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*Around the World around the Clock*

Markus A. Launer

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## **General Management**

### **Acknowledgment of our global Research Network on contemporary Management**

Our network on general management research is fast growing since we changed the conference name to CoSiM. We welcome research on management science from *around the world around the clock*.

The CoSiM Conference is about contemporary Studies in Management. The key topics are:

Managing Universities, Managing Vocational Schools, Excellence in Education, Quality Assurance and Control, Distance Learning, Innovative Teaching Approaches and Methods, Teacher Training, continuous Education, Electronic Learning, Educational Metaverse, Augmented and Virtual Reality, Artificial Intelligence and ChatGPT, Gamification and Game-based Learning, Mobile Learning and Bring Your Own Device (BYOD), Cloud Computing and Storage in Education, Robotics and Automation, Learning Analytics and Data-Driven Education, Internet of Things (IoT), Smart Devices, other Innovative Technologies, Micro Learning, Social Media, Online Learning Communities, Multimedia, Instructional Technology, Open Educational Resources (OER), Massive Open Online Courses (MOOCs), Sustainable Development, Teachers Intuition, Social Sciences, and Diversity.

### **Outlook**

In 2024 we plan Workshops on the topic "Research Direction in Management Sciences". Please stay tuned and participate.

**Geospatial Approach for Flood Damage Assessment in lower  
Plains 2022****Indus**

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**Extended Abstract**

Floods, as natural disasters, pose a formidable global challenge due to their capacity for widespread destruction and threats to human life, infrastructure, and ecosystems. Pakistan, particularly the Lower Indus Plains, has consistently been susceptible to the devastating effects of floods. This research endeavors to comprehensively assess the flood damage incurred in the Lower Indus Plains during the year 2022 by harnessing the power of geospatial technology and satellite data. The study's core objectives encompass flood extent mapping, identification of the most severely affected regions, estimation of the flood's impact on both built-up areas and crop lands, and shedding light on the affected population. Synthetic aperture radar data, satellite imagery, and demographic information have been meticulously employed to analyze and evaluate the extent of flood damage. In order to analyze and evaluate flood damage in the Lower Indus Plains, the research utilized several datasets. These datasets included: Synthetic Aperture Radar (SAR) data from Sentinel-1: SAR data from Sentinel-1 satellite were used to map flood inundation. SAR data can penetrate cloud cover and provide reliable information on the extent of floods in the research area. The DEM dataset was crucial for analyzing floods. It provided elevation information, helping to understand the topography of the research region and identify low-lying areas prone to flooding. Optical satellite imagery from Sentinel-2 was used to extract information about agricultural and urban built-up areas. This data was essential for assessing how floods impacted different land cover types and the extent of damage to agricultural and urban infrastructure. LandScan data was utilized for population count analysis. This dataset provided information on the distribution and density of the population in the research area. It facilitated estimating the number of affected people and contributed to understanding the social impacts of the floods.

The study used the geospatial tool Google Earth Engine (GEE) to construct a flood extent map from Synthetic Aperture Radar (SAR) data using Sentinel-1. GEE's cloud-based platform allowed for efficient processing and storage of data. The process involved using GEE-developed code to process Sentinel-1 SAR GRD (Ground Range Detected) images for a specific area and time period. By combining radar images from before and after the flooding and applying various filters, a flood extent map was created. The degree of flooding was determined by setting variables, including pass direction, polarization, and difference threshold. Filtering techniques were applied to improve accuracy and reduce noise in the flood extent map. The Global Surface Water dataset and a Digital Elevation Model (DEM) were used to further refine the map.

Land cover classification was performed using Sentinel-2 satellite data and the Random Forest method. The data were acquired and radiometrically corrected in the Google Earth Engine (GEE) platform. Cloud-free composite images were created to ensure data quality. Ground control points were used to train and validate the classification model. The resulting classified image provided a detailed representation of land cover types in the research area.

Population data were obtained from the LandScan database, which provides population density and distribution estimates with a resolution of approximately 1 km<sup>2</sup>. This dataset incorporates data from various sources, including administrative records, census data, and satellite imagery, to provide up-to-date demographic information. It was used to map the distribution and density of affected populations in the study area.

To validate the research findings, group discussions were conducted with residents of the Lower Indus Plain in Sindh. These discussions provided qualitative information and first-hand accounts of the flood events, serving as a valuable complement to the quantitative analysis conducted in the study.

The results of this study unearthed significant flooding in districts such as Jaccobabad, Shikarpur, Larkana, Naushahro Ferozpur, and Kashmore within the Lower Indus Plains of Pakistan. Among these, Jaccobabad, Shikarpur, Larkana, and Naushahro Feroze emerged as the districts that bore the brunt of this natural catastrophe, with substantial portions of their territory submerged under the floodwaters. In total, the floods encompassed an area spanning 37,703 square kilometers, equivalent to a staggering 25% of Sindh province, affecting a wide spectrum of land types, including densely populated areas, forests, and agricultural lands.

The devastation was not confined to land alone; Hyderabad, Tando Muhammad Khan, and Tando Allahyar also experienced significant crop damage. Meanwhile, the built-up areas along the rivers, particularly in Jaccobabad and Larkana, bore the full force of the flood's impact. Among the districts, Hyderabad, Larkana, Matiari, Naushahro Feroze, Shikarpur, and Tando Allah Yar reported the highest numbers of affected population, ranging from hundreds of thousands to millions.

Through a temporal analysis, it has been observed that the flooding endured for an extended period, primarily in July and August, followed by a gradual decrease in flood activity in the subsequent months. The damage assessment has underscored the extensive loss suffered by agricultural and built-up areas, surpassing initial projections. Furthermore, the flood's impact on standing crops and its disruption of urban centers suggest broader economic implications that cannot be ignored.

Overall, this research provides a comprehensive assessment of the 2022 flood event in Pakistan's Sindh province. It successfully maps the flood extent, evaluates the impact on land cover, and assesses population vulnerability using geospatial data. The insights gleaned from this study can substantially inform future disaster management and mitigation efforts, aiding in the development of effective strategies aimed at reducing vulnerability and enhancing resilience in flood-prone areas, not just in Sindh province but across the globe.

### Research Questions

- i. What is the extent of flooding in the Lower Indus Plains in 2022?
- ii. Which districts in the Lower Indus Plains were most affected by the flood?
- iii. How did the flooding impact the built-up areas in the affected districts, including urban and residential areas, infrastructure, and other constructions?
- iv. What percentage of the crop area in the Lower Indus Plains was damaged due to the flood?
- v. What is the impact of the flood on the population in the affected districts of the Lower Indus Plains?

### Limitations

Further research could benefit from conducting a comprehensive on visit survey of the Sindh province. This survey would provide an opportunity to collect ground truth data. Furthermore, if time permits, integrating additional methods could enhance the research. The inclusion of other classification algorithms or machine learning models, such as support vector machines (SVM) could provide alternative perspectives and improve the overall accuracy of the analysis.

Accuracy of the flood mapping and damage assessment results heavily relies on the quality and availability of the input data, including satellite imagery. Any inaccuracies or limitations in these data sources can introduce uncertainties in the analysis. Also, temporal scope of the study may not capture the full Extent of flood events and their long-term impacts. It is also worth noting that the study focuses on a Sindh province and may not be fully generalizable to other areas.

While LandScan data with its 1 km resolution and block-level population accuracy is valuable, it is recommended to explore alternative data sources for more precise and detailed population analysis at a smaller scale. In situations where alternative data sources are unavailable or time constraints limit their accessibility, LandScan data can still be useful for obtaining quick results by applying it to other areas. Although the accuracy may vary when extrapolating data, it can offer valuable insights and serve as a preliminary analysis, allowing for a broader understanding of population distribution and trends across different regions.

### Material and Methods

The study used the geospatial tool Google Earth Engine (GEE) to construct a flood extent map from Synthetic Aperture Radar (SAR) data using Sentinel-1. Due to the cloud-based platform, GEE provides processing speed and storage benefits. Because GEE can record both temporal and geographical changes, previous research has shown that it successfully maps different types of land cover (Zhao et al., 2021). The process included GEE-developed code to process Sentinel-1 SAR GRD (Ground Range Detected) images for a particular area of interest and time period. By integrating radar photos collected before and after the flooding and using several filters to increase accuracy, the map of flood extent was created. The degree of flooding was determined by setting variables including pass direction (ASCENDING and DESCENDING), polarization (VV and VH), and

difference threshold (1.00). The SAR data was filtered and processed according to these settings, which produced the map of flood extent. The before and after flood pictures mosaicked into single images for every time period in order to concentrate on the area of interest. Filtering techniques have been employed to improve the accuracy of flood extent maps by reducing artifacts and noise. The noise was efficiently smoothed out by establishing a focal mean for every image using a 50m radius of the circular filter. The difference between the filtered SAR images before and after the flood was computed by dividing the "after" image by the "before" image. A threshold was then applied to identify pixels with an increase in backscatter intensity above the specified threshold. Based on this threshold, a binary flood map was created, designating non-flooded pixels as 0 and flooded pixels with a difference greater than the threshold as 1. To further refine the flood extent map, the Global Surface Water dataset was used to mask out pixels that were unlikely to be flooded based on a separate surface water extent dataset. Additionally, areas with a terrain slope exceeding 5 degrees were removed using a Digital Elevation Model (DEM) as they were considered less susceptible to floods. These masking methods significantly improved the accuracy of the flood extent map.

#### Land Cover Classification

An important first step in identifying and mapping various land use types within a region is land cover classification. Numerous industries, including urban planning, forestry, environmental monitoring, and agriculture, frequently use this technique. Land cover classification entails dividing satellite pictures into several classes based on their spectral and textural characteristics. There are numerous categorization methods, each with unique advantages and disadvantages (Talukdar et al., 2020). The Sentinel-2 satellite dataset was used in this work to map the land cover. Sentinel-2 has 13 spectral bands in total, including those specifically made for monitoring the land, like the Blue, Green, Red, Near-Infrared (NIR), and Shortwave Infrared (SWIR) bands. It also has narrow NIR bands and red-edge bands, giving it complete spectral coverage (Ghorbanian et al., 2020). The Google Earth Engine (GEE) platform was used to initially acquire and radiometrically correct the top of atmospheric reflectance data from Sentinel-2 Level-1C photos. Images with a cloud cover percentage greater than 20% were not included in the analysis to ensure the quality of the data. To construct a cloud-free representation, a mosaic image of the entire study region was made. The noisy, dark, or excessively bright pixels that might be ascribed to haze or shadows were removed using the median technique (Amjad et al., 2023). The land cover classification was tested and trained using the Random Forest method. A training set and a validation set were created from the dataset using ground control points (GCP). At the GCP sites, the median composite image was sampled, and a feature collection was made based on the characteristics of various land cover types. A unique color scheme determined by the palette option was used to show the resulting categorized image. An accuracy statistics and confusion matrix were produced by comparing the classified image using the validation set to assess the accuracy of classification. Using Sentinel-2 data along Random Forest Algorithm from the GEE platform, the land cover classification provided a complete mapping of the

different land use types in the research. The accuracy of classification was evaluated using a statistical analysis and validation set.

#### Population Data

The population impacted by the natural disaster was mapped using the LandScan database. With a resolution of roughly 1 km<sup>2</sup>, the commonly used database LandScan gives population density and distribution estimates. According to (Elvidge et al., 2017; Tenerelli et al., 2015), this database was used in a different sector, such as disaster response planning, epidemiology, and environmental studies. To produce thorough population estimates, it incorporates data from various sources, including administrative data, census records, and imagery from satellites. This data contains all of the world's regions and is commonly used in research on demographics to analyze population growth, migration, and aging trends. The effects of demographic changes can be better understood by spatial studies (Raza et al., 2023). One benefit of using the LandScan database's updates assure that researchers have accessibility to the most recent demographic data. As a result, precise and valid demographic information can be used in research approaches (Dobson et al., 2000). The researchers were able to precisely map the distribution and density of affected people in the study area by using the LandScan data.

#### Data Validation

Conducting a focus group with citizens of Sindh's Lower Indus Plain was the strategy used to validate the study's findings. Since it was challenging to physically survey the impacted areas, the researchers decided to use group discussions as their major method of gathering data. Muhammad Waqas Chaudhary, Amjad Ali Maitlo, Ayesha Liaqat, Umar Bajwa, Shaukat Ali, and Dr. Noor Chandio from the Institute were among the participants in the group discussion. The participants had structured discussions that were aided with a questionnaire created especially for collecting data on experiences, opinions, and floods in the Lower Indus Plain. The researchers sought to validate and improve our understanding of the flood episodes in the study area by interacting with the locals and gathering first-hand stories through the questionnaire. The data gathered from the group discussion was useful qualitative information that could be contrasted and cross-referenced with the quantitative conclusions drawn through the study's usage of geospatial analysis and data sets.

Keywords: Flood; Damage assessment; LandScan; Synthetic Aperture Radar (SAR); Remote sensing; GIS; GEE.

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## **Government support and employment of Tunisian Small and Medium Entrepreneurs during the COVID-19 Crisis**

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### Extended Abstract

The recent COVID-19 pandemic is not the first time a corona virus disease has reached epidemic levels, as seen with SARS and MERS, for example. However, this is the first time a pandemic has had a global impact (Brem et al., 2021). Brem et al. (2021) add that the global outbreak of the COVID-19 is a disaster in several ways. It has impacted not only many people's personal lives, but also whole economies, markets, and nations around the world. Deutschmann et al. (2020) claim that the economic impacts of the COVID-19 pandemic may be as significant as its health impacts. The current crisis is worse than the financial crisis of 2008-2009, and it is equivalent to the great depression in the United States from 1929 to 1933, and the wartime devastation in Europe from 1939 to 1945. Many politicians have drawn comparisons between battling the pandemic and mobilizing for war, which is not surprising (Beglaryan and Shakhmuradyan, 2020). Sumner et al. (2020) add that for the first time since 1990, the COVID-19 pandemic may result in a rise in poverty rates. Beglaryan and Shakhmuradyan (2020) argue that the coronavirus outbreak triggered a global crisis involving supply and demand shocks. Nicola et al. (2020) add that the lockdowns have disrupted economic growth unlike any other past demand or supply crisis. According to the Organisation for Economic Cooperation and Development (OECD) (2021), current containment policies could decrease global Gross Domestic Product (GDP) by 2% per month, or 24 percent annually. According to Ferrando and Ganoulis (2020), small and medium-sized enterprises (SMEs) are substantially more vulnerable to pandemic risks than large companies, and become financially fragile over the recent pandemic. Moreover, many SMEs were forced to close temporarily or permanently as a result of the pandemic.

Many of these incidents were caused by containment measures, which required non-essential companies to shut their doors during lockdowns (OECD, 2021). Bartik et al. (2020) think that reduced demand and employee health issues were cited as the primary factors for the temporary closure. Besides, Gourinchas et al. (2020) estimate that COVID-19 would result in an approximately 9 percentage point rise in the failure rate of SMEs. OECD (2021) argue that the COVID-19 crisis has often impacted SMEs rather than large companies. Besides, Beglaryan and Shakhmuradyan (2020) show that SMEs' employees have been impacted worse by the crisis, with many being laid off or getting their hours and wages decreased.

According to experts, working with a small business doubles the chances of being laid off or having your salary reduced. According to International Labour Organization (2020), around 300 million full-time workers have lost their jobs or have had their working hours and wages reduced because of

the lockdown. To mitigate the negative effects of the COVID-19 pandemic on employment, several SMEs used financial mechanisms, such as direct investment, sales on credit, tax stimulus, acquisitions on credit, tax delays, etc. (Levashenko and Koval, 2020). Moreover, governments around the world have introduced temporary support measures to help businesses maintain productive relationships with their clients, and employees to mitigate the negative effects of the economic crisis (Bartik et al., 2020; Deutschmann et al., 2020).

In 51 nations, the government has implemented over 1,300 stimulus measures totaling about \$ 11 trillion, according to Albaz et al. (2020). In Tunisia, SME's face a lack of financial support. To address this issue, Oxfam in Tunisia works with the organization impact partner, that has helped a women's group pottery producers with technical and financial assistance (Dridi ,2020). The Tunisian economy is dominated by small and medium-sized enterprises (SMEs), while more than 99% of all firms in the private sector. Tunisian SMEs are confined to low-technology and low-productivity activities leading, to a low value added and limited integration to the global value chains.

The study empirically investigated the impact of government support on the employment of small and medium-sized enterprises (SMEs) during the COVID-19 crisis. A questionnaire survey was conducted based on 95 Tunisian SMEs used in this study. The questionnaire is divided into three parts, each part contains 28 questions. Use STATA to analyze the results. The main results show that during the COVID-19 pandemic, government support measures have had a positive impact on employment. This means that companies with higher employment rates need more financial relief and sell them through credit. Besides SMEs' policies. Results indicate that digital technologies positively influence the SME's employment. So far, as far as we know, there are no academic papers studying the impact of government support measures on employment during the COVID-19 pandemic. Therefore, this study fills a key research gap in the literature.

In addition, this research paper provides valuable practical evidence (investors, academics, regulators, etc.). During the COVID-19 pandemic, this article provides useful information on how government supports affect the employment of SMEs. In order to update the rules, company officials should consider the results of the research and devote more time to implement new measures to ensure the effectiveness of government policies. Moreover, this article discusses the impact of government supports on the employment of SMEs during the COVID-19 pandemic. After greater efforts, there are still many ways to be found in future research.

First, this research is limited to 2021. The number of researchers in the future should be increased for a few more years, because we have taken a step forward, and the impact of government supports on the employment of SMEs has become more and more obvious. Second, more empirical analysis of government supports and the employment of SMEs is needed. Similarly, during the COVID-19 crisis, future research should pay more attention to the impact of emerging technologies on jobs. Third, more research is needed to address policy questions about how the epidemic affects banks. COVID 19 also faces major obstacles in corporate social responsibility (CSR) activities. The following problems can be solved by more research.

## **The Moderating Role of Remote Work to the Precedents of Employee Engagement among Metro Cebu IT-BPO Employees**

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### Introduction

The COVID19 Pandemic is the single most influential historical event in recent global history. Global lockdowns, social distancing, and limited face-to-face interactions helped catalyze existing technologies and practices that were still developing and novel in organizations. Although most global economies in 2022 have chosen to live with COVID-19, there is still a concern about worker susceptibility to contracting the virus from workplaces considering the return-to-office movement (Leso et al., 2021).

It is in any firm's interest for employees to develop loyalty to the organization alongside retention and attracting additional employees. Investments in positive work experiences to foster employee engagement have been exerted by multiple organizations to remain competitive amidst the increasing pool of employers. However, developing employee engagement may require significant investments in time, effort, and in finances. Such investments may deter decision-makers to push forward their employee engagement agendas in their respective organizations. However, failing to engage employees - especially those at the rank-and-file level - can lead to burnout and eventual resignation (Freeney & Tiernan, 2009).

In the Philippines and the IT-BPO industry, there is a dearth of information on the phenomenon of the Great Resignation, and more so on the effects of employee engagement as a response. While there have been studies on employee engagement and its practical benefits for organizations, few have linked its relationship with attrition. An increase in employee engagement job vacancies has been anecdotally observed in the Philippines, as companies have committed to making employee engagement their number one priority (HR Asia, 2021).

In the realm of the IT-BPO industry, remote work is seen as the most desired feasible work arrangement, considering the nature of its main business operations. Employers are seen as inflexible when insisting on returning to office post-COVID-19, amidst tech giants (such as Twitter) who have made remote work arrangements permanent (Smith, 2022). As employees choose to leave their jobs for permanent remote work arrangements, technology companies have chosen to set up at least hybrid work arrangements or offer remote work arrangements for roles that can be done outside the office (Kwittken, 2021).

## Purpose

The concept of remote work has been introduced as early as the 1980s. Remote work is defined to perform work in any desired location using a computer and communications technology (Olson, 1983). There have been mixed receptions to the employment of remote and hybrid work during the COVID-19 pandemic. Some workplaces claimed that their company remote work policies have helped improve employee well-being (Prasad et al, 2020), while other studies have argued that the hasty application of remote work during the COVID-19 pandemic has done more harm to employee engagement by creating added stress to the social and personal resources of employees (Adisa et al, 2021). In the Philippine setting, remote work is found to have a positive effect on job satisfaction and work productivity, while negatively affecting job performance. This consequently creates a negative effect on job productivity (Ramos and Prasetyo, 2020). Remote work also allows employers to cut overhead costs related to leasing and utilities, and for employees to lessen their overhead expenses that may occur when reporting to the office (Syal & Sharma, 2022).

The transition to remote or hybrid work had imposed a number of challenges on organizations. The lack and limitation of peer-subordinate communication and the psychological effects of perceived workplace isolation are some of the factors that have employees resist remote work and seek on-site roles (Prasad, 2020). Management also faces challenges in adapting their current work culture to a remote work set-up, which can result in an increase in employee resignations from lack of motivation and satisfaction in this new workplace environment (Popovici & Popovici, 2020). Due to the uncertainty brought about by the COVID-19 pandemic, employee retention has also proven to be a challenge as qualified talent with the steadily growing abundance of simultaneous income-generating work through freelancing, part-time employment, and the gig economy (Hamouche, 2021).

The IT-BPO industry is considered a resilient and fast-growing industry in the Philippine workforce, contributing to 41% of job vacancies nationwide (Serrano, 2021). With such a competitive environment, this would mean that IT-BPO companies are at constant risk of having their valuable talent poached by competitors within the industry. There is an opportunity for organizations to improve their employee engagement programs as a defensive and offensive human resource strategy. A defensive strategy can be employed for organizations, wherein current employees will not be incentivized to leave the organization. Investment in employee engagement can be a potentially offensive strategy in which known organizational culture and labor practices can entice disgruntled talent from competitors to transfer to one's organization.

### Theoretical framework

Derived from Kahn's model of Engagement (1990), the study will see if psychological meaningfulness and psychological safety have a significant relationship with employee engagement. The study also sees if remote work has a moderating effect on these relationships.

While literature has covered how psychological meaningfulness and psychological safety contribute to employee engagement, no studies conducted in the Philippines was found by the researcher. Considering that the focus of Filipino human resource practitioners in the COVID19 economic recovery, the study would like to test if these precedents do have a significant contribution to employee engagement in the Philippine context.

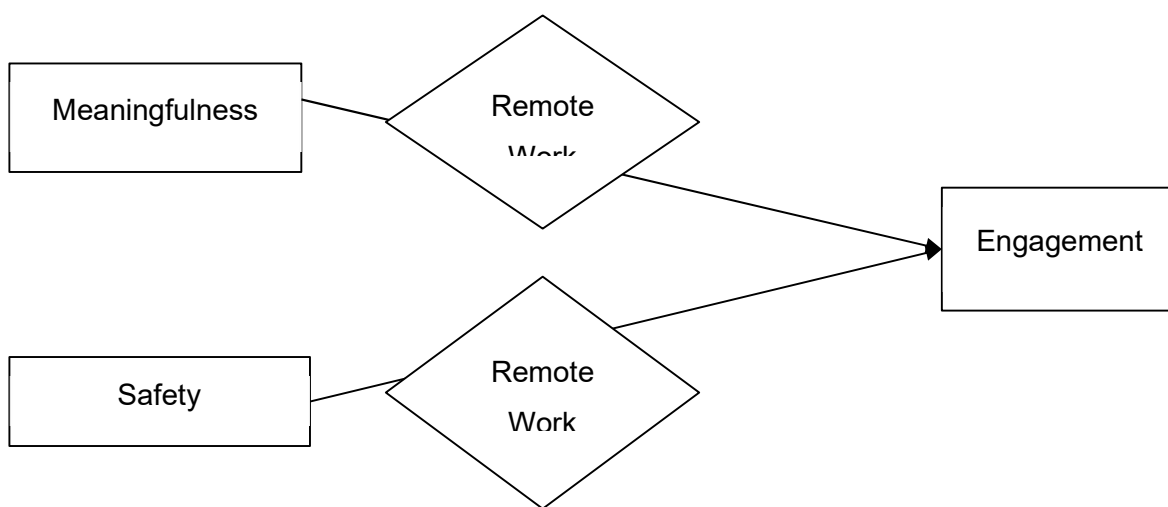


Figure 1 The Conceptual Framework

### Methodology

A field study using survey methodology was utilized for this research design. Primary data collection from a randomized sample of one hundred ninety-six (196) employees in eleven (11) IT-BPO companies at Metro Cebu was gathered through a self-made questionnaire. The study aimed to capture the actual routine in the field setting via participants' perceptions.

The study utilized a Desired Confidence Level interval of 95% which is equivalent to a z-score of 1.96. This is the range of values that reflects the amount of random error in the sample and provides a range of values that will likely include the unknown parameter. From the identified statistics identified for each of the components, a sample size of one hundred ninety-six (196) was determined to be needed for the study.

Participants in the survey study included employees across the different departments of these IT-BPO companies. The researcher partnered with these companies' respective human resources departments to distribute the survey questionnaires to the intended respondents. The human

resource practitioners from each company identified their employees who fit the requirements needed by the study. From the identified participants, the employees were asked by their respective human resource practitioners to answer the online survey.

An online survey was utilized as the medium for the questionnaire due to its practicality in terms of financial resources and logistical distribution, and convenience for the participants to answer in their free time.

Due to the broad and encompassing nature of the IT-BPO industry, the participants must have worked in broad occupational areas associated with the industry: customer service, technical support, software development, and administrative tasks such as accounting, human resources administration, and maintenance work.

The participants, to qualify for one of the screening requirements, should have already been employed in the company before or in October 2019. This demographic was able to experience onsite work and the transition of the implementation of remote work due to COVID-19 restrictions and the subsequent return to office movement.

The needed primary data to adequately test the hypotheses in this study was the level of engagement in the company. This was determined by identifying the participants' level of psychological safety and psychological meaningfulness. Data pertaining to the possible moderating effect of remote work on employee engagement was also gathered from the same sample.

Convenience sampling was utilized to identify the employees of IT-BPO companies participating in this study. A total of one hundred ninety-six (196) participants from eleven (11) companies participated in answering the survey questionnaire.

A four-point Likert scale was utilized to rate participants' perceptions of the constructs studied in this paper. The questionnaire was designed to measure the level of employee engagement perceived by the participant, and its precedent factors of psychological safety and psychological meaningfulness. The perception of how remote work has affected the participant's level of engagement is also measured in this questionnaire.

This questionnaire underwent pilot testing before being distributed to the sample. To adequately determine the validity and reliability of the scale, a total of ten (10) control participants were utilized to test the validity and reliability of the scale before it will be issued to the sample. The number of control participants has been based on the market research standard of ten (10) to fifteen (15) control participants. The scale was measured to see if it was reliable and valid for the use of this study, and not for public consumption.

The raw data in each scale were analyzed using an exploratory factor analysis through SPSS. A correlational bivariate analysis between the two independent variables of Psychological Safety and Psychological Meaningfulness were conducted. From the exploratory factor analysis results, the

mean was obtained from the scale measuring the dependent and independent variables. A multiple regression analysis was then conducted to test the hypotheses in this study.

## Results

Multiple linear regression analysis was used to test the hypotheses in this study, namely: HA1: There is a significant positive relationship between psychological safety and employee engagement, HA2: There is a significant positive relationship between psychological meaningfulness and employee engagement, HA3: Remote work has a significant moderating effect to the relationship between psychological safety and employee engagement, and HA4: Remote work has a significant moderating effect to the relationship between psychological meaningfulness and employee engagement.

**Psychological Meaningfulness and Employee Engagement:** A multiple linear regression was conducted to test if psychological meaningfulness has a significant positive impact on employee engagement.

From the mean obtained of the scale, the respondents felt a moderate sense of employee engagement in their respective organizations. They also felt a moderate sense of purpose and fulfillment in the work they do. Refer to Table 24.

Table 1: Descriptive Statistics of Psychological Meaningfulness and Employee Engagement Analysis

Variable	Mean	Standard Deviation	N
Employee Engagement	3.133929	0.443164	196
Purpose and Fulfillment	3.326531	0.444526	196
Attitudes Remote Work x Purpose and Fulfillment	9.555461	2.419188	196

Using the enter method it was found in the first model to test the significance of the impact of psychological meaningfulness which explains a significant amount of variance in employee engagement ( $F(2, 193) = 32.866$ ,  $p < .001$ ,  $R^2 = .254$ ,  $R^2_{\text{Adjusted}} = .246$ ). Refer to Table 25 and Table 26.

Table 2: Analysis of Variance of Multiple Linear Regression of Psychological Meaningfulness and Remote Work towards Employee Engagement Analysis

	Sum of Squares	df	Mean Square	F	Sig.
Psychological Meaningfulness towards Employee Engagement					
Regression	9.463	1	9.463	63.668	.000b
Residual	28.834	194	0.149		
Total	38.297	195			

Results show that the factor of Purpose and Fulfillment has a significant positive impact to employee engagement (Beta=.497,  $t=7.979$ ,  $p<.001$ ). Refer to Table 26 and 27.

Table 3: Model Summary of the Multiple Regression Model Analysis of Psychological Meaningfulness towards Employee Engagement Analysis

Model	R	Std. Change Statistics							Sig. F Change	Durbin-Watson
		R Square	Adjusted R Square	Error of the Estimate	of R Square Change	F	df1	df2		
1	.497a	0.247	0.243	0.385	0.247	63.668	1	194	0.000	

Table 4: Coefficients of the Multiple Regression Model Analysis of Psychological Meaningfulness and Remote Work towards Employee Engagement Analysis

		Standardized			95.0% Confidence Interval for	
		Coefficients	t	Sig.	B	
		Beta			Lower Bound	Upper Bound
Psychological Meaningfulness towards Employee Engagement						
(Constant)	1.485	0.208	7.127	0.000	1.074	1.897
PF	0.496	0.0620.497	7.979	0.000	0.373	0.618

Therefore, H01 is rejected and HA1 stands there is a significant positive relationship between psychological meaningfulness and employee engagement.



### Psychological Safety and Employee Engagement

A multiple linear regression was conducted to test if psychological safety has a significant positive relationship with employee engagement, and if remote work moderates this relationship.

From the mean obtained of the scale, the respondents felt a moderate sense of employee engagement in their respective organizations. They also felt a moderately positive sense of their organization's team and management dynamics, a moderate amount of resilience, and a moderate sense of self-expression in their respective organizations. See Table 28

Table 5: Descriptive Statistics of Psychological Safety and Remote Work Analysis

Variable	Mean	Standard Deviation	N
Employee Engagement	3.1339	.44316	196
Team Management Dynamics	3.2143	.49467	196
Resilience	3.4320	.46091	196
Self-expression	3.4566	.55415	196

Using the enter method it was found in the first model to test the significance of the impact of psychological safety which explains a significant amount of variance in employee engagement ( $F(3,192) = 17.613$ ,  $p < .001$ ,  $R^2 = .216$ ,  $R^2_{\text{Adjusted}} = .204$ ). Refer to Tables 29 and Table 30.

Table 6: Analysis of Variance of Multiple Linear Regression of Psychological Safety towards Employee Engagement Analysis

	Sum Squares	ofdf	Mean Square	F	Sig.
Psychological Safety towards Employee Engagement					
Regression	8.265	3	2.755	17.613	<.000
Residual	30.032	192	.156		
Total	38.297	195			

Results show that the Psychological Safety factor of Team Management Dynamics does not have a significant positive impact to employee engagement ( $\text{Beta} = -0.628$ ,  $t = -.848$ ,  $p < .398$ ). The second factor, Resilience, has generated results that show that it has a significant positive impact on employee engagement ( $\text{Beta} = -0.465$ ,  $t = 5.452$ ,  $p < 0.001$ ). For the third factor of Self-Expression, the analysis has generated results that show that it does not have a significant positive impact ( $\text{Beta} = 0.059$ ,  $t = .725$ ,  $p < .469$ ).

Table 7: Model Summary of the Multiple Regression Model Analysis of Psychological Safety and Remote Work towards Employee Engagement Analysis

R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics R Square Change	F	df1	df2	Sig.	F Durbin-Watson
.465	.216	.204	.39550	.216	17.613	3	192	.000	

Psychological Safety towards Employee Engagement

Table 8: Coefficients of the Multiple Regression Model Analysis of Psychological Safety and Remote Work towards Employee Engagement Analysis

	Unstandardized Coefficients B	Std. Error	Standardized Coefficients Beta	t	Sig.	95.0% Confidence Interval for B Lower Bound Upper Bound	
(Constant)	1.633	.232		7.042	.000	1.175	2.090
Team Management Dynamics	-.061	.072	-.068	-.848	.398	-.203	.081
Resilience	.447	.082	.465	5.452	.000	.286	.609
Self-Expression	.047	.065	.059	.725	.469	-.080	.174

In consideration that one factor of psychological safety has a significant influence on employee engagement, we can say that HA2 stands.

Therefore, H02 is rejected, and HA2 stands there is a significant positive relationship between psychological safety and employee engagement.

## Remote Work

Multiple linear regression analyses were conducted to test if remote work significantly moderates the influence of psychological meaningfulness and psychological safety towards employee engagement.

Table 9: Descriptive Statistics of Psychological Meaningfulness and Employee Engagement Analysis

Variable	Mean	Standard Deviation	N
Attitudes Remote Work x Purpose and Fulfillment	9.555461	2.419188	196
Attitudes towards Remote Work x Team Management Dynamics	9.2127	2.38135	196
Attitudes toward Remote Work x Resilience	9.8677	2.52828	196
Attitude towards Remote Work x Self-expression	9.958900	2.78895	196

The analysis shows that the remote work factor of Attitudes Towards Remote Work as a moderator to psychological meaningfulness explains a significant amount of variance in employee engagement ( $F(4,191)=17.521$ ,  $p<.001$ ,  $R^2=0.268$ ,  $R^2_{\text{Adjusted}}=0.253$ ). Refer to Tables 33 and 34.

The analysis has also shown that the remote work factor of Attitudes Towards Remote Work as a moderator to psychological safety explains a significant amount of variance in employee engagement ( $F(6,189)=10.042$ ,  $p<.001$ ,  $R^2=0.242$ ,  $R^2_{\text{Adjusted}}=0.218$ ). Refer to Tables 33 and 34.

Table 10: Analysis of Variance of Multiple Linear Regression of Psychological Meaningfulness and Remote Work towards Employee Engagement Analysis

	Sum of Squares	df	Mean Square	F	Sig.
The Influence of Remote Work as a Moderator towards Psychological Meaningfulness					
Regression	9.914	2	4.957	33.709	.000c
Residual	28.383	193	0.147		
Total	38.297	195			
The Influence of Remote Work as a Moderator towards Psychological Safety					
Regression	9.258	6	1.543	10.042	<.000
Residual	29.039	189	.154		
Total	38.297	195			

Table 11: Model Summary of the Multiple Regression Model Analysis of Psychological Meaningfulness and Remote Work towards Employee Engagement Analysis

R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				Sig. Change	Durbin-Watson
				R Square Change	F Change	df1	df2		
The Influence of Remote Work as a Moderator towards Psychological Meaningfulness									
.509b	0.259	0.251	0.38348	0.012	3.070	1	193	0.081	1.809
The Influence of Remote Work as a Moderator towards Psychological Safety									
.492	.242	.218	.39198	.026	2.154	3	189	.095	2.036

The results also show that the remote work do not have a significant moderating effect on the relationship of employee engagement to the psychological safety factors of Team Management Dynamics (Beta=-.650, t=-1.046, p=.297), the second factor of Resilience (Beta=-0.346, t=-0.462, p=0.644), and the factor of Self-Expression (Beta=-0.902, t=-1.207, p=0.229), as well as to the psychological meaningfulness factor of Purpose and Fulfillment (Beta=-0.128, t=-1.752, p=0.081). Refer to Table 35.

Table 12: Coefficients of the Multiple Regression Model Analysis of Psychological Meaningfulness and Remote Work towards Employee Engagement Analysis

		Standardize		Sig.	95.0% Confidence Interval for	
		d			B	
		Coefficients t				
		Beta			Lower Bound	Upper Bound
The Influence of Remote Work as a Moderator on Psychological Meaningfulness Towards Employee Engagement						
(Constant)	1.480.2075		7.164	0.000	1.076	1.894
Purpose and Fulfillment	0.560.0733	0.565	7.737	0.000	0.419	0.706
Attitudes towards Remote Work Purpose Fulfillment	-0.0130.023	-0.128	-1.752	0.081	-0.050	0.003
The Influence of Remote Work as a Moderator on Psychological Safety Towards Employee Engagement						
(Constant)	1.61.2302		7.001	.000	1.158	2.066
Team Management Dynamics	.303.372	.338	.815	.416	-.431	1.037
Resilience	.610.392	.634	1.555	.122	-.164	1.384
Social Expression -	.355.364	-.455	-1.027	.306	-1.064	.335
Attitude Towards Remote Work Team Management Dynamics	.116x.121	-.650	-1.046	.297	-.349	.107

		Standardize				95.0% Confidence Interval for	
		d				B	
		Coefficients t		Sig.			
		Beta				Lower Bound	Upper Bound
Attitude Towards- Remote Work X.061 Resilience		.131	-.346	-.462	.644	-.320	.198
Attitude Towards.143 Remote Work X Self-Expression		.131	.902	1.207	.229	-.091	.377

HA3 and HA4 is rejected while the following hypotheses stand:

- H03: Remote work does not have a significant moderating effect on the relationship of psychological safety between employee engagement.
- H04: Remote work does not have a significant moderating effect on the relationship of psychological meaningfulness between employee engagement.

### Discussion and conclusion

From the results presented, the study was able to generate sufficient findings to conclude that both psychological meaningfulness and psychological safety have a significant influence on employee engagement. The findings have also given adequate data to see the moderating effects of remote work on the relationship between psychological safety and employee engagement, and on the relationship between psychological meaningfulness and employee engagement.

The results are cognizant of Kahn's (1990) theory of employee engagement. The precedent factors of psychological safety and meaningfulness adequately measure the level of engagement an employee has in an organization. This has further reinforced May et al's (2004) findings that both precedents have a significant positive relationship with employee engagement. The results have shown that meaningfulness not only contributes to employee engagement but can be utilized as one indicator to gauge the level of employee engagement in an organization (Ruslan et al, 2014; Ruslan, Islam, Noor, 2014). In a world post-COVID-19 wherein most employees reflected on the kind of work they would want to engage in, the results are congruent with Fairlie's (2011) definition of work meaningfulness centering around human development. Considering that Purpose and Focus is the factor that has significance in gauging Psychological Meaningfulness, the research has shown that employees need to identify that their work has purpose, and that they are able to focus on their tasks at work.

Further, the results show that psychological safety may not be one of the required precedents of employee engagement. Although a work environment or team that is safe for employees to express and take interpersonal risk-taking (Edmondson, 1999) and is crucial in developing engagement with employees and beneficial to the organization (Tiwari & Lenka, 2016), this may be not an adequate gauge of an employee's engagement to the organization. Psychological safety may, then, not adequately determine an employee's engagement with the organization but may reflect an organization's leadership and management climate (Basit, 2017; Jansriboot, 2016; Mao & Tian, 2022).

As Resilience is the factor that has retained a significant positive finding among the other three factors of psychological safety, the study shows that an individual's ability to be resilient among external challenges that may arise in their work environment may be more contributing toward one's sense of psychological safety. This may mean that external factors, such as team and management dynamics, have little contribution to one's perception of how psychologically safe the organization is in comparison to the internal factor of an employee being able to overcome challenges and difficulties in the workplace.

While the results show that high feelings of psychological safety and psychological meaningfulness significantly contribute to one's level of engagement as an employee, the study recognizes that multiple factors may have influenced these results. Factors such as employment rank and the increased level of autonomy in the workplace is an area that has not been viewed by the study. Further, employment tenure may also impact how engaged employees can be. It has not been explored in this study whether less tenure or more tenured employees were more engaged than the other, which can also be another possibility.

It is also worth noting that respondent noted their perception of how psychologically safe their respective organizations in on their current work set-up, the onsite return to office arrangement. This may be a different perception of how psychologically safe they felt in the work from home arrangement and before the COVID19 pandemic occurred.

Lastly, the study has shown that remote work has no significant moderating effect on the relationships of both psychological safety and psychological meaningfulness to employee engagement. This contrasts with the literature wherein it argues that remote work either decreases employee engagement (Adisa, Ogbonnay, & Adekoya, 2021), or increases it (Ashwini, Anand, and Acharya, 2021). Rather, remote work remains as a neutral force in increasing or decreasing employee engagement.

Pass & Ridgway's (2022) hypothesis that remote employees are more accountable for their level of engagement may explain this result. As employees find more meaning in their work and belong to psychologically safe work environments, engagement now falls as a proactive choice among

employees to participate in the organization's goals and as organizational citizens, regardless of if they work onsite or remotely.

Keywords: remote work, employee engagement, it-bpo

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**Co-creating event Experience: a Strategy towards Destination Promotion**

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**Abstract**

With rapid technological advancement, humans' desire to explore the world has increased. From the destination's perspective, it resulted in the growth of tourists' and related tourism activities. Consequently, competition among destinations took place. To sustain in the competitive market, distinguishing from other competitors and creating a competitive edge becomes necessary. In contemporary times, the traditional methods of promoting a destination (i.e., advertising, providing complementary products, etc.) got replaced with new notions. One of them is co-creation. As the consumer-centric approach is evolving in the 21st century, people are seeking unique experiences. The adoption of co-creation in promoting a destination implies involving tourists, stakeholders and organisers in creating value to a product or service offered. The innovative strategy of co-creating experiences encourages tourists' engagement that further leads to destination promotion. Some of the notable examples of co-creation in tourism are gastronomic tours, virtual tours, and travel guides. This chapter aims to the significance of co-creation of experiences at events that leads to destination promotion. Co-creation of experiences at events brings the spotlight from the stage to the audience. The study is conceptual and presents a short case of Jal Mahotsav in Madhya Pradesh in India that adopts the multi-stakeholder approach to co-create event experience.

**Keywords:** Co-creation, Event Management, Destination Branding, Experiential Marketing, Tourism Marketing

**Introduction**

The global tourism and hospitality industry is highly competitive owing to the diversity of services offered at destinations and the ever-changing requirements of travellers. The fragmented nature of the stakeholders involved in the tourism and hospitality industry worldwide makes it necessary to focus on the quality of tourists' experiences. Subsequently, visitors' engagement in the consumption process could be considered a way to enhance their experiences. Thus, one such way to offer personalised experiences to travellers is involving them in the process through 'co-creation' (Neuhofer, 2016).

Ramaswamy & Gouillart (2010) define co-creation as the collaborative act of creating products and services by involving different beneficiaries of an organisation. In contemporary times, various companies have started utilising co-creation strategies to engage their customers and offer personalised products or services. For example, McDonald's, a popular fast-food restaurant chain

encouraged customer co-creation by organising a competition that allowed re-invention of their iconic hamburgers or Lays, a potato chips manufacturing firm that asked their customers about new flavours for their chips (Innovators, 2019). Likewise, the concept is widely discoursed and researched in the tourism and hospitality domain. The emergence of an experiential economy predominates the need for innovation to survive the fierce competition in the market. Service experience lies at the core of tourism and hospitality-related services. A tourist's perception of exchange value creation is directly proportional to the levels of authenticity and engagement while consuming the services (Choo & Petrick, 2014).

Even though the tourism sector is known to produce and consume experiences simultaneously (Tussyadiah & Zach, 2013), not all sub-sectors have gained much importance in research (Mohammadi et al., 2021). One of those sectors is events. Although some authors have studied co-creation in events such as green sports events and branding through co-creation (Bjerke & Naess, 2021), experience co-creation in food and wine tourism (S. A. S. Rachão et al., 2021) and smart event experience (Bustard, 2019). As per the limited knowledge of the authors, the existing literature fails to acknowledge the scope of co-creation in the events settings. Consequently, the present study aims to bridge the gap by determining the role of stakeholders in co-creating unique experiences at events.

Events are a part of tourism attractions and are attended to and organised by people from diverse backgrounds. In contemporary times, events and festivals have become crucial in demonstrating the uniqueness of a destination (Zhang et al., 2019). Events are a source of representing the socio-culture values and physical attributes of any destination, thereby attracting tourists and encouraging re-visitations (Getz, 2010). As tourism events aim at increasing the experiential value for visitors, Suntikul & Jachna (2016) mentioned that this value is co-created with the unique physical features of a destination.

Co-creation is largely a service-related concept introduced in 2004 (Prahalad & Ramaswamy, 2004). Until now, several studies have been carried out in the field of tourism and hospitality (Pandey & Kumar, 2021). Additionally, Campos et al., (2015) accentuate the co-creation of tourism experiences in their study whereas, (Mohammadi et al., 2021) presented a mapping study to analyse the emergence of co-creation in tourism. Based on the existing literature reviews conducted on co-creation in tourism and hospitality, it is found that the scope of co-creation in the events sector is still unacknowledged.

Accordingly, this study would fill the underlying gap by highlighting the scope of implementation of co-creation in the events sector. Consequently, with greater levels of engagement, co-creation can further be used as a tool to promote events at several destinations. Moreover, the study would also discuss the advent of the virtual dimension in co-creating events experiences at destinations.

### Research objective

Therefore, the chapter aims to signify the scope of co-creation strategy in improving the event experience that would further lead to destination branding and promotion. Co-creation of event experiences brings the spotlight from the stage to the audience and other stakeholders involved in making the event experiential. The study is conceptual and presents the case of Jal Mahotsav in Madhya Pradesh (India). The event followed a multi-stakeholder approach to co-creating the event experience and has now become a popular tourism product in the Madhya Pradesh tourism promotional campaigns.

The chapter is divided into three broad sections. Firstly, a literature review on co-creation in the tourism, hospitality and events sector is summarised; indicating the development across different countries. Secondly, the case study of Jal Mahotsav is presented that underlines the significance of co-creation in events with the help of diverse stakeholders at a destination. The case also emphasises using co-creation of events experience as a tool to destination promotion. The last section of the chapter would discuss the future directions to encourage co-creation as a branding tool in events through virtual experiences and building co-creating community.

### Literature Review

#### Co-creation

Experience is the primary element while consuming a product or a service. The notion of 'co-creation of experiences' was coined by Prahalad & Ramaswamy in 2004. The term implies co-creating unique customer experiences and adding value through a co-creation process facilitated by the service providers (Rachão et al., 2020). It is defined as "an act of creating services and products through collaboration among company managers, employees, consumers and other beneficiaries of an organisation" (Ramaswamy & Gouillart, 2010). Collaboration between the stakeholders benefits them in the co-creation process (Sthapit & Björk, 2019).

Co-creation is one of the prolific strategies that help companies drive innovation in highly competitive markets. The by-products of implementing co-creation in businesses include innovative product ideas, overcoming supply chain problems, and offering technical solutions to intricate product designing (Innovators, 2019). Some examples of co-creation are asking people for feedback about a new product and involving them in product designing.

Organisations benefit from the co-creation process since it allows them to understand the customers' likes, dislikes, and preferences and offer customized products or services. Consequently, creating a win-win situation for both organisations (customers' trust loyalty, market share, innovation) and customers (fulfilled demands). Indeed, the effectiveness of the value co-creation process depends on the intensity of customer engagement.

Jaakkola & Alexander (2014) conceptualised the role of customer engagement behaviour in value co-creation as "*the customer provision of resources during non-transactional, joint value processes*

*that occur in interaction with the focal firm and other stakeholders, thereby affecting their respective value processes and outcomes.*” Similarly Ostrom et al. (2010) reported that engaged customers are more likely to share information and seek opportunities in co-creating their experiences. Several authors have examined the role of customer engagement in value co-creation in different contexts (Buhalis & Sinarta, 2019; Lei et al., 2020; Pandey & Kumar, 2021). The existing studies on co-creation have given rise to novel concepts such as co-destruction, co-production, and prosumption in marketing and management studies. The value co-creation process has been examined from several viewpoints however, its application in tourism, hospitality and events is of greater significance owing to its distinctive characteristic of being an active service provider (Chathoth, Ungson, Harrington, & Chan, 2016).

#### Co-creation in tourism, hospitality and events

Despite being introduced as a concept in marketing studies, the subject of tourism and hospitality has largely preponderated the literature on value co-creation (Pandey & Kumar, 2021). To reason out, Mohammadi et al., (2021) mentioned that the innate characteristic of the tourism and hospitality sector i.e., the inseparability of consumption and delivery of services, makes the scope of examining co-creation larger. Considering the criticality of co-creation in-service experience in tourism-related services, numerous researchers have analysed different dimensions of value co-creation in this subject, such as Bethune et al., (2021); Kamboj & Gupta, (2018); Kim et al., (2018); Sarmah et al., (2017); and Tjandra et al., (2020) to name a few.

With respect to tourism and hospitality management, Prebensen, Kim, & Uysal (2016) defined co-creation as the interest of tourists in physical and psychological participation in any activity and its subsequent role in tourists' quality of experience (p.1). Moreover, the adoption of a value co-creation process would help companies in sustainable growth (Tuana, Rajendrana, Rowley, & Khaic, 2019). Since sustainability in tourism and hospitality is a matter of great concern for stakeholders, several authors have examined the significance of value co-creation in creating sustainability (Font et al., 2021; Plichta, 2019; Wanga et al., 2014).

The proliferation of information and communication technology helped in the development of the tourism and related sector. The emerging concept of Industry 4.0 identifies the need for innovation, customer engagement and sustainability in the business process. To face the market challenges, the tourism sector seeks a co-creation process that would help innovatively create positive experiences. Rihova et al. (2015) emphasised that the predisposition of tourism market forces is slowly shifting from “creating value for tourists” to “co-creating value with tourists”. It indicates the direct relationship between the involvement of tourists in product co-creation and their satisfaction with the destination experience (Buonincontri, Morvilloa, Okumus, & Niekerk, 2017). Moreover, several studies have indicated tourists' satisfaction with the co-creation process as they could express their needs and wants clearly, and customize the products and services in collaboration with tourism organisations (Kamboj & Gupta, 2018). Indeed, the active engagement of travellers not only

help create positive trip experiences but also help destinations create brand value and promote themselves globally.

#### Co-creation and destination marketing: multi-stakeholders' perspective

Collaboration is the key in the co-creation process of adding value to the products and services. In the majority of the cases, organisations co-create with consumers by inviting them to become part of product designing, such as Lays and BMW. However, the process of co-creation could spread its roots to other stakeholders. Collaborating with other stakeholders, for instance, co-creating in the supply chain management helps organisations to create a shared value hierarchy.

According to Deloitte Insights (2020), an effective co-creation process allows a broad range of stakeholders to support innovation in organisations. As demonstrated in Figure 1, stakeholders include suppliers, consumers, government, competitors, non-profit organisations and academic institutions. An effective co-creation process includes different stakeholders who work together to deliver value in the marketplace.

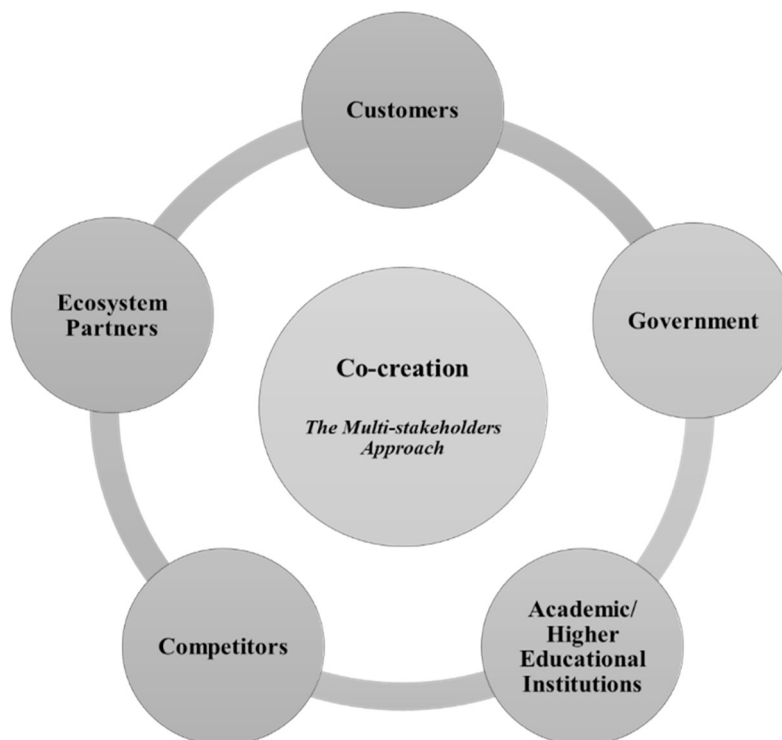


Figure 1: Co-creation with different stakeholders

Source: Adapted from Deloitte Insights (2020)

In the context of tourism and destination marketing, implementing the multi-stakeholder approach in the co-creation process would lead to the development of the tourism sector, especially events. It is noteworthy that a diverse range of stakeholders is involved in organising an event and making it successful by delivering a unique event experience to the attendees. Therefore, it would be useful to gain better insights into co-creating value with the help of stakeholders. Accordingly, the role of

different stakeholders involved in the co-creation process in destination marketing is discussed below:

1. **Travellers/Visitors/Tourists:** Tourists are the epicentre of every tourism-related activity. The unprecedented use of the internet, technologies & social media platforms has empowered travellers to get the required information search for an explored place or an accommodation and share their experiences as global citizens. The user-generated content shared by travellers, such as photos, blogs, tweets, reviews etc., impacts the perception and image of a destination in the minds of others travellers (Kim & Stepchenkova, 2015). This further increases the travellers' influence as destination marketing agents (Kim et al., 2018).
2. **Government:** While travellers play a dominant role in co-creation and promoting a destination, the role of government cannot be undermined. National, state and local government bodies should be included in promoting and branding a destination (Sahin & Baloglu, 2014). Several events have witnessed that engaging government bodies help create value. For instance, in the Gamcheon Cultural Village Project, (Hong & Lee, 2015) reported that the financial assistance provided by the central government and Busan city government encouraged the locals' participation in the project. Likewise, the Indian Government's initiative of the Swadesh Darshan Scheme in 2014 is another example of the government's role in promoting & branding destinations (Roy & Gretzel, 2020) through co-creation.
3. **Academic/Higher Educational Institutions:** Several studies have emphasised the imperative role of tourists in the co-creation process. However, promoting and branding a destination with the help of academia is unacknowledged. Higher Educational Institutes (HEIs) around a tourist destination could engage and become an essential part of the co-creation process. Chowdhary, Tiwari, & Kainthola (2020) discussed the potential of HEIs, tourism graduates and researchers in promoting destinations by following the Principles of Responsible Management Education (PRME). Encouraging students to organise, participate and promote the local events would lead to their active engagement in delivering value through co-creation. For instance, Hong and Lee (2015) suggested that continuous promotion and education would help preserve the Gamcheon Culture Village Regeneration Project.
4. **Competitors:** Committing to innovation is the new norm in Industrial era 4.0. Subsequently, companies profoundly lookout for opportunities that would help them create value- both for customers and other stakeholders. Amidst the race to offer unique experiences and deliver quality, organisations understand the significance of cooperative business environments and gradually collaborate with competitors (Proximus, 2018). It has led to a concept termed 'coopetition', and several destinations and tour organisations co-create value through competition. Miki & Canino (2018) developed a tourism coopetition model and reported seven factors. These are - co-production, co-entrepreneurship, strategic management, associationism, co-location, competition and cooperation. Therefore, tourism organisations can co-create with competitors through these paradigms in delivering services to tourists.

5. Ecosystem Partners: Co-creation in tourism and events can also take place with the help of ecosystem partners such as NGOs, local tourism bodies, tourist police, tourist facilitation offices, independent researchers, volunteers and the local community. Since tourism is a fragmented sector, ecosystem partners contribute significantly to co-creating value at the destination. However, the impact of ecosystem partners in co-creating value in tourism-related activities is largely unexplored in research.

The next session would discuss the case of Jal Mahotsav in Madhya Pradesh that implemented the multi-stakeholder approach. The event is a successful case of using co-creation to offer a unique event experience to the visitors.

#### Case of Jal Mahotsav, Madhya Pradesh

Situated at the Heart of India, Madhya Pradesh is one of the largest states in the country. The state has everything that would appeal to people of every age group. Madhya Pradesh offers exquisite attractions ranging from lush green forests of Panna to intricately carved stone temples. The mighty rivers, unique physical features, rich cultural and tribal heritage, diverse wildlife, glorious forts and palaces, age-old temples, and pre-historic caves have provided a competitive edge to state tourism. The state is a fascinating example of history uniting with colonialism and modernism in the 21st century. Owing to its grandeur tourism resources, three famous sites are listed in UNESCO's World Heritage Sites. These are – Khajuraho Group of Monuments, Buddhist Monuments at Sanchi and the Rock Shelters of Bhimbetka (UNESCO, 2021).

Indeed, the state utilises its physical features in a way to deliver unique tourist experiences at the destination. The state tourism board promotes different types of products, attracting tourists from all over the world. Furthermore, each tourism product taps the tourists' requirements and encourage engagement. One such tourism product offered by Madhya Pradesh Tourism is *Jal Mahotsav* which means *water carnival* in English. The event is held from October to January at the Hanuwantiya island near Khandwa district (MP Tourism). The island is less explored, promising to deliver a serene visiting experience for tourists. Located near the Indira Sagar Dam built on the Narmada River, India's biggest water carnival offers adventure activities to the visitors. Moreover, to provide a thrilling oceanic experience, an artificial water body has been created (Patel, 2017).

The Jal Mahotsav is well-equipped with a temporary tent city that caters to more than 100 Swiss tents. The tents provide a hassle-free accommodation unit to the visitors. The temporary city also houses a multi-cuisine dining hall and conference facilities. Moreover, the events at the Hanuwantiya island also organised several water, land and air-based adventure activities along with cultural evening, craft display, and island trekking (MP Tourism, 2020). Some of the activities organised are- cycle tours, treasure hunts, water zorbing, parasailing, tug of war, bird watching, glamping, hot air ballooning, water-skiing, kite flying, banana boat riding, and paramotoring (MP Tourism, 2020).





Figure 2: Jal Mahotsav, Hanuwantiya Island, Madhya Pradesh (India)

Source: Authors'

The Jal Mahotsav is organised and promoted by the Madhya Pradesh Tourism Board (MPTB) and offers tenders for the development and management of the event (Tourism MP). The event is a successful example of co-creation at a tourist destination because of the following two main reasons:

#### Â) Common Online Platform for Suggestions

The state government in coordination with the central government has launched a common online platform. The platform invites stakeholders and tourists to share their suggestions, opinions, and areas of improvements for the Hanuwantiya Jal Mahotsav in comments (MyGov). Introducing a common online platform and encouraging people or potential attendees and other stakeholders for discussions and putting forward their suggestions is a crucial step towards co-creating events experience at the water carnival. The MPTB's initiative to co-create event experience through a technological medium has made this event widely popular among domestic travellers.

#### B) Co-creating experience at event through activities

One of the biggest reasons for the popularity of the Jal Mahotsav is the level of tourists' engagement. The event offers a wide array of activities for people belonging to different age groups. The activities deliver a unique experience to the mind, body and soul of the visitors. From thrilling adventurous activities to spiritual exercises like yoga and meditation, the event ensures value co-creation by engaging tourists.

#### Future directions

##### Co-creating through Online Platforms

The essence of co-creation lies in collaboration. One such platform that offers shared experiences is Nibana. The platform encourages people to interact, communicate and co-create experiences at the Nibana Festival. The platform adheres to seven founding principles- Collaborative community,

Live and let live, Try, No intoxication, Loving communication, Enthusiastic consent and Care for Earth (Nibana, 2019). The development of similar platforms would be the future of co-creating experiences in events and festivals. Common online platforms like Nibana Festival encourages people to collaborate and co-create experiences and become a part of a global community.

#### Virtual Approach to Co-create Experience

The post-pandemic era has gradually signified the technological deployments in the tourism sector. These include augmented reality, virtual reality, chatbots, wearable technology, and enhanced use of artificial intelligence. The use of these tools has increasingly become crucial in the events spectrum globally (Buhalis & Leung, 2018). The developing incorporation of virtual reality in events would bring technology-driven co-creation of experiences for the visitors. Very few events have already retorted to virtual reality to co-create, such as Anheuser-Busch giving a virtual tour of St Louis brewery at the 2016 SXSW fest (Maskeroni, 2016). The immersive experience allowed attendees to see, smell, hear and taste their Budweiser.

Challenges: Nevertheless, the involvement of a diverse range of stakeholders would lead to increased engagement and co-create experiences and value, Bustard (2019) stressed the challenge of mapping stakeholders. Accordingly, the authors suggested following the conventional classification given by Freeman in 1984, which includes- competitors, media, government, customers, local community, environmentalists, suppliers and so on (Freeman, 1984).

#### Conclusion

The emergence of co-creation in strategic management and marketing decisions cannot be overlooked. In the current industrial era, delivering value holds utmost importance. Consequently, business process, product designing, supply chain management systems, service and product marketing, and service delivery aim to co-create. Co-creation has become a key element in the tourism, hospitality and events industry, where production and consumption of services take place simultaneously. If tourism products and services eliminate value co-creation, long-term survival would be questionable.

The current study proposed the significance of co-creating value with the help of multiple stakeholders, namely academia, tourists, government, competitors and ecosystem partners. Co-creating value for every stakeholder would lead to inclusive development of the tourism sector. The process of co-creation experiences should be sought in a manner that brings both innovation and sustainability while delivering value. Further, the chapter presented a case study of Jal Mahotsav, India's largest water carnival which is held every year from October to January in the Madhya Pradesh state. The event has gained huge popularity among domestic visitors and assistance from the local government bodies. Presently, the event is branded and promoted under the Madhya Pradesh Tourism Campaign as a unique product. Furthermore, the water carnival has become a hallmark tourism product in the state, and a successful example of co-creating experiences at the destination. However, there is a scope for further improvement to make this event an international

brand. For instance, event organisers can influence the co-creation experience by using virtual reality tools. It would arbitrate the impact of co-creation on visitors' satisfaction.

Learning and implementing the strategic actions adopted by similar events around the world would lead to better promotion of the event. For instance, to increase the co-creation experience, organisers at the Macao International Parade aimed to encourage interaction between the performers and attendees (Zhang et al., 2019). Consequently, they invited local schools, artists, organisations to perform in the parade, leading to attracting their families and friends who had come to cheer for the performers (Zhang et al., 2019).

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## **A Comparative Study of Corporate Governance Systems of Turkey and United Kingdom**

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### **Extended Abstract**

The aim of this study is to analyse and compare the corporate governance systems of Turkey and United Kingdom. We examined the historical development of corporate governance, theories and principles. Corporate governance in the United Kingdom (UK) has a rich historical evolution that reflects the country's socio-economic developments. Understanding this evolution provides crucial insights into the principles and practices that underpin the UK's contemporary corporate governance framework. The earlier works about this topic started in the early 20th century with the 1929 Companies Act. Despite its laissez-faire nature, it established the first framework for financial disclosure, requiring companies to publish annual reports and financial statements. (Bircher, 1988) However, it was not until the publishing of one of the most important bodies of articles in the late 20th Century until shareholders had some real protection against financial scandals.

The Cadbury Report (1992), which emphasized the importance of transparency, accountability in the corporate culture of companies, defines corporate governance as the system by which companies are directed and controlled" In a more recent report by the Organization for Economic Cooperation and Development (2015), which the UK co-founded along with 19 other influential countries of the world, builds on this definition and states that ""Corporate governance involves a set of relationships between a company's management, its board, its shareholders and other stakeholders. Corporate governance also provides the structure through which the objectives of the company are set, and the means of attaining those objectives and monitoring performance are determined". The depth and understanding that lies within the change in these definitions' points to the direction of advancement in corporate governance practices in the UK throughout the years and the pivotal role that it plays in the current business climate. There are agencies and codes that govern corporate behavior in this climate, such as the Financial Conduct Authority (FCA) and Financial Reporting Council (FRC). The FCA is the main regulatory body in the UK that regulates financial markets and firms. (GOV.UK, 2023) It oversees the conduct of these financial firms and markets by maintaining integrity, protecting consumers, and promoting healthy competition in the UK's financial markets. (GOV.UK, 2023) Whereas the FRC is an independent regulator in the UK and Ireland that focuses on corporate governance, accounting standards, and reporting (IFG, 2023). It sets accounting, auditing, and actuarial standards through various codes and guidelines and

monitors compliance with accounting and auditing standards while engaging with various stakeholders to incorporate their feedback into governance and reporting standards.

One of the most important works that was published by the FRC and overseen by the FCA is the UK Corporate Governance Code which is comprised of set of principles and guidelines for corporate governance in the United Kingdom. The document outlines various principles and provisions related to board leadership, effectiveness, accountability, remuneration, and relations with shareholders (FRC, 2023). The main premise of the code is the “comply or explain” model and is regarded as an international benchmark for corporate governance practices. (Arcot et al., 2010) "Comply or Explain" indicates that companies that are regulated by this code are encouraged to comply with the principles outlined in the code, however, if a company decides not to comply with a particular provision, it is required to explain the reasons for non-compliance (FRC, 2023). The reason that it is recognized as a best practice is due to the flexibility that it provides by allowing companies to adhere to the standards which are most suitable to their nature since have diverse structures, sizes, and business models, and what works for one company may not be suitable for another. (WBCSD, 2019) However favorable that this might sound in principle, the empirical evidence on the subject remains to be mixed. For instance, by using data from 245 non-financial companies for the period 1998-2004, Arcot and Bruno (2005) found a rising tendency to adhere to the requirements that are outlined by the code. However, there was also a rising trend of not providing cookie-cutter, non-adequate explanations of the reasons when there was a non-compliance incident which doesn't line with the spirit of the code.

Another study by Ausloss and Kyere (2020) investigated the relationship between corporate governance and firms' financial performance in the United Kingdom. The results of the empirical analysis conducted on 252 firms listed on the London Stock Exchange in 2014 reveal varying outcomes that are positive, negative correlation, as well as instances where corporate governance mechanisms show no significant impact on financial performance. (2020) Lastly, in their article, Cheffins and Reddy (2022) argue that the Code needs to be abolished all together due to being outdated, irrelevant and costly in the current market conditions. Further research into the Corporate Governance Code is needed to get a clear understanding of how it currently affects the markets, companies, and stakeholders.

Turkey, on the other hand, bears characteristics of Anglo-Saxon and European Continent Systems in terms of corporate governance practices. There are differences as regards ownership types, corporate finance, formation of Board and objectives between these two systems. For instance, Anglo-Saxon system, led by UK and the United States of America (USA) is characterized by executive dominance and originates in the economies with developed capital markets. Dispersed ownership restrains influence of certain person or group during the decision-making process. Along with shareholders reaching to information, small investors are protected through law. Boards consist of both executive and non-executive members. This system is also called as “market centred system”. It prioritizes maximization of profit. On the contrary, in European Continent System,

ownership types mostly consist of concentrated shareholding and financing. It is based on banking rather than capital markets. Two-tier Board structure is formed by high-level non-executive Board members and low-level executive members. In addition, representatives of both shareholders and stakeholders take part in Boards. This system is also called as “Network System” and it aims sustainable development (Çakalı, 2021; 23).

Turkish corporate governance practices show both Anglo-Saxon and Continental Europe systems characteristics. Particularly, credit based corporate financing in Turkey can be inferred as adoption of European Continent banking practices and do not have developed capital markets (Yılmaz, H.2008). Notwithstanding, internal and independent audit practices, short run and profit centred approaches, and corporates quoted in stock market having Board Chair and CEO(twin management) are characteristics of Anglo-Saxon system.

Capital Board of Turkey (CBT) has determined principles of corporate governance to be adopted by publicly held companies, corporations of private and public sectors in 2003. CBT revised these principles in 2005, 2010, 2011, 2012, 2013 and 2014. By obliging to establish audit committee and switching audit and consultancy, CBT has reinforced autonomy of independent audit that pertains to Anglo-Saxon model and OECD corporate governance principles (Darman, 2009).

In this research, we compared Turkey and UK corporate governance systems in terms of shareholding type, audit mechanisms and financing. We determined the similarities, differences and the problems of the Turkish system. We contributed to the literature on corporate governance by developing comparative solution suggestions for these problems.

Keywords: corporate governance, accountability, transparency, responsibility, equitability, Anglo-Saxon System, European Continent System

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## **A Comparative Study of Governance and Economic Performance of Central and Eastern European Countries and Turkey**

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### **Extended Abstract**

The aim of this study is to analyse the effects of governance on economic performance and compare Turkey and Central and Eastern European Countries in this respect. We examined the literature on governance and economic performance. Good governance leads economies to prosper and increase well being of people. Among other institutions of the Western world, European Union as a regional actor has influence on its partners more directly. In this context, negotiation process is an instrument to enable candidate countries to establish democratic institutions and improve their governance structure paving way for inclusive institutions. This relationship forms an anchor for the country to attract foreign direct investment and is reflected on economic development.

An abundant literature on the effects of governance on economic performance has emerged. Through establishment of inclusive institutions, governance encourages democratic and human development as well as economic development. Furthermore, positive effect of governance on human capital and capital investments lays the groundwork for innovation and technology transfer, investment and economic development. In this way, governance capacity of the country is led to translate economic and social resources into development.

Works of Daron Acemoğlu and others on institutions and governance that have been mostly debated and assumptions of which are commonly accepted distinguish institutions as inclusive and extractive ones. While inclusive institutions reflect positively on economic performance and human development, extractive ones pave the way for a poor nation (Acemoğlu&Robinson, 2012). Divergences among nations on development are the consequence of the features of institutions as being either inclusive or extractive. Therefore, establishment of inclusive institutions is an indicator of good governance.

Since 1990s international organisations have attached great importance at the concept of governance. World Bank, International Monetary Fund, and Organization for Economic Cooperation and Development have emphasized governance in the process of policy making. Financial contributions of those institutions have thus widely been associated with governance. The European Union as a regional integration exerting influence on its relationships with the outer world, has defined its objective as promoting peace, its values and wellbeing of people. Human rights, democracy, and the rule of law have taken place as European values and been the tools of its

external partnerships. In this respect, enlargement process has been the instrument of institutional transformation along with good governance. In 1993, the European Union has formulated the enlargement process based on Copenhagen criteria that stipulate a country to ensure the rule of law and democracy along with a functioning free market economy and the ability to take on the obligations of membership. Enlargement process encompassing Central and Eastern European countries took place on this ground.

Governance is a loose concept which can be associated with effectiveness, efficiency, transparency, accountability, predictability, sound financial management, fighting corruption, respect for human rights, democracy and rule of law (Böerzel et al., 2008;6). Those elements lead to Acemoğlu and Robinson's conceptualization of inclusive institutions (Acemoğlu&Robinson, 2012). Through establishment of inclusive institutions, governance is contemplated to encourage democratic and human development as well as economic development. Literature on the relationship between governance and economic development puts forth that good governance contributes to translating economic and social resources into development, attracting foreign direct investment and helps to combat corruption, rent-seeking behaviour and socially unfair privileges enjoyed by specific groups. (Masuch et al, 2018; 15)

The motivation behind the European Union's formulating enlargement process based on Copenhagen criteria was to transform former communist countries of Central and Eastern Europe into democratic countries with free market economies and continued negotiation process on the same grounds with Turkey by far more democratic country with free market economy. The first progress report launched for Turkey had stated that Turkey had the institutional background of free market economy(T.C. Dışişleri Bakanlığı Avrupa Birliği Başkanlığı, 2023). When the accession of Central and Eastern European Countries to the European Union was completed in 2004 and 2007, the process was just starting for Turkey. It de facto stalled in the years to come and was officially suspended in 2018. The process in which Turkey had close ties with the European Union, contributed to economic performance and human development through good governance and attracted foreign direct investment by forming a European Union anchor. On the other hand derailing from the European Union process has eroded achievements until then. Stalling negotiations and losing European Union anchor have exacerbated governance and reflected negatively on economic indicators.

Through European Union membership, Central and Eastern European Countries have performed well in terms of economic development, well-being of people and attracting foreign direct investment (Aydoğan, 2017;97). Those countries coming from command economy and its institutions had to establish institutions of free market economy, adopted European democratic values and harmonized with the European model of governance. European Union anchor has enabled foreign direct investment to flow to those countries and they have become part of global supply chains. On the other hand, democratic backsliding is the issue to be discussed for those countries, specifically Poland and Hungary of the European Union.

As put forth by North, it takes long time to establish institutions since they are affected by cultural, social, economic, and legal factors (North, 1999/2010;97-136). In the context of our comparative research, European Union process of Turkey and Central and Eastern European countries will be elaborated. Poland and Hungary of Central and Eastern European Countries and Turkey will be assessed as regards governance and economic performance considering European Union membership process and evaluated in terms of mainstreamed World Governance Indicators (WGI) of World Bank.

Key Words: governance, European Union anchor, Central and Eastern European Countries, WGI

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## **Customer Insights in the Clouds: A Study of duty-free online Review Analysis for Satisfaction Assessment**

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### Introduction

The Republic of Korea's duty-free retail industry has emerged as a powerhouse within the global commerce arena. Boasting staggering annual revenues and attracting millions of visitors, this sector has not only become an economic linchpin but also a pivotal gateway for cultural exchange and international trade. According to recent statistics from the Korea Duty-Free Shops Association (2023), the year 2022 witnessed a staggering 10,831,031 individuals visiting duty-free establishments, with domestic consumers accounting for 9,267,985 and foreign consumers numbering 1,563,046. The total revenue generated from these transactions surpassed an astounding 13.78 billion USD.

In the Republic of Korea, Value Added Tax (VAT) and Individual Consumption Tax are not included in the cost of products at duty-free stores. Duty-free shops normally exist in airports and areas of downtown, and are maintained by major department store chains such as Lotte, Shilla, and Shinsegae (Visit Korea, 2023). The current duty-free industry in the Republic of Korea has established itself as a national representative in the retail sector, promoting Hallyu (Korean Wave) and domestic products abroad. It has become a key shopping infrastructure for attracting foreign tourists.

In this context, online reviews, especially Google Maps reviews, stand out as a valuable reservoir of unaltered consumer opinions (Handani & Kim, 2022). With millions of users globally providing candid feedback, when this platform is utilized effectively, and can offer insights into the duty free experience and satisfaction. Through the application of frequency analysis, co-occurrence analysis, and sentiment analysis, this research endeavors to uncover and evaluate the customer experience and satisfaction levels within the duty-free sector of the Republic of Korea. By tapping into the extensive consumer-generated content on Google Maps, this study aims to uncover concealed patterns, preferences, and trends. These insights hold the potential for enhancing customer experiences and guiding strategic decisions for industry stakeholders.

### Methodology

This study focuses on qualitative analysis through several analyses. The data collected and used in this study are gathered from online reviews of 6 different duty-free stores in the Republic of Korea. After the data is collected, the data go through frequency and co-occurrence analysis to identify the recurring themes and associations. Followed by sentiment analysis with Azure

machine learning and the last part will be the grouping of the sentiment analysis results. The analysis result will be interpreted based on the categorized groups. Furthermore, it will aggregate sentiment scores to gauge overall customer satisfaction.



Figure 1. Research Flow

## Results

This paper utilized Outscraper to gather the online review of duty-free in Korea to evaluate customer satisfaction. After receiving the raw online review, this study utilized the KH Coder to perform the frequency and co-occurrence analysis. Based on the frequency analysis, the top 10 frequently mentioned words are good, store, shop, many, free, shopping, place, nice, department and floor. The top frequently mentioned words are presented in a bigger circle size in the co occurrence graph. As for the co-occurrence analysis, it shows the connection between words through the connecting line between words. This study also groups the co-occurrence network analysis results into three main groups that are affecting customer satisfaction. The previous study mentioned that there are several things that contribute to the satisfaction of visitors in the duty free (Park et al., 2013). The first group is the customer value which includes words such as luxury, comfortable and event. Next is the image of duty-free in Korea which shows that it's perceived as a place to shop for Korean cosmetics. The last group facilitating condition shows that the shopping experience there is nice and convenient, as shown by the words.

This study also utilized the sentiment analysis to evaluate the online review whether it's a neutral, negative or positive review (Harfoushi et al., 2018). Using the Azure machine learning we received the polarity of each review and through that result, the data was processed in the KH Coder to find the words related to each polarity. It is important to understand the subjectivity, readability and linguistic accuracy of online reviews since it could directly affect people's perception of comments and decisions. using sentiment analysis, researchers can understand the polarity of online reviews that extend to the explanation of customers' ratings and variations (Luo et al., 2021). In this study words such as nice, convenient, friendly and food are all highly related to the positive polar which can be seen in reviews such as "Transportation is convenient because it is in the city centre, all stores are clean, and all employees are friendly.". On the other side of the polar words such as customer and items are in the negative polar side which is shown in the reviews for example, "No variety of items" and "Customer service at the Kakao store was horrible".

## Discussion and Conclusion

Based on the co-occurrence network result, this study confirms that these three clusters are the things that are affecting customer satisfaction in duty-free in the Republic of Korea. Therefore, it is

important for stakeholders to pay attention to these three clusters which are facilitating condition, customer value and image. By looking at the sentiment-based co-occurrence network analysis, this study verified that there are several words that affect customers' opinions and perceptions. Words such as place, parking, shop, and product are frequently mentioned and they create different perceptions of customers. At the current moment, there are lack of previous study that investigates online review regarding duty-free. With this being said, this study contributes to the industry theoretically and at the same time provides insight for stakeholders to increase customer satisfaction which can lead to other financial benefits.

**Keywords:** Duty-free, Republic of Korea, Big data analysis, Sentiment analysis, Co-occurrence network analysis

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## **Exploring Factors influencing Engagement in GIG Work**

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### **Abstract**

Our lives and work cultures have undergone a fundamental transformation because of technological advancements like artificial intelligence and the internet of things, so is the form of work. It has opened up new ways of doing work and gig work is one of those new forms of work. People are attracted towards working in gig economy as it offers flexibility, independence and autonomy. There are many factors that motivate the gig workers to work in gig economy. The current study is based on the variables identified in previous studies and a modified model using the constructs of SDT and UTAUT 2 is developed. This model will be used to identify the various motivational orientations that persuade the gig workers to work in this contingent form of work. This would be a study which will be contributing to enrich the existing literature and more useful to platform operators and owners to lure the unemployed as well as employed people to work in gig economy.

**Keywords:** intention of gig workers, motivation, SDT, UTAUT2.

### **Introduction**

Recent technological breakthroughs have significantly altered the landscape of modern living. Fourth Industrial Revolution: Our lives and work cultures have undergone a fundamental transformation because of technological advancements like artificial intelligence and the internet of things (Schwab, 2017). The growing demands of corporate life, the nosy boss, and ineffectual office politics led to the emergence of independent work. Youth do not want their abilities to be constrained by stereotypes of traditional 9–5 employment. The young people of today want flexible work schedules that offer room for advancement and a good work-life balance. They don't want to be bound by the traditional employer-employee relationship, which is why they want to operate autonomously (De Stefano, 2016). the usage of artificial intelligence. New job profiles will consequently emerge, prompting the need for businesses to hire qualified people. According to Stanford (2017), businesses will find it more practical to hire workers on a project-by-project basis as opposed to permanently. Temporary, ad hoc, freelancing, or other non-permanent kinds of employment make up the gig economy. It differs from the conventional permanent, full-time workforce. One of the traits that defines the gig economy is the almost universal recognition of those working in this sector as independent contractors rather than workers of the company they represent. The two main kinds of gig workers, or people who earn a living outside of the conventional employer-employee relationship, are platform-based employees and non-platform based employees. Platform employees use online tools or digital platforms to carry out their tasks. Non-

platform gig workers are neither unemployed nor permanent employees; instead, they are casual wage workers and own-account employees in traditional firms. They can work either part or full-time (Aayog, N. I. T. I., 2022).

#### Intention to Participate in Gig Economy of Gig Workers

Due to a number of circumstances, more and more people in the workforce today intend to participate in the gig economy. The promise of flexibility and independence that gig economy offers is one of its main draws. Because it enables them to plan their schedules, balance various commitments, and exert more influence over their professional lives, many people are drawn to this type of job (Manyika et al., 2016; Rockmann & Ballinger, 2017). Additionally, the gig economy frequently supports both the pursuit of individual passions and the need for several sources of income. According to Archak (2010) and Kaufmann et al. (2011), people are choosing gig labour not just out of necessity but also out of preference in order to find fulfilment and happiness in their autonomous endeavours. Additionally, the explosion of online platforms and the quick development of technology have made it simpler than ever to access gig possibilities, which has increased interest in joining this dynamic and developing area of the labour market (Rockmann & Ballinger, 2017).

The Self-Determination Theory (SDT), which explains that humans have fundamental psychological desires for autonomy, competence, and relatedness, has strong ties to the concepts of the gig economy. Due to the alignment, it provides with these essential human needs, people are becoming more and more attracted to this type of work in the context of the gig economy. The existing literature (Lakhani and Wolf, 2005; Archak, 2010, Brabham, 2010, Bayus, 2010; Manyika et al., 2016, Heeks, 2017, Shapiro, 2018, Lehdonvirta, 2018) highlighted a number of variables that motivate engagement in crowdsourcing communities, sharing economies, and gig economies. But only one or two elements are used in the investigation. In contrast, Bayus (2010) found that participants were encouraged to participate more actively in commenting on others' views by a sense of community. For example, Brabham (2010) argued that participants were motivated by the possibility of financial benefits and freelance employment. According to research by Zhong et al. (2011), people enjoy contributing when they believe their work is significant and makes sense to them. The effect mechanisms, however, change dependent on the motivational type and have each been explored individually in distinct research (Deci et al., 1985). It is essential to combine these diverse incentives into a unified framework in order to better understand how participants' creativity performance is impacted by motivations. A similar technique can help in discovering methods to encourage people to come up with creative and excellent ideas. According to SDT, people are motivated to start and maintain behaviors to the extent that they believe their efforts will lead to the desired outcome (Ryan & Deci, 2000). The incentive to participate in gig work is governed by both extrinsic and intrinsic variables. SDT gives us a well-organized framework for categorizing various reasons. According to SDT, there are four different types of extrinsic motivation: integrated motivation, introjected

motivation, identifiable motivation, and external motivation. Extrinsic motivation is not a single thing. This classification depends on how much people internalize the intrinsic worth and order of tasks (Gagne & Deci, 2005). when they believe that their actions will lead to the desired outcome (Ryan & Deci, 2000).

UTAUT 2, which stands for "Unified Theory of Acceptance and Use of Technology 2," is a prominent model in the field of technology acceptance and adoption. It builds upon the original UTAUT model and was developed to provide a comprehensive framework for understanding how users adopt and making use of technology. The major constructs involved are performance expectancy, effort expectancy, social influence, facilitating conditions, hedonic motivation, price value, habit, trust (Venkatesh et al., 2012)

UTAUT 2 is a flexible framework that may be used to understand user behaviour and acceptance of new technology across a variety of areas (Hongxia et al., 2011; Lwoga, 2017; Widodo et al., 2019; Tenk et al., 2020). Its wide usage is due to its holistic approach in considering the various factors that influence technology acceptance and use, making it a valuable tool for researchers, businesses, and policymakers.

### Purpose

A new economic revolution is being ushered in by the fast-growing gig economy. According to the NITI Ayog estimate from 2021, there would be 2.35 crore (23.5 million) jobs in the gig economy by 2029–2030. This demonstrates how the gig economy would see exponential expansion. In order to draw in so many people, the gig economy must offer something unique. It can increase a nation's GDP and create a vast number of job possibilities. This served as the impetus for a boom in this area of study. Numerous studies on a range of gig economy-related topics have been conducted in recent years. The vast majority of studies conducted are conceptual, and very few studies have been practically tested. There is an urgent need for empirically proven research to enable platform owners who provide gig labour make concrete judgments. It would also assist gig workers in making decisions linked to gig employment (Spreitzer et al., 2017; Kumar et al., 2018; Banik et al., 2021). Although the research has been carried out in the pursuits of a uniform definition and classification of gig work (Stewart & Standford, 2017; Ahsan, 2018; Howcroft & Bergvall-Kareborn, 2019; Shafiei Gol et al., 2019); the earnings mechanism offered by gig and how gig workers are able to manage their earnings while working at gig platforms (Arenas et al., 2018; Graham & Anwar, 2018; Doucette and Brandford, 2019); the need for regulatory transformations to protect the gig workers (Manyika et al., 2016; Hawley, 2018; Wood et al., 2019; Vallas & Schor, 2020); the use of algorithmic management for the measuring and managing the gig workers (Shafiei Gol et al., 2019; Veen et al., 2020) and the other related areas but the motivational orientations or the inducement for participating in gig economy is somehow not tested empirically so far.

## Methodology

The modified model using the constructs of Self Determination Theory (Ryan & Deci, 2000) and UTAUT 2 (Venkatesh et al., 2012) are used. Content validity pertains to the degree to which an instrument effectively represents the constructs under investigation. It is a quality that cannot be assessed through statistical measures; instead, it hinges upon the discernment and insights of experts. To ensure content validity in the current study, measurement scales have been chosen meticulously, ensuring they comprehensively encompass the relevant elements of the construct. Furthermore, their reliability and validity based on previous research. Additionally, feedback and opinions from experts and academic practitioners were considered in improvising the proposed scale.

## Research Objective

The aim of the current study is to explore whether a modified model using SDT and UTAUT 2 constructs can be used to study the motivational orientations of gig worker to work in online gig work. Which factors motivate them to prefer working in gig economy.

## Literature Review

The diligent review of literature illustrates that Self Determination theory is used in sharing economy, collaborative economy, platform economy, which paralleled with gig economy. Numerous studies demonstrate that as self-determination behaviour levels rise, the impact of the afore mentioned behaviour also rises. Additionally, self-determination behaviour is more consistent and better complies with social networks (White, 2015). Similarly Unified Theory of Acceptance and Use of Technology (UTAUT) developed by Venkatesh et al. (2012) is widely used extensively to study the impact of use of technology on behaviour intention of people (Gefen et al., 2003; Zhang and Moon, 2013; Slade et.al., 2015; Lwoga, 2017

**External Motivation:** An individual's desire to accomplish a desirable result or avert an unfavourable outcome is referred to as external motivation. It is affected by incentives, compliments, tips, and extra work (Archak, 2010). The desire for financial gain is the primary external motive for individuals working on platforms for the gig economy (Brabham, 2008; Kaufmann et al., 2011; Pilourdault et al., 2018; Posch et al., 2019). Instant payment options and rewards like points serve to draw individuals to gigs (Mahmod & Hassan, 2020). The literature supports that these elements strengthen the intention to join in the gig economy.

**Introjected Motivation:** Acceptance, utility, and happiness, as well as a sense of achievement and validation, are the driving forces behind the gig economy (Brabham, 2008; Rockmann & Ballinger, 2017). It provides adaptability, social connection, and status and knowledge validation (Lakhani & Wolf, 2005). Autonomy and intrinsic drive are essential because they allow people to feel in charge of their job and to explore important facets of who they are (Ryan & Deci, 2000). Introjected motivation and participation intention do certainly have a positive connection.

**Identified Motivation:** Identified regulation is a self-sufficient type of extrinsic motivation in which people participate in activities because they find them meaningful and important (Ryan & Deci, 2000). This drive fosters a sense of genius and social identity while increasing emotional connection and investment (Allen & Meyer, 1996). Participants think that using gig platforms will help them develop their talents and creativity (Brabham, 2008). The participant is thus inspired to give all of their efforts to providing solutions and remarks, which may heighten their perception of brilliance and social identity (Archak, 2010).

**Integrated Motivation:** Participants who experience integrated motivation perceive their work as meaningful and important, which can build a sense of duty and commitment on their part and promote loyalty and continued involvement. (Zhong et al., 2011; Brabham, 2010). The maximum level of autonomy within extrinsic motivation is represented by integrated regulation. People engage in an activity when it is consistent with their underlying beliefs and sense of who they are (Ryan & Deci, 2000). The individual's identity has thoroughly assimilated and incorporated the behavior. Building a virtual community helps people feel more a part of it and gives them the freedom to follow their actual desires.

**Intrinsic Motivation:** People, especially women, are mostly driven to work on gig platforms by their own intrinsic incentive (Mahmod & Hassan, 2020). It means giving them the choice to choose their skills while freely undertaking interesting, unusual, and difficult jobs. These pull factors, sometimes referred to as intrinsic variables, support employees' favorable perceptions of on demand labor and employers (Keith et al., 2019). Gig work is a desirable alternative for women since factors like autonomy (Manyika et al., 2016), flexibility (Rockmann & Ballinger, 2017), and social interactions (Gagne & Deci, 2005; Hon, 2012). foster creativity and learning outcomes.

**Social Influence:** The term "social influence" describes how friends and family might affect someone's decision to adopt new technology (Venkatesh et al., 2003). Users frequently base their acceptance of new technology on the opinions of those in their social group. Social variables have a big impact on whether or not someone will use mobile payments (Slade et al., 2014). Social influence is the second most significant component in affecting behavioral intentions, according to research by Yang et al. (2021). Decisions are also influenced by peer pressure, particularly when novel types of employment are introduced (Puschel et al., 2010; Tenk et al., 2020). The gig economy, a new type of employment, is impacted by the experiences of current employees who share their insights and encourage their acquaintances to pursue this type of employment.

**Facilitating Conditions:** Infrastructure and technical assistance make it easier to use new digital technology (Thompson et al., 1991) The level of IT assistance required to use new technique of performing work digitally is referred to as facilitating conditions (Venkatesh et al., 2012). Those who use are more inclined to new technology if it is simple to use, supported by technical help, and connected to the internet (Hossain et al., 2017). According to research, enabling factors greatly increase users' behavioral intentions while positive facilitation conditions encourage Japanese

citizens to adopt digital payments (Amoroso & Watanabe, 2012; Widodo et al., 2019). Participation in gig labor also requires the help of IT infrastructure.

**Hedonic Motivation:** Hedonic motivation is the expectation that a user will enjoy utilizing a technology (Venkatesh et al., 2012). Hedonic motivation, according to users, was the most accurate indicator of behavioral intentions while adopting and using a new technology. (Venkatesh et al., 2012; Alalwan et al., 2018). Research by Kim et al. (2008) indicates that consumers favor using technology that they enjoy. According to Widodo et al. (2019) and Slade et al. (2014), hedonic incentive has a relatively small role in determining users' intentions. According to Venkatesh et al. (2012), hedonic motivation is the second most crucial factor in establishing its relationship with behavioral intentions. More people are choosing to work in the gig economy due to its advantages of flexibility, independence, and freedom.

### Conceptional Framework

The objective of current study is to understand and evaluate the factors that influence people's decision to work in the gig economy. Deci & Ryan (1985) assert that the key mechanism causing people to engage in specific behaviours and take appropriate action is motivation. The Self Determination Theory has been used to examine the variables affecting attitude and targeted behaviour. And when it comes to consider the person's intention to use a new kind of technology or pathway, UTAUT 2 has been used extensively. Countless pragmatic studies were conducted to predict and explain the attitude towards mobile banking (Zhou and Wang, 2010; Al-Saedi et.al. 2020), mobile wallets (Hongxia et.al ,2011; Slade et.al.,2015; Teo et al., 2015; Min Tun ,2020), internet banking (AbuShanab & Pearson, 2007; Tarhini et al., 2016 ; Rahi et al., 2018) m commerce (Min & Qu, 2008; Wei et al., 2009; Chong , 2013) and many more like this. Since for this study we are considering the gig workers working through online mode with the help of digital platforms. Since technology is being used by them for working with these digital platforms, three constructs which are associated with the current study are being taken into account. So, a modified model having constructs of SDT and UTAUT2 are being used to review the intention of gig workers towards working in gig economy.

The careful analysis of literature demonstrates how the self-determination theory is applied in the platform, sharing, and collaborative economies, which are similar to the gig economy. Numerous research show that the impact of the aforementioned behaviour increases along with self determination behaviour levels. Self-determination behaviour is also more reliable and better fits in with social networks (White, 2015). UTAUT 2 is a well-accepted model to study the behaviour intentions by using or accepting new technology. Keeping these in mind a modified model taking inputs from these two theories are being used for the current study and the model having constructs of both these models is framed and proposed. Facilitating conditions, social influence and hedonic motivation amongst eight constructs of UTAUT 2 are being considered as these are in congruence with internal and external motivation which are the foundations of SDT theory.

Proposed Research Model to Determine Intention to Participate: External Motivation, Introjected Motivation, Identified Motivation, Integrated Motivation, Intention to Intrinsic Motivation, Facilitating Conditions, Hedonic Motivation, Social Influence, Participate.

## Discussion

Extant literature is available on burgeoning topic of motivation and based on these insights have been drawn to include the constructs of SDT and UTAUT 2 as factors motivating the gig workers to work in gig economy. Financial rewards and tips serve as external motivators, enticing individuals through tangible incentives, such as money, to achieve specific goals or perform desired actions (Archak 2010; Bayus (2010); Kaufmann et al. (2011); Posch et al. (2019). Similar results are corroborated that when individuals receive recognition for their efforts, it can encourage them to take on more tasks or challenges, driven by the desire to maintain the positive feedback and continue to excel in their roles. This external motivation often fosters a sense of achievement and commitment to their work (Di Palantino & Vojnovic, 2009). A sense of being successful reflects the feeling of accomplishment and achieving personal goals. Doing one's best signifies giving maximum effort and striving for excellence (Krishnamurthy, 2006; Brabham, 2008). Introjected motivation stems from personal standards or the desire to maintain self-esteem, often pushing individuals to display their abilities as a means of self-validation or recognition (Lakhani & Wolf, 2005; Rockmann & Ballinger, 2017). Experiencing a sense of glory when receiving positive feedback represents the pride and satisfaction that comes from recognition and validation. People feel motivated when they have control over their decisions (Lakahani & Wolf, 2005; Manyika et al., 2016). Flexibility and ease in performing work can enhance the motivation to work in gig economy by reducing barriers and enabling individuals to engage more freely in tasks that align with their interests and values (Rockmann & Ballinger, 2017; Lehdonvirta, 2018).

Through peer pressure, social norms, or the expectations of others, people may be motivated to conform, excel, or change their actions to align with the values or desires of their social group (Hongxia et al., 2011; Slade et al., 2014; Tenk et al., 2020). When facilitating conditions are favourable, they can boost motivation by reducing barriers and increasing the likelihood of task completion. The technical support and internet connectivity are the important parameters to motivate the people to work for digital platforms (Amoroso & Watanabe, 2012; Widodo et al. 2019). People are inclined towards some new activity only when it adds to their enjoyment, and the idea of seeking enjoyment and positive experiences while avoiding discomfort or negative feelings motivated them to indulge in any new sort of arrangement (Alalwan et al., 2018; Widodo et al., 2019).

## Implications

The current contribution will be an addition to the existing literature available on gig economy or gig workers. The literature so available is so far either theoretical or based on qualitative research.

Very few papers are of empirical nature. This study will surely be enhancing the existing literature when it will be tested empirically. By using this model, Platform operators in the gig economy can improve the participation of gig workers by understanding their motivations. The results of the model may help operators to customize the onboarding process, provide clear information about job opportunities, and promote autonomy by granting workers more control over their work. Skill development is another key motivator, and operators should offer opportunities for skill enhancement and training. Mechanisms for feedback and recognition are also essential for fostering a sense of worth and belonging. Building social features within the platform fosters social relations and involvement. Operators should offer support services and benefits tailored to their specific needs, such as health benefits, financial advice, or personal growth resources. Fair compensation is essential, and open communication channels, regular surveys, and research can provide valuable insights into their motivations. Operators should remain flexible in policies and practices, ensuring ethical and fair treatment, respecting workers' autonomy and well-being. Ultimately, by understanding the motivations of gig workers and proactively aligning platform practices with these motivations, operators can foster higher job satisfaction, boost worker retention, and maintain a highly motivated workforce, contributing to the mutual benefit of both gig workers and platform operators in the gig economy.

Other than platform operators, the public would be aware of the motivational orientations for this new form of work, and they might engage in such work and supplement their earnings. The employers requiring ad hoc workers can also provide employment opportunities keeping in mind the motivational factors influencing the persons to work for this kind of jobs.

## Conclusion

The modified model using the two most reviewed models i.e. SDT and UTAUT2 may produce desirable results when tested empirically. It is well accepted that both internal and external factors of motivation influence the decision of whether participating or not in a particular form of work. Surely this modified model may open up the possibilities for further research by adding or deleting certain factors affecting motivation. Moreover, the moderating effect of personal and psychographic factors can also be studied to comprehend this modified model.

## Originaliy of the paper

The current research work is using the integrated scale combining the constructs of SDT and UTAUT2 to study the motivational orientations of the gig workers. The literature reviewed so far has not used the combinations of these two, rather individually they are being used in numerous research papers and projects. The current study would surely be adding something of value to the existing literature on gig economy.



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**FinTech: A new Era of financial Inclusion**

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**Introduction**

A new era of financial inclusion has been ushered in by financial technology, or fintech, which has emerged as a revolutionary force within the financial industry. Fintech is the fusion of finance and technology, utilizing innovation to make financial services accessible and inexpensive for formerly marginalized and underserved groups (Mhlanga, D. 2020). The way people, companies, and entire economies deal with money could be completely transformed by this convergence of finance and technology. According to (Setiawan, et.al. 2023) examine the development of fintech and its contribution to greater financial inclusion in this succinct introduction. Financial services accessibility is a basic human right and a major factor in both economic expansion and the fight against poverty. But a large portion of the world's population has been excluded from the conventional financial system, often due to factors such as geography, socioeconomic status, or restricted access to physical bank branches. This financial isolation impedes economic expansion and maintain inequality (Beck, et.al. 2007). In the past, established financial institutions have prioritized serving wealthy and urban clients over those in rural and underdeveloped areas. This restriction ultimately resulted in a growing wealth disparity and a lack of financial empowerment for underprivileged groups. In response to these difficulties, fintech arose, providing a novel and more accessible, affordable, and inclusive approach to financial services (Nkalubo, A. E. 2021). Financial services accessibility is a basic human right and a major factor in both economic expansion and the fight against poverty. Leading the way in the financial technology revolution are fintech companies, which leverage technology to offer cutting-edge financial services. The dominant market participants are fintech companies, who create and provide a broad range of fintech products. Fintech businesses frequently work together with other organizations in the fintech ecosystem, including regulators, financial institutions, technology suppliers, and customers. Institutional investors, private equity firms, and venture capitalists provide money to a large number of fintech companies. Partnerships between fintech businesses and traditional banks and financial institutions are common (Cumming, D. J., et.al. 2018). In general, fintech businesses play a major role in the expansion, evolution, and development of the financial services sector. They are dynamic, ever-evolving organizations that adapt to the shifting needs of businesses and consumers in the digital age.

### Purpose

The present research's main goal is to thoroughly assess how fintech is helping to advance financial inclusion in India. It also analyzes the current state of financial inclusion by determining the gaps and disparities in access to financial services among various demographic groups and geographical areas, as well as the degree to which financial inclusion has been achieved in India (Dixit, R., & Ghosh, M. 2013). Understanding the fintech landscape entails investigating the various fintech technologies and solutions that have arisen to solve issues with financial inclusion. Fintech or financial technology, refers to businesses that use technology to provide cutting-edge financial services and solutions (Lee, I., et.al. 2018). They improve accessibility, cut expenses, and streamline procedures. They improve accessibility, cut expenses, and streamline procedures. Fintech companies frequently target MSMEs by giving them access to credit, effective money management tools, and payment processing services. Artificial intelligence (AI) is essential to improving financial services' precision and effectiveness (Rutten, M. J. 2021). Algorithms that use machine learning may evaluate credit risk, handle customer service automatically, and offer tailored financial guidance. AI-driven underwriting models have the potential to facilitate MSMEs' access to loans and other financial services. The potential of peer-to-peer lending and microloans has been unleashed by fintech platforms, offering much-needed support to small business owners and entrepreneurs for microfinance & assistance for small businesses. Fintech is making loans in areas where traditional banks have been hesitant to do (Rubini, A. 2018). All operations of digital banks take place online, offering consumers and companies an affordable and easy option to obtain banking services. A larger population can access these banks more easily, including people who might not be well-served by conventional brick-and-mortar banks (Kendall, J., Mylenko, N., et.al. 2010). The foundation of many economies is comprised of small and medium-sized businesses. Nonetheless, they frequently encounter difficulties obtaining credit and financial services. AI-powered fintech solutions can offer MSMEs customized financing products, enabling them to expand and generate employment (Gupta, R., et.al. 2021). Ensuring that all people and businesses have access to necessary financial services, irrespective of their location or economic condition, is the aim of financial inclusion. This covers insurance, loans, savings accounts, and more.

### Methodology

The process of conducting secondary research include gathering and examining previously published reports, articles, and data. There are some ways that you can use secondary research techniques to bolster your fintech and financial inclusion studies. Literature analysis to find previous research, studies, and scholarly articles on fintech, financial inclusion, artificial intelligence, digital banking, and MSMEs, do a thorough literature review. Look through the literature for patterns, insights, and gaps. NGO and government reports from international organizations, non-governmental groups, and government agencies. These studies frequently include insightful information and useful statistics about laws, financial inclusion programs, and the effects of fintech.

### Discussion

Of course, this is a succinct summary that focuses on how fintech is influencing the next phase of financial inclusion. Within the field of financial technology, or fintech, the union of creativity, online availability, and financial accessibility is catapulting the financial environment into a new century (Siebel, T. M. 2019). Leading this change is fintech, which serves as a catalyst and a remedy for the problems associated with financial inclusion. Financial inclusion is greatly aided by fintech. Fintech companies are increasing access to financial products and services, especially in underserved regions, through digital banking, mobile payment solutions, and AI-driven services. Fintech addresses the particular requirements of MSMEs, or micro, small, and medium-sized enterprises. These companies prosper and support economic growth because of effective loan platforms, payment processing systems, and accounting tools. Accuracy and personalization of financial services are being enhanced by the use of artificial intelligence (AI) into fintech (Guo, H., et.al. 2021). This improves client satisfaction and makes customized financial solutions available to both people and companies. It is still a shared goal to make sure that everyone can benefit from fintech, and fintech will be essential to reaching this goal. In conclusion, fintech is transforming how individuals and organizations access, use, and profit from financial services, and it is a major factor in the new era of financial inclusion.

### Scope for future Research

These fields of research have many potential to further our understanding of the ways in which digital banking, fintech, AI, and MSME support can help to improve the financial well-being of enterprises and individuals globally and to increase financial inclusion (Darma, D. C., 2020). In this dynamic and ever-evolving sector, researchers and policymakers will continue to collaborate to address issues and take advantage of possibilities. Fintech is projected to significantly enlarge the population and MSMEs with greater access to banking services, especially when combined with digital banking. More people may have access to savings accounts, loans, insurance, and payment services, including the underbanked and unbanked, according to the research (Thomas, H., & Hedrick-Wong, Y. 2019). Research may show that the use of AI in fintech has improved financial process efficiency. Financial institutions and clients may both see cost savings as a result, lowering the cost and increasing the accessibility of financial services. Also indicate that the fintech help given to MSMEs has resulted in these companies' expansion, the creation of jobs, and regional economic development. The cost and increasing the accessibility of financial services.

### Implication

Financial inclusion generated by fintech has huge ramifications that affect many facets of society, the economy, and financial systems. Fintech can open up banking services to underserved and unbanked communities, enabling them to save, invest, and obtain credit. As a result, possibly a reduction in poverty and a more equitable allocation of financial resources.

Keywords: Fintech, Financial Inclusion, Technology, Artificial Intelligence.

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## **Transformative Potential of Mindfulness in the Organization**

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### **Introduction**

The idea of mindfulness in the workplace has become popular in recent years and is a fast expanding field of study because it can improve worker well-being and increase corporate effectiveness as a whole (Hyland et al., 2015). This method lays a lot of focus on developing work settings where staff members are enabled to be fully involved and acutely aware of their activities, their coworkers, and the larger dynamics at play in the workplace. Growing a keen awareness of the present moment is the fundamental component of mindfulness in the workplace (Shonin et al., 2015). When applied carefully, mindfulness practices have been demonstrated to provide a wide range of advantages for both the people using them and the organizations they support. One of the most notable benefits is the decrease in employee stress. Mindfulness activities provide a break from the demands of the modern workplace, which can cause emotional exhaustion and burnout. By promoting complete present-moment awareness, people can enhance their stress management skills and reclaim control over their professional lives. Additionally, mindfulness practices give workers the ability to make wiser decisions (Daniel et al., 2022). Their elevated consciousness allows them to tackle obstacles with more clarity, take into account other viewpoints, and reason more logically. Organizations can anticipate better decision-making procedures and results as a result, which are essential for success in a business environment that is becoming more competitive and complex (Hair et al., 2019). The growth of employees' emotional intelligence is another significant advantage (Humphrey et al., 2013). Through the cultivation of a more profound awareness of one's own emotions as well as those of coworkers, mindfulness activities can enhance interpersonal connections and communication. This enhances team cohesion and promotes workplace harmony, both of which are beneficial to the organization as a whole. Mindfulness in the workplace is proving to be a helpful method for fostering employee well-being and increasing overall organizational effectiveness in this age of rapid change and increased working pressures (Knight et al., 2019). An increasing number of businesses are seeing the benefits of incorporating mindfulness into their corporate cultures in order to foster happier, more efficient workplaces, as research on the subject continues to demonstrate.

### **Methodology**

The research methodology entails a thorough analysis of secondary data sources, such as scholarly papers, business reports, and case studies of workplace mindfulness (Reina et al., 2023). These data come from reliable databases, surveys, and research papers, enabling a comprehensive



examination the effects of mindfulness on worker wellbeing and organizational success in many business scenarios (Goswami et al., 2023).

## Discussion

Being mindful is more than just a trend; it is a potent weapon that has the potential to significantly alter the current business landscape (Sharma et al., 2023). Mindfulness stands out as a catalyst for change and long-term success as we work to adapt to a constantly changing environment (Shahid, 2023). A future where organizations and their stakeholders are more aware, compassionate, and successful may result from more study and practical application of mindfulness in diverse industries.

## Dynamics of Mindfulness

The dynamics of mindfulness in the workplace demonstrate its capacity for transformation by boosting innovation, increasing leadership, and encouraging moral decision-making for long-term success.

1. **Employee Well -Being:** The enormous contribution that mindfulness makes to improving employee well-being inside enterprises has come to be recognized. Employees can better handle the demands of the modern workplace by practicing mindfulness, which encourages self-awareness and stress reduction (McGarrigle et al., 2011). Mindfulness practices help workers feel less stressed, anxious, and burned out. This directly results in more content and engaged employees as well as improved overall job satisfaction. As people look for companies who value their mental and emotional well-being, improved well-being is a crucial component for luring and keeping top talent.
2. **Performance and Productivity:** Practices of mindfulness have a significant impact on effectiveness and productivity. Employees are better able to focus, think creatively, and solve problems as a result of these improvements (Zada et al., 2015). Employees who are mindful are more capable of handling workloads and expectations because mindfulness creates a resilient mentality. As a result, firms see an increase in productivity and better work quality. Additionally, mindfulness fosters innovation, making it a vital resource for businesses looking to gain a competitive edge in today's quickly changing market.
3. **Leadership and Management:** Emotional intelligence, compassion, and the capacity to effectively comprehend and handle the problems of teams are all characteristics of mindful leadership (Melita Prati et al., 2003). Positive effects on employee engagement and morale are produced by mindful leaders who foster a more peaceful work environment. Leaders who practice mindfulness are more empathetic and emotionally intelligent, two traits that are crucial for successful management and long-term organizational success.
4. **Communication and Conflict Resolution:** In the workplace, mindfulness promotes better communication and dispute resolution (Kay et al., 2020). Enhancing relationships and teamwork requires being totally present and paying attention to coworkers. As people learn

to control their emotions and react to difficulties calmly, conflict resolution becomes more effective. A more unified workplace is facilitated by improved communication and conflict resolution abilities, which also promote better problem-solving and decision-making.

5. **Competitive Advantage:** Organizations that practice mindfulness have a distinct advantage in a cutthroat business world (Wagner III et al., 2020). Employers may adapt, innovate, and thrive with the help of mindful practices, setting up the business for long-term success. Because it demonstrates a dedication to employee growth and well-being, mindfulness also aids firms in luring and keeping top talent.
6. **Ethical and Sustainable Business Practices:** Mindfulness is intimately related to sustainable behavior and ethical decision-making (Huang, P. H. 2017). People are more likely to act morally when they are aware of the consequences of their choices and behaviors. This enhances the company's reputation while also fortifying ties with customers, partners, and the general public. For sustainability and long-term success, trust must be built through moral business practices.
7. **Customer Service:** The transforming power of mindfulness in customer service (Abrams, S. 2019). It promotes compassion and restraint, two traits crucial in dealing with customers. Employees who engage in mindfulness practices are better capable of recognizing and meeting client demands, which boosts customer happiness and loyalty. Beyond just interfacing with people, mindfulness has the power to alter customer service procedures and tactics.
8. **Neuromarketing:** Neuromarketing is a developing field that studies the meeting point of consumer behavior and neurology in the world of marketing (Misra). Neuromarketing can be more effective if it is practiced mindfully because it improves cognition, attention, and creativity (Ludvik, M. J. B. (Ed.). 2023). Employees that are mindful are more likely to come up with original concepts and tactics that give companies a competitive edge in the rapidly evolving marketing environment.
9. **Digital Technology and AI:** The benefits of mindfulness extend beyond improving human health; they may also be seen in the advancement and upkeep of AI and digital technology (Ahuja et al., 2023). Intelligent workers in the disciplines of artificial intelligence and digital technology can improve the health and effectiveness of AI systems and algorithms. This is essential for ensuring that AI applications across diverse industries continue to be moral and effective.

## Conclusion

For implementing mindfulness in workplaces has a variety of advantages that span many different areas (Reynolds et al., 2023). Mindfulness has the power to change businesses and increase productivity by boosting worker happiness and performance as well as leadership, communication, and dispute resolution (Khan et al., 2022). Additionally, it supports excellence in customer service,

sustainability, and moral decision-making. Mindfulness encourages innovation and advantage over competitors across the fields of neuromarketing, digital technology, and AI. It is clear that mindfulness is more than just a fad; it is a strategic decision that has the potential to completely transform how firms run and produce long-term value (Allal-Chérif et al., 2023). The incorporation of mindfulness into corporate culture is likely to spread as businesses become more aware of its advantages, ultimately improving organizational and individual outcomes.

#### Scope for future Research

The potential use of mindfulness in the workplace is quite positive. One may foresee a wider integration of mindfulness into organizational culture and strategy as firms continue to understand its many benefits (Zighan et al., 2023). The development of mindful leadership will receive additional attention, technology and AI will be used to assist employee well-being, and mindfulness will become the norm across the globe in the workplace. The optimization of mindfulness practices will also depend heavily on research and data-driven insights, and ethical decision-making informed by mindfulness will be essential to maintaining a strong business reputation (Srivastava, 2023). Prioritizing employee well-being through mindfulness initiatives will become a defining characteristic of strong employer brands as businesses compete for top talent. The continued development of mindfulness will influence how work is done in the future by promoting increased productivity, inventiveness, and moral corporate conduct (McGhee et al., 2015).

#### Implications

The mindfulness fosters empathy and collaboration at work by promoting a more favorable workplace atmosphere (Barner et al., 2013). Stress reduction helps employee well-being by lowering absenteeism and burnout. Better organizational performance is influenced by increased individual concentration and output (Kumar et al., 2023). Effective team management and decision-making are aided by mindful leadership, which also helps to recruit and keep top people. Additionally, it enhances organizational resilience and customer service, making it a significant asset for long-term success and growth.

**Keywords:** Mindfulness, Neuromarketing, Customer Service, Workplace, Leaders.

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## **Corporate Brand Management - Bibliometric Analysis**

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### **Purpose**

The purpose of this study was to analyze the subject area of corporate branding and to identify the pillars in contemporary corporate brand management based on bibliometric analysis.

### **Theoretical framework**

In contemporary brand management, a shift in focus to corporate brands from product brands has been observed since the mid-1990s (de Chernatony, 1999; Hatch & Schultz, 2003). A corporate brand is defined as a parent name that represents a successful company with a specific set of values, culture, people, programs, and assets/skills, forming relationships with stakeholders based on elements that are or are not branded with it (Aaker, 1996). Another definition points to a valuable corporate resource inextricably linked to internal factors such as corporate strategy and culture, and externally to reputation and competitive positioning (Bickerton, 2000). Defining a corporate brand is followed by identifying the components. The literature lists assets as examples, heritage, reflecting values, people, priorities, outreach, community involvement and corporate performance, achievements, and size (Aaker, 2004). Another set of elements constituting a corporate brand is presented in a model called corporate brand star and includes identity, culture, image, reputation, communications, structure/architecture, environment and nature of operations (Balmer, 2001b). Based on these definitions and elements constituting a corporate brand, the question arises how the research area related to corporate brand management is developing. The next question relates to the identification of pillars in contemporary corporate brand management.

### **Methodology**

A bibliometric analysis procedure was used, including research design, bibliometric data compilation, analysis, visualization and interpretation (Zupic & Čater, 2015). The following search criterion was used in the Scopus database: TITLE-ABS-KEY ("corporate brand") AND TITLE-ABS-KEY ("management"). 397 records were identified, noting the first indexed publication. In the analysis of the results, attention was paid to the number of publications, main authors, total citations, and average annual number of citations (Donthu et al., 2021). The authors with the highest number of publications, the countries with the highest number of affiliations, the number of keywords and the most frequent keywords were reported. Keyword analysis in the form of co-occurrence of keywords was applied. For all keywords, the total strength of the co-occurrence links with other keywords was

calculated. In VOSviewer (Nees Jan van Eck and Ludo Waltman, Leiden University, ver. 1.6.17), the keywords with the greatest total links were selected.

## Results

The bibliometric analysis of publications from the Scopus database in the field of corporate brand management covered the period 1996-2022. 397 records were identified (23.4 publications per year) in three main subject categories: 'business, management and accounting' - 327, 'economics, econometrics and finance' - 72, and 'social sciences' - 54. The total number of citations in the period 1997-2022 was 10,565, resulting in an average number of citations of 391.3. In 2009, the total number of citations exceeded 200, and in 2013 - 500. In 2020-2022, the total number of citations exceeded 3,500. The first noted publication is the article "Corporate and generic identities: Lessons from the Co-operative Bank" written by A. Wilkinson and J.M.T. Balmer (Wilkinson & Balmer, 1996). The article analyzes 2 identities: corporate and generic related to cooperative activities. Among the authors with the highest number of publications were J.M.T. Balmer (26 articles), R. Abratt (10), P. Foroudi (8), M. Schultz (8), and B. Merrilees (7). The authors of more than 100 publications were from the United Kingdom (104 publications), followed by the United States (62), Australia (25), Germany (24), and China (23). The largest number of articles indexed in the Scopus database in the field of 'corporate brand management' were published as journal articles (294 publications), followed by books (38), book series (33), and conference proceedings (27). Among journals, the largest number of articles came from the Journal of Brand Management (33 publications), the European Journal of Marketing (27), and the Journal of Product and Brand Management (23).

The publication most often cited was J.M.T. Balmer's article "Corporate identity, corporate branding and corporate marketing - Seeing through the fog" published in 2001 in the European Journal of Marketing (Balmer, 2001a). This article examines the issue of corporate identity and corporate marketing. Corporate identity was analyzed in the context of corporate identity, organizational identity, and visual identity. Corporate marketing refers to what an organization has, what it expresses, the connections of its employees, as well as what the organization does and how it is perceived by stakeholder groups and networks.

In the articles included in the bibliographic analysis, 1,426 keywords were identified. The most common keywords were the following: 'corporate branding' (in 66 publications), 'brand management' (55), 'corporate brand' (54), and 'corporate identity' (25). Keywords such as 'brand', 'brand equity', 'reputation', 'marketing', 'brand image', 'corporate brands', 'corporate reputation', 'corporate brand management', 'branding', 'corporate social responsibility', 'brand identity', 'corporate image', 'corporate brand identity', and 'brand orientation' appeared in 10-20 publications. The bibliometric analysis included a co-occurrence map of keywords with a minimum number of occurrences of 4 keywords. This assumption was met by 89 keywords. Eight clusters were identified (Figure 1). They are as follows:

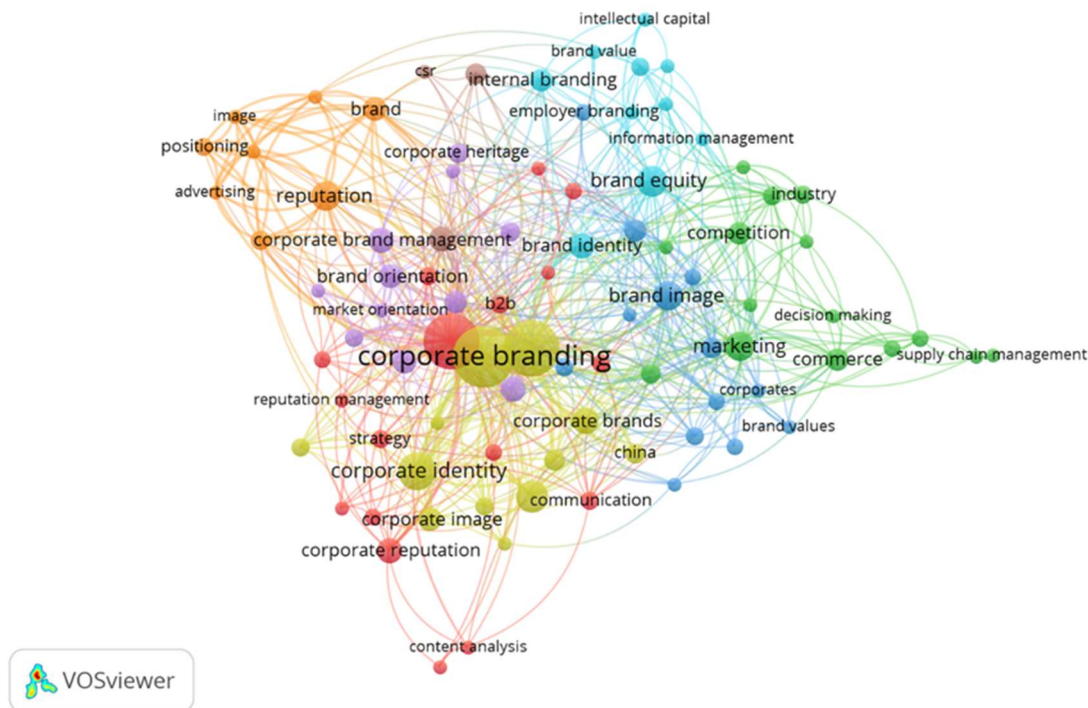


Figure 1. Co-occurrence of keywords for corporate brand management

- cluster no. 1 - 'reputation-based corporate brand management', defined by keywords including 'brand architecture', 'branding strategies', 'communication', 'corporate brand', 'corporate reputation', 'industrial marketing', 'reputation management', 'strategy', and 'sustainability';
- cluster no. 2 - 'competition-based corporate brand management', with such keywords as 'competition', 'competitive management', 'change management', 'environmental management', 'human resource management', 'management science', and 'organizational culture';
- cluster no. 3, - 'brand-based corporate brand management', described by keywords including 'brand awareness', 'brand experience', 'brand image', 'brand values', 'employer branding', 'customer satisfaction', and 'customer relationship management';
- cluster no. 4, - 'corporate-based corporate brand management', with such keywords as 'corporate brands', 'corporate branding', 'corporate image', 'corporate identity', 'corporate communication', 'corporate strategy', 'corporate marketing', and 'corporate culture';
- cluster no. 5, - 'heritage-based corporate brand management', defined by keywords including 'brand heritage', 'brand orientation', 'corporate heritage', 'market orientation', 'branding', 'corporate communication', and 'social media';
- cluster no. 6 - 'intangibility- and equity-based corporate brand management', with such keywords as 'brand equity', 'brand identity', 'intangible assets', 'intellectual capital', 'knowledge management', 'information management,' and 'brand value';
- cluster no. 7 - 'stakeholder-based corporate brand management', described by such keywords as 'advertising', 'stakeholder', 'reputation', 'positioning', 'image', and 'identity';



- cluster no. 8 - 'social responsibility - based corporate brand management', with three keywords 'corporate social responsibility', 'CSR', and 'co-creation'.

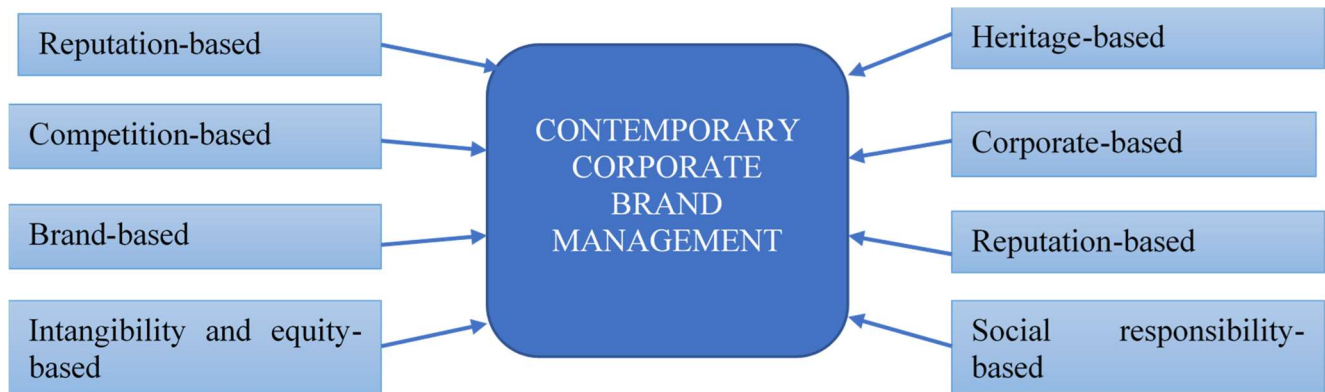


Figure 2. Pillars of contemporary corporate brand management

## Conclusion

The purpose of this study was to analyze the subject area of corporate branding and to identify pillars in the field of corporate brand management. 397 publications were identified that fit the theme of corporate brand management. The bibliometric analysis proved an increase in publication intensity in the field of corporate brand management. An increase in the citation rate in the field of this subject area was also found. Publications in the field of corporate brand management were in three main subject categories. The first subject area was business, management, and accounting, the second was economics, econometrics, and finance, and the third was social sciences.

The co-occurrence analysis of keywords identified 8 clusters that fit into contemporary corporate brand management. These are the following pillars of contemporary corporate brand management: reputation, competition, brand, corporate, heritage, intangibility and equity, stakeholders, and social responsibility. Each of these pillars is subject to theoretical analysis and empirical research, but for holistic corporate brand management, they should be combined into a single model.

The identification of this model adds value to this study. As a direction for future research, all pillars should be explored to indicate the relationship between them. In addition, it would be useful to analyze how each pillar responds to crises taking place in the organization's environment.

Keywords: corporate brand management, corporate brands, management, heritage, reputation

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## **Decoding of Visitor Satisfaction at Temple Tourism in Busan: A Text Mining Methodology**

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### **Purpose**

In this increasingly digital age, while online reviews may significantly boost the visibility and appeal of tourism sites, they also expose the challenges faced by managers of religious sites. The growing popularity of religious tourism presents a complex scenario. These sites continue to serve their essential religious function as places of worship and ceremony, but concurrently they must also cater to visitors' diverse and, occasionally, conflicting needs. Visitors may seek historical and cultural information, architectural insights, or enjoyable recreational opportunities (Hughes & Ballantyne, 2013). Effectively managing such sites necessitates identifying crucial aspects in designing tourism experiences at religious sites and finding ways to satisfy a diverse and often demanding range of visitors.

The motivation for this research is anchored in these observed challenges and the interest in and satisfaction of visitors within the temple tourism industry. Notably, relatively few studies have focused on the temple industry in Busan as a significant player in the tourism sector, which further underlines the necessity of this study. Therefore, this research aims to examine visitor satisfaction with temple tourism in Busan and augment existing findings on the antecedents of visitor satisfaction. By deepening our understanding of factors influencing visitor satisfaction, the authors hope to improve the quality of visitor destinations and the overall experience for visitors.

### **Theoretical framework**

The trend of "temple tourism" is rising among the younger generation. Temples are becoming increasingly popular among young people for mental and physical relaxation alongside beach vacations and amusement parks (Global Times, 2023). One of the services most people are interested in temple tourism is the temple stay program. The temple stay program is a relatively new but increasingly popular visitor attraction in Korea. It allows visitors to spend a few days in residence at various major Buddhist monasteries nationwide (Kaplan, 2010). Ross et al., (2020) experienced the temple stay program in a Korean monastery called Hwaeomsa temple. They argue that based on the interest of temple stay participants, travellers may be surprised by the spiritual dimension of temple stays due to their peaceful experience.

Several studies have been conducted to assess visitor satisfaction in various sectors of the temple tourism and travel industry. Meng et al., (2008) measured Chinese visitors' satisfaction in Hongkong using the visitor satisfaction index. They found that mainland Chinese visitors in Hong Kong are most satisfied with the hotel industry, followed by the retail industry, and least satisfied with the local tour

operators. Meanwhile, Canny., (2013) investigated the relationship between the five dimensions of service quality and visitor satisfaction and the relationship between satisfaction and future behavioral intentions. Using multiple regression analysis, this study analyzed the SERVQUAL model. The fieldwork was conducted at the temple of Borobudur. He found that the relationship between service quality and visitor satisfaction is weak, whereas satisfaction substantially affects future behavioral intentions.

This study utilized KH Coder to analyze the text of Google reviews. The author chose to utilize the KH Coder because this tool is quite user-friendly and designed for general-purpose analysis. In addition, the result of data visualization is also easy to comprehend. KH Coder is an open-source computer-assisted quantitative data analysis application, especially quantitative content analysis and text mining. The KH coder allowed us to conduct a content analysis of the extracted nouns, verbs, adverbs, and adjectives and to identify the essential topical associations (Jurkus & Taminkas., 2022). KH Coder was initially designed for Japanese text and now supports many additional languages, including English, Italian, French, Spanish, and other Asian languages such as Korean and simplified Chinese (Heo et al., 2019). It also aids in developing a centralized system for factual analysis, an automated arrangement manual, the ability to scale data across multiple dimensions, and the capacity to conduct comparative analyses (Luo et al., 2019). Mainly it can assist with multidimensional scaling, comparative calculations, and the investigation of the hub structure of co-event system hubs (Kushima et al., 2019). Several studies have used KH Coder as a data analysis application.

## Methodology

This research data is collected through a Google review of six temples in Busan, including Haedong Yonggungsa temple, Samgwangsa temple, Beomosa temple, Taejungsa temple, Hongryongsa temple, and Tongdosa temple. In this study, the authors only chose temples with more than 1000 reviews. Review content and ratings are included in each review. The data is collected from January 2023 to June 2023. The authors use the year 2023 because there is a continued recovery in international tourism in South Korea, and the South Korean government has loosened visitor entry requirements. For example, taking the COVID-19 pre-departure test or wearing masks is no longer necessary (GlobalData, 2023).

From 32,132 temple reviews, the authors only collected 500 reviews for each temple. In this study, the author ignores the review that does not have text comments or does not contain essential or related information. Visitor satisfaction is evaluated using Google Travel visitor reviews as a basis. At last, a total of 2,516 reviews were collected. The data was scraped using Outscraper, a third program for web crawling and data processing. Frequently, crawling data is used to investigate human behavior and visitor satisfaction by analyzing network reviews (Xu et al., 2019).

KH coder, a program that analyzes quantitative text, was then used to analyze the data. Users of KH Coder can construct a network of words that are likely to co-occur in the same content due to their shared patterns of occurrence (Higuchi, 2015).



Figure 1: Research Process

## Results

Based on Table 1's results, temples in Busan have received substantial customer feedback, totaling 32,132 reviews. The average rating for these establishments is 4.47 out of 5, indicating high visitor satisfaction. Among other temples, the Yonggungsa temple has the most significant reviews. Hongryongsa temple, meanwhile, has the lowest number of reviews.

Temple name	Number of reviews	Average Rating
Yonggungsa temple	19411	4.4
Samgwangsa temple	1223	4.5
Beomosa temple	3340	4.6
Taejungsa temple	1814	4.2
Hongryongsa temple	1054	4.5
Tongdosa temple	5290	4.6
Total review	32,132	
Total average rating	4.47	

Table 1. Temples' review and rating

According to text mining results, by June 2023, six temples in Busan had sorted and collected 2,516 reviews. Based on the word frequency analysis shown in Table 2, a list of the top 100 related terms used by the author to describe the experience of visitors who visited the temple is provided. Using a database and text mining software (KH Coder), the author could extract frequently occurring words representing significant aspects of the visitor experience.

The five most common words are "temple," "place," "beautiful," "good," and "hydrangea." The frequent appearance of these terms in online reviews suggests that temples in Busan receive positive feedback through favorable reviews. In this analysis, the word "temple" is used most by the temple reviewers.

Words	Frequency	Words	Frequency
temple	1509	valley	67
place	681	best	97
beautiful	608	visit	97
good	822	water	96
hydrangea	270	cool	94
time	232	flower	93
waterfall	213	bloom	90
people	209	full	88
view	208	way	88
entrance	192	amazing	84
bus	188	famous	84
mountain	177	building	82
parking	158	car	79
quiet	155	food	79
sea	151	fee	77
walk	148	large	77
scenery	135	autumn	76
year	126	buddhist	76
day	122	area	72
great	121	peaceful	71
small	115	season	71
worth	101	tree	70
road	99	city	68
visitor	98	minute	68
old	66	history	65

Table 2. Frequently used 50 words.

The KH Coder 3.0 function of the Co-occurrence analysis enabled us to create a network diagram with different colors, each representing a different research theme expressed as the most frequent words (Jurkus, Povilanskas & Taminskas., 2022). In this study, the Jaccard distance is utilized. The Jaccard coefficient is a statistical measure of the likeness within distinct sample sets, such as a list of words (Romesburg, 1984).

Based on the Co-occurrence network analysis depicted in Figure 3, it appears that the reviews of temples in Busan contain several recurring themes:

Cluster 1 focuses on the hydrangea flower in the temple. This indicates that most visitors come to see the blooming of hydrangea flowers when visiting the temple. Cluster 2 revolves around the price

of temple admission. This cluster emphasized free admission to the temple. This indicates that visitors considered the fee admission when visiting the temple.

Cluster 3 highlighted the beauty of the temple. This cluster is the most noticeable among others. This cluster demonstrated that most visitors view the temple as a beautiful location. Cluster 4 investigates the subway station to reach the temple. This indicates that most visitors use the subway to reach the temple.

Cluster 5 was concerned with the springtime at the temple. This implies that springtime visitors to the temple will observe the red palm in bloom. In the meantime, Cluster 6 represents a rainy day when visitors visit the temple.

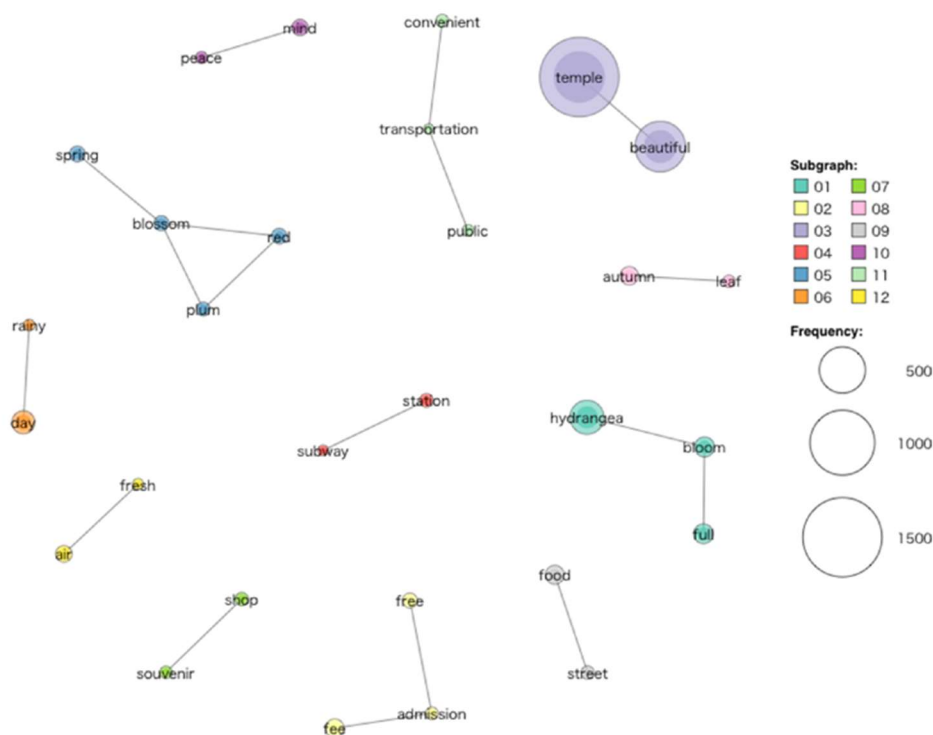


Figure 3. Co-occurrence network results

Cluster 7 describes the gift shop located near or within the temple. This indicates that most visitors visit the souvenir shop at the temple. Cluster 8 centered on the temple's autumn season. This implies that visitors observe the leaf fall during autumn.

Cluster 9 focuses on street food around the temple. This suggests that most visitors who visit the temple also buy street food. Meanwhile, cluster 10 focuses on the temple's atmosphere. This cluster explained that most visitors to the temple experience a sense of tranquility.

Cluster 11 investigates temple-area public transportation. This cluster indicates that most visitors arrive at the temple via public transportation. They recognize the utility of public transportation as convenient. Finally, cluster 12 indicates that most visitors to the temple enjoy the atmosphere of fresh air.

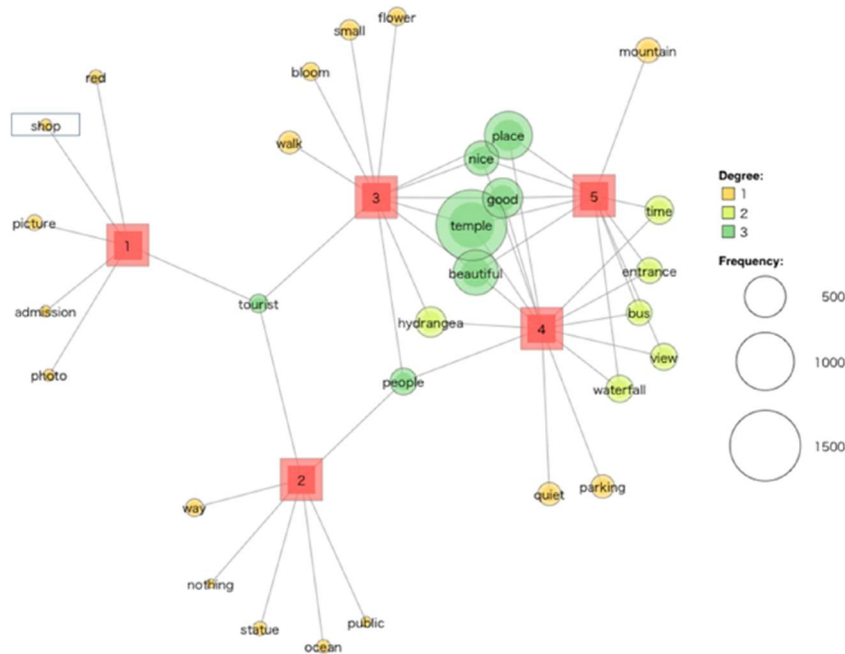


Figure 4. Co-occurrence rating results

In Figure 4, it gives the result of the Co-occurrence network based on rating. The Co-occurrence rating uses ratings as each subject's leading variable or heading. The inner circle, which represents the 4-star and 5-star ratings, demonstrates a strong correlation between several keywords, including "temple," "place," "good," "nice," and "beautiful." This indicates that visitors who give the temple a rating of 4 or 5 stars tend to highlight these positive aspects of their experience when visiting the temple. The place's atmosphere and experience are frequently associated with its high ratings. The strong correlation between these terms and high ratings suggests that these elements significantly influence visitors' satisfaction with Busan's temples.

A hierarchical cluster analysis was conducted with the minimum number of occurrences limited to 2 or more. The Ward method and Jaccard distance scale describe the hierarchical cluster analysis chart. This analysis divided the online testimonials into eight distinct cluster groups, each denoted by a unique color. For example, the first red cluster in Figure 5 describes the parking facility and entrance fee. "entrance" is the most important word in this group, followed by "parking" and "fee". The second cluster, which is colored Tosca green, represents autumn. "hydrangea" is the most prevalent word in this group, followed by "time" and "year" This indicates that the hydrangea flower drew most visitors to the temple. The third cluster, colored yellow, includes the words "road," "tree," "statue," "building," and "ancient" to describe the ancient temple structure.

The fourth cluster contains more words than any other cluster. This cluster describes the mode of transport, the sensation, and the experience. In this cluster are the terms "train", "walk", and "bus". This indicates how individuals reach the temple. The fifth cluster, colored dark green, represents the temple's waterfall.



The sixth cluster in purple represents the view. This cluster is dominated by the word "temple," followed by "beautiful," "place," and "good." The green-colored seventh cluster contains the fewest words, with "full" and "bloom" describing the bloom view. The eighth cluster, which is colored pink, represents the spring flower.

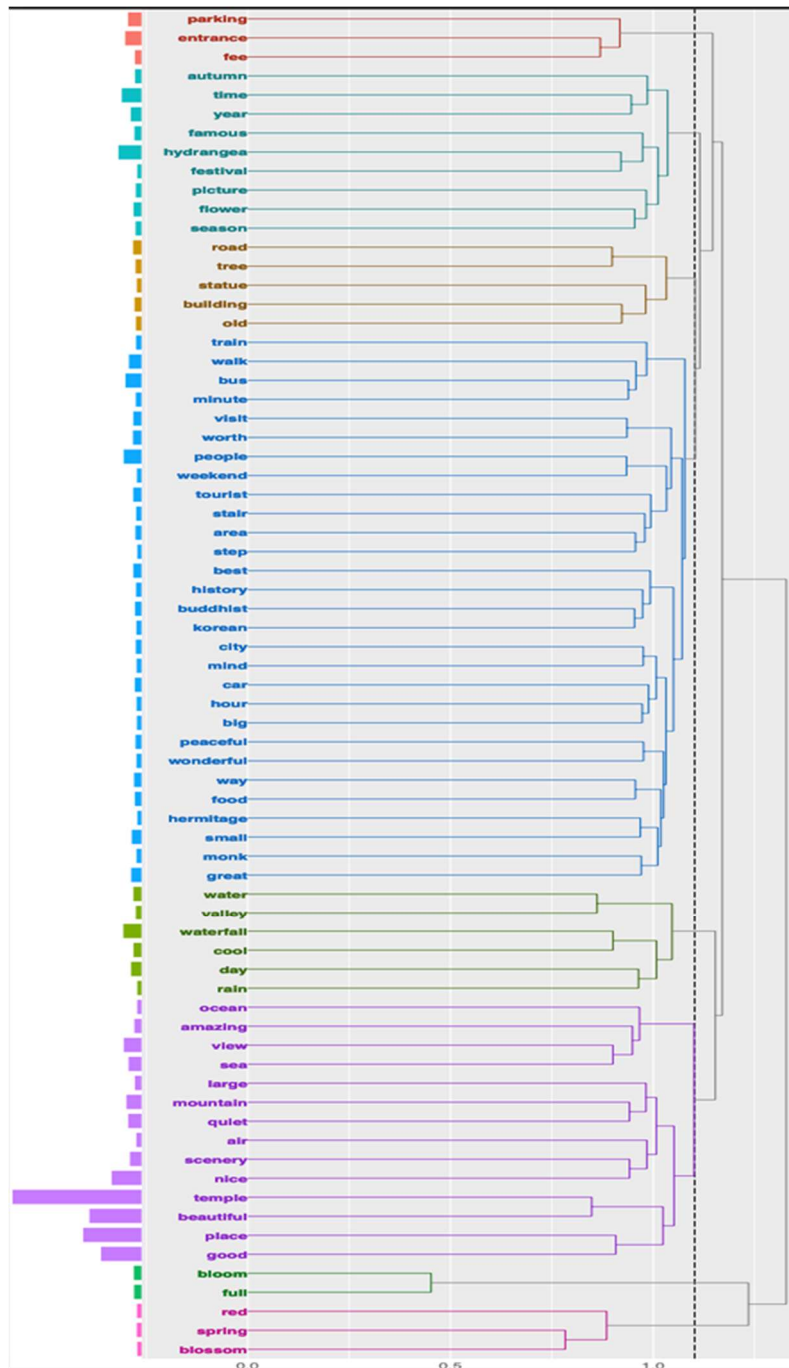


Figure 5. Hierarchical cluster analysis results

### Discussion and Conclusion

As a result, it has been discovered that temples in Busan have overwhelmingly positive ratings and reviews from visitors. The average rating of 4.47 out of 5 indicates that most visitors who visit the temples have positive experiences. The word frequency analysis revealed that the visitor that has

visited the temples in Busan have positive experiences considering the most frequently occurring words are “temple”, “place”, “beautiful”, “good”, and “nice”.

The Co-occurrence analysis revealed several key terms, including overall temple experience, admission price, environment, and nearby transportation. The co-occurrence analysis based on ratings revealed a strong correlation between high ratings (4 and 5 stars) and positive attributes such as view, location, temple transportation, and overall pleasant experience. This suggests that these factors are crucial for determining the future of Busan's temples and ensuring visitors' satisfaction. In contrast, the analysis revealed that visitors with lower ratings (1 to 4 stars) are likelier to mention stores, attractions, and fees. The temple management can improve the lower ratings by considering the admission fee, the prices of shops nearby, and adding more attractions. By doing these things, visitors are hoped to improve their reviews and ratings. The hierarchical cluster analysis uncovered eight separate clusters. Each of the clusters represents a unique aspect of the temple experience. In addition, some subclusters emphasize specific relationships and themes. Attractions, scenery, and weather also play an essential role in temples in Busan visitor satisfaction. The environmental factors of Busan's temples, attractions and scenery create unforgettable experiences that visitors have witnessed (Suanmali, 2014).

At last, the temple's management team needs to concentrate on improving the overall temple experience. Admission, environment, scenery, and transportation contribute to visitors' satisfaction. The staff of the temple must maintain a clean and welcoming environment. In addition, Preserving the originality of the temple constructed centuries ago is necessary. In addition, it is necessary to establish and execute routine maintenance and conservation programs. Ensuring sufficient staff recruitment and training guarantees proper safety and other vital services. These aspects can encourage visitors to return for future visits (Pandya & Sanghani, 2023).

Keywords: temple tourism, religious tourism, text mining, satisfaction

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## **Aging vs. Development: An Experience of the Baltic states and the Central European countries**

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### Introduction

The purpose of this work is to evaluate the demographic factors' impact on the economic growth dynamics and to propose the main priorities for the social and demographic policy mix.

### Theoretical framework

The theoretical and methodological bases of the study were the scientific works addressing the issues of the socio-demographic and fiscal policy mix and the features of population dynamics in advanced and emerging market economies.

We used the statistics of the World Bank open database. Taking the inertia of demographic changes and the data availability into account, we investigated the time interval from 1960 to 2020. The sample represented the Baltic states and the Central European countries: Bulgaria, Croatia, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Moldova, Poland, Romania, Slovakia, Slovenia, and Ukraine. The population aged 15 to 64 was identified as economically active. The working possibilities for the persons aged 65 and older has been noted.

### Methodology

We used the theoretical generalization to systematize the factors influencing the socio-demographic and economic development of the sampled economies. We applied the methods of statistics to investigate the population dynamics. We made an assumption that a certain architectonics of public administration could ensure sustainability, optimal demographic and income dependency ratios. While studying the factors' impact on economic growth, we considered the concept of demographic sustainability. It could be partially described by the model (1). We disclosed the changes in the population age composition and analyzed the respective dynamics in terms of working-age and non-working-age strata. The main attention has been paid to an increase in the elderly population's stratum and to the government measures.

$$\left\{ \begin{array}{l} \frac{IAP}{EAP} = Ddr \rightarrow \text{opt (min)}; \\ \frac{AlEpc}{Alpc} = ldr \rightarrow \text{opt (min)}; \end{array} \right. \quad (1)$$

Where Ddr – demographic dependency ratio; IAP – economically inactive population; EAP – economically active population; Idr – income dependency ratio; AIEpc – average amount of per capita income spent on economically inactive population; Alpc – average per capita income.

The initial hypothesis of the study was that the real GDP per capita annual growth rate (GDPpcgr) has been stochastically interrelated with: a) working-age population's share as a percentage of total population (WAP); b) the elderly demographic dependency ratio (EDdr); and c) domestic general government healthcare expenditures' share as a percentage of total public spending (GHE). We imposed a control – gross capital formation (GCF) as a percentage of GDP. Hence, we have built the next model (2):

$$\text{GDPpcgr} = A + \alpha_1 \times \text{WAP} + \alpha_2 \times \text{EDdr} + \alpha_3 \times \text{GHE} + \alpha_4 \times \text{GCF} + \varepsilon, \quad (2)$$

Where A – a constant;  $\alpha_1$ ,  $\alpha_2$ ,  $\alpha_3$ ,  $\alpha_4$  – respective regression coefficients;  $\varepsilon$  – statistical error.

Obtained and verified interdependence could be used to prepare the socio-demographic and macroeconomic policy mix.

## Results

The total population of the countries under study increased by 1.22 times from 136.11 million in 1960 to 165.60 million in 1990. In 1960, there were 0.56 incapacitated persons of any age stratum for the one working-aged person. In 1990 and 2020, the indicator equaled to 0.51 and to 0.52, respectively. In 2010, the minimum overall demographic dependency ratio for the period – equaled to 0.43 – has been recorded. At the same time, the specific demographic dependency ratios changed essentially. The share of the elderly population stratum increased from 7.17% in 1960 to 18.58% in 2020. Meanwhile, the specific weight of the persons under the age of 14 decreased from 28.61% to 15.48%, respectively.

The elder population financial resources' distribution peculiarities should be regarded in the social policy preparation processes. The sample's total population reached its own peak in 1990. Principally, its subsequent reduction was due to the next socio-political phenomena: a) the collapse of the USSR and the historically determined migration of the part of its existing population; and b) European integration, decentralization trends, and foot voting. C. M. Tiebout (1956) argued that the concept of foot voting was primarily associated with the fiscal jurisdictions' specific profiles.

The number of the elderly population significantly increased even in the countries with relatively low per capita incomes, in particular, in Ukraine and Moldova. Over the 1990–2020 period, the elderly population stratum induced by 51.79%, while the youngest stratum decreased by 38.47%. While examining the above variable, one should consider both natural population change and migration. In the latter case, institutional traditions play a key role, in particular, in terms of national informal

rules regarding the composition and the size of the family as well as the system of migrants' professional competences.

Samuelson (1954) formulated an ambiguous Serendipity Theorem, according to which sustainable economic growth was determined exclusively by a combination of optimal fiscal decentralization and corresponding rate of natural increase. However, in the commentary, Deardorff (1976) convincingly proved that such statement was debatable, since it had been often impossible to estimate the optimal natural population change that could be able to maximize the economic agent's (fully representing the society) individual utility.

Aiming to verify the proposed model 2, we applied the ordinary least squares. Regarding the data availability, we investigated the period from 2000 to 2020. An increase in the working-age stratum negatively affected the real GDP per capita growth rates. That could be due to the methodology's peculiarities: only the specific weight of the working-age stratum had been considered, while the human intellectual capital's quality mattered. To ameliorate the working-age stratum's participation in public production, the fundamental changes in fiscal policy should be made. The taxes' on labor and on capital rates optimal composition should accelerate economic growth instead of inducing negative foot voting. The elder population strata should be effectively involved into the production. The domestic general government health expenditures' share in total public spending negatively affected the real GDP per capita growth rates. Gross capital formation appeared to be the only model's variable that had positive impact on economic growth and had been robust. Over the period of 2000–2020, an increase in gross capital formation by 1.00 % induced real GDP per capita by 0.348%. Due to the Wicksell / Cobb–Douglas production function, investment in physical capital should be rationally combined with cultivation of human intellectual capital.

## Discussion and Conclusion

Demographic changes have a certain impact on the growth trends. To ensure development the economic agents should improve their performance towards macroeconomic sustainability. Even though the countries under study varied significantly in terms of economic growth (especially during the 2000s), there were some specific trends common for the entire sample.

The obtained results proved that the interdependence between certain socio-demographic and macroeconomic factors appeared to be valid. The model could be improved by: a) a profound investigation of the human intellectual capital's quality impact; b) an examination of the actual public and private healthcare expenditures effect on the demographic dynamics in terms of longevity; and c) a complex investigation of fiscal policy's impact on the working-age population economic behavior. From 2000 to 2020, an increase in the working-age stratum-specific weight adversely affected economic growth. That fact could be due to the methodology peculiarities as we assessed the quantitative instead of qualitative parameters of human capital. Specific attention should be paid to the intellectual capital cultivation processes. Over 2011–2020, an increase in the working-age stratum specific weight affected the real GDP per capita growth rates positively, yet statistically

insignificant. The average elderly demographic dependency ratio was negatively interrelated with economic development indices. Regarding that, the social and demographic policy mix should be focused on the elimination of the population ageing negative impact on public welfare. So, the respective policy profile should be updated to ensure active and efficient elderly population strata participation in the production processes. Healthcare expenditures – both public and private – should be rationalized, regarding the respective population's actual structure to ensure the elderly strata productive involvement.

Taking the Wicksell / Cobb–Douglas production function into account, an increase in human capital requires simultaneous proportional expansion in physical capital. Thus, the taxes on labor and on capital rates optimal composition should be found empirically. Regarding all the intervals under study, gross capital formation appeared to be the only model's variable that had a statistically positive impact on economic development. Over 2000–2020, if gross capital formation raised by 1.00% the real GDP per capita growth rates have induce by 0.348%. The obtained results could be considered while preparing a growth-friendly social and demographic policy mix.

**Keywords:** population structure, demographic ageing, human capital, public welfare, social and fiscal policy mix, sustainable economic development

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## **Tacit Knowledge Space and Organizational Efficiency**

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### **Abstract**

In this paper I discuss what we mean by a “Tacit Knowledge Space” (TKS) and how it relates to organizational efficiency. The idea of tacit knowledge space is a borrowed concept from Michael Polanyi’s seminal work and it derives a rich understanding of an organizational space which is occupied by knowledge dimension characterizing the implicit aspects of knowledge transfer and decodification of the tacit component of learning and skill development into its more readily applicable explicit counterpart. This TKS is a growing space in knowledge organizations and workplaces that is found to be immensely useful among the knowledge workers of today. We discuss these issue and construct a structural frame to model such a space that has organizational implications and contributes to employee efficiency in the long run.

**Keywords:** Tacit dimension, tacit knowledge space, knowledge workers, organizational efficiency

### **Introduction**

It was Baruch Spinoza who most probably was among the first to have cited the importance of the resultant idea of mass production of complex things with less effort. Let me quote from his work stating thus:

“...and thus advancing gradually from the simplest works to the making of tools, and from tools to other works and other tools, they have reached a point where they can make very many complex things with little labour.” *Spinoza*

Has it not been indicated therein that humanity was moving toward productive efficiency—thru creation of simple tools to complex and more complex things using “less labour but more intellect”? In productivity lies the answer which ensures our prosperity and progress. As it appears though, that the principles of productivity, human productiveness and efficiency—all these concepts could be found in the pockets of knowledge space, the realms of knowing and doing. This realm of knowing and then doing involves the tacit component of human understanding—as explained by Michael Polanyi in his book *The Tacit Dimension*.

Therefore, if it be considered following the findings from behavioral sciences and psychology researches that knowledge is rooted in human behavior and actions, then one may ask, wherein do our thoughts dwell? What are the roots of intentional thinking and skill development? And, how our thoughts direct us to become more productive and efficient? What skills make us more productive?



This would perhaps require a recourse to Michael Polanyi's (Polanyi, 2009) writings on tacit knowing, among others. In his landmark book, "The Tacit Dimension", which is basically a collection of lectures and thoughts spanning over several decades of his productive career, Michael Polanyi took the opportunity to explain and understand the structure of tacit knowing. The effect had been substantial. The concept of tacit knowledge was readily acknowledged no sooner than it was absorbed into management thinking and practice, for it has now become a favorite theme among the managers and executives who believe that they have found a good ground for understanding the fundamental basis of this inexplicable concept of implicit learning, and the resulting tacit knowing. It's understanding, however, is a difficult thing, wherein the difficulty lies in its use where it is verbalized and absorbed for proper utilization (Tsoukas, 2005).

Firms are good at leveraging invisible assets, among which tacit knowledge being the one which takes a special place in management literature (Kakabadse, Kouzmin, & Kakabadse, 2001; Tsoukas, 2005). Tacit knowing has also been applied to the field and domain of organizational studies, including organizational learning (OL) and Organizational Culture (OC) respectively. This is on account of the association of tacit knowing with cognitive and behavioral developments of learning in organizations. Organizations today are highly complex entities: they are not just workplaces, but beyond that, they constitute as the bodies of knowledge creation, productivity, and innovation. Therefore, the content produced by the processes of organizational learning, adjustments, and adaptations vary greatly, and contribute to knowledge spaces. This is what I call tacit knowledge space. One may, hence, quite easily trace the behavioral outcomes that reflect the patterns of developing cognitive associations in organizations (Bennett and Bennett, 2008); i.e., growth and development of skills and widespread dissemination of practical knowledge useful to organizations. But again, what is it that we mean by the term Tacit Knowledge Space? In this research paper, we attempt to define such a knowledge space that is the result of tacit knowing which leads to creation of a form of organizational memory and record from where users can readily access what's essential for organizational practice. We show that creation of such a dedicated space would not only increase the efficiency of organizational operations, but will also result in increased productivity of the workforce, thereby promoting employee performance and productive efficiency of a firm/organization.

### Research Goal

Now, what do we mean by Tacit Knowledge Space (TKS)? How creation of a knowledge space—that of tacit, could help organizations perform better? In this paper, we attempt to address the specific issues that most likely determine organizational efficiency and productivity. Our research goal, in this sense, is to examine organizational operations that constitute the basis of association of learning and tacit knowing, and their effects on the productive efficiency frontier of knowledge workers. In another sense, how workforce behaviors, actions and thoughts help determine what organizations do best to survive and sustain competitive pressures is the current theme of this research. The goal

is thus allied to the productivity aspects of firms, and the factors that contribute to its increase. It also examines the exchange of and transfer of tacit knowledge into its explicit form, which has great use value for business firms that continuously strive for productivity and innovation to survive in highly competitive environments.

Learning of tacit skills, it is assumed, is achieved through observation, imitation, and practice. Adoption of effective learning strategies that contribute to the development of tacit skill is imperative to modern day organizational practice. Knowledge of such could be used to explain in more detail what's needed to increase workforce productivity—of both blue collar and knowledge workers. It must be borne in mind that knowledge workers are asset to an organization (Drucker, 1999). Our goal is to understand with more clarity and gain systematic insights into craft knowledge (practical knowledge), or tacit knowledge—to say so in another sense. The knowledge of expertise and the knowledge required to gain expertise are both invaluable to organizational existence, operation and survival. It gives certain clues to organizational innovativeness and their competitive spirits. We want to identify and examine the clues of organizational efficiency: what makes a knowledge organization more productive and efficient than its competitors? Besides, it is imperative to understand how tacit knowing and tacit knowledge contribute to and in what way they help determine productive efficiency of an organization. Similarly, it goes too for the workers: what makes some workers more efficient and productive, and what inhibits them thereby making them less efficient but more idle.

#### Organizational Competitiveness and Tacit Knowing

It needs be understood that only explicit knowledge is valuable and that's the one which can be leveraged by organizations. This theory has been forwarded and well-defended by Michael Polanyi in his book "The Tacit Dimension". However, there are other forms and kinds of knowledge the value of which is often unknown to others (Hayek, 1945). These are—according to Hayek, knowledge of special circumstances and events: the unorganized knowledge of the particular circumstances of time and place. Besides, there's benefit of possessing unique information unknown to others. Skills are special sets of "tacit" knowledge whose development and proper utilization are beneficial to society. Learning—in such respect—helps develop skills and it adds to existing knowledge which becomes asset for an organization. Organizations in due course of time and out of necessity make use of such skills and unique knowledge that we call tacit information. However, credibility of knowledge is an effective instrument of organizational transformation. Learning could help draw out the best that are to be found in employees. Hence, continuous learning is effective in developing skills that are crucial for organizational competitiveness.

Knowledge is that one amplifier which inspires learning. Organizations hence support and promote learning among the workforces to help cultivate tacit skills and to stimulate productivity and innovation. It is the experts who are in possession of special knowledge: tacit skills. But unless such tacit knowledge is converted into its explicit counterpart, organizations are not able to fully leverage it to their advantage. When converted, it becomes a powerful instrument of success. Organizations

who command such special knowledge of expertise are in authority to command a competitive edge in the markets (Drucker, 1999).

Organizations by way of learning along with specific actions extend their existing knowledge bases, which they continuously update for future usage and which often comes to their aid in times of need. The changing ecology of learning in organizations points to the fact that organizations now stress more on the acquisition of tacit knowledge that often marks the difference between success and failure (Levitt and March, 1988; Fiol and Lyles, 1985). Seen other way, learning vastly contributes to organizational success (Levitt and March, 1988). But what kind of learning is more useful to organizations? What kinds of knowledge are useful to the firm? Does learning help build up organizational memory? Yes, certainly it does so. These are all necessary due to the fact that modern day organizations face difficult problems and challenges: i.e., they need to deal with different dimensions of market competition, knowledge creation, innovation drive, product development, strategic marketing issues, and other aspects that characterize successful organizational operations. One the other hand, organizational management has become a strategic domain of study and research, and organizations today give more importance to the role of knowledge in management of organizations; e.g., organizational operations, people, process, and practice. Since most industrial organizations and manufacturing firms strive for creativity, knowledge creation and innovation, such processes need effective management of knowledge resources as well. In that respect, organizations make use of explicit or “codified knowledge” which is directly available and transmittable to them in order to leverage productivity and operations. This form of knowledge can be shared, communicated, and stored for future retrieval and usage. This process is, nevertheless, understandable. But could it be more difficult to understand that productivity is a function of say, effort plus skill? If that be such and so, then what makes somebody more productive and efficient than someone else?

Productive work creates value, and productive activities that are distinct, result from specific need, aim or imposed necessities. However, intellectual output is also a productive activity. It is the result of a combination of cognitive effort and noetic exertion. Additionally, it may involve the use of other intellectual resources. One particular example is, for example, inventions or innovations, as they both require involvement of noetic components (thought process, reasoning, and rational thinking) and utilize the sources of intellectual assets (i.e., use of references to the past works of creativity and imagination). Hence these are knowledge-intensive works better suited for knowledge workers. How could then the productivity of knowledge workers be improved? This particular issue has been addressed with care by Peter Drucker in his paper titled, “Knowledge-worker productivity: The biggest challenge”.

## Discussion

To understand the tacit knowledge space within which firms (organizations) operate, we may take for granted that firms could be analysed from both resource view point of frame, and product

development frontier. However, Wernerfelt (1982) considered resources and products as two sides of a same coin. Which means that, product development (including innovation) necessitate the use of resources as inputs, and that gives a different perspective of the resources position of a firm, in terms of its strengths and weaknesses. This is pertinent with respect to continued innovation in product development that is so essential for good firms to survive and overcome stiff product market competitions. Thus, firms who bring innovation to the marketplace through product development and service delivery foster healthy competition and facilitate economic growth (Ahlstrom, 2010). In this paper, we introduce the concept and the idea of the “Theory of Productive Capital”, which is closely linked to the subject of organizational learning, Organizational capital (Prescott & Visscher, 1980; Dessein & Prat, 2022), Product Market Innovation (Lyon and Ferrier, 2002), and Managerial capital (Murphy & Zbojnik, 2006). Capital—in any form, is a factor of production (Hennings, 1990), and, it could be viewed as a resource, when one considers a resource-based view of a firm. According to Martín-de-Castro et al (2006), some form of it which constitute as Organizational Capital is the source of competitive advantage to a firm. While considering the capital structure of a firm, if we can incorporate different forms of capital structure and types of resources being used, for example, managerial capital (Neill, Wu & Noel, 2023; Murphy & Zbojnik, 2006), or, organizational capital (Prescott & Visscher, 1980; Dessein & Prat, 2022), then why cannot one consider productivity (i.e., efficiency) as a form and structure of capital resource employed as input to production? This is the foundational basis of this research, for we consider “productivity” as well as “efficiency” as a form of strategic resource, which could be viewed as an input to production as productive capital of a firm. Productivity and efficiency contribute to firm productivity in a positive manner. But of course there are many other determinants of organizational (firm) productivity, but these aforementioned factors are no less important in determining firm-level productivity. Without productivity there’s no innovation possible.

The things and objects necessary to organizational productivity are skills, competency, knowledge, and aptitude of the workforce. Productivity is the result of effort, action and efficiency. Industrial and manufacturing firms can largely be designated as productive organizations, for they produce goods and commodities for consumption that have value and utility. Consumption is a function that utilizes economic goods to satisfy human needs and desires. It is not a new idea but an offshoot of thoughts relating Organizational Science to the Science of the Economics of Human Capital Management (Schultz, 1972). A stock of capital goods—known as capital, is required in the production of something else. Productivity is a function as well: the rate at which something is produced per unit time. It is also a power and the capability to produce something like goods, commodities, or to create, render and offer some services. Today, the concept of productivity is wide-ranging, and it includes the production of services as well. Something must go into the production of something else; the “input—output” mechanism. Effort must go in to offer some services. Therefore, services is also a sort of product as well. The division of labour, in the Marxian sense, however, has become more complex with employees today depending on knowledge and development of high technological

skills that use advanced technologies, including the (artificial intelligence) AI. More complexities in skill development and their firm-level utilization is creating independent knowledge spaces across the organizations and also in the virtual world of informatics and the web (Lee et al., 2018).

In the industrial sectors, it underpins the principles leveraging knowledge, human potential, and human capital to promote creativity and stimulate innovation in all kinds of organizations, e.g., governmental, industrial, manufacturing, and services types. The concept is modelled on the backdrop of “innovation” that drives today’s organizations towards success. Indeed, one of the key factors that drives organizational success is innovation. But innovation itself is driven by many other factors, the chief among them being: (i) the creative capacity of individuals, (ii) new knowledge creation capabilities, (iii) new product development, (iv) power of imagination, (v) individual performance, (vi) improvements and advancements in technologies, (vii) acquired experiences, and (viii) tacit skills of the individual. This last factor—the “tacit skill”—is a crucial determinant, insofar as it concerns with organizations capable of bringing innovations in their production, operations, and service delivery frontiers. Organizations driven by innovation become more successful and remain viable. They build up a space—so called a knowledge space—that they leverage for their operations. This space is what I call the Tacit Knowledge Space which is the key to sustainable existence of a firm. The role of tacit knowledge in organizations (Baumard, 1999) could best be understood today in their direct application to solving complex problems and creating solutions to emerging problems. Within this space, firms can operate seamlessly and innovate, and bring efficiency in their production process and service delivery. Innovation requires the application of tacit knowledge. Therefore, innovation is a “key” sustainable strategic tool for organizational success. To sustain organizational success, firms create such a space for innovation where knowledge engineering and reengineering takes the upper hand. The resultant effect becomes a capital resource for the firm. Firms utilize such knowledge capital as strategic resources, as they leverage its powers to maintain strategic and competitive advantages in the markets. This, we believe, is the fundamental basis of capital utilization. The role played by a knowledge space—tacit knowledge space therefore, is of supreme importance in creation of, and utilization of capital resources that are employed for organizational activities, including innovation, technological breakthrough research, and other R&D activities. It must be understood that this space defined as TKS is not synonymous with the R&D, for research and development is a workspace for the employees, whereas the Tacit Knowledge Space (TKS) is an intellectual space within which ideas and knowledge are transcribed into applied, real-world situations. It is space that firms create to gather and curate work experiences which also becomes a part of the organizational memory.

## Conclusion

In this paper, we have discussed the novel aspect of Tacit Knowledge Space, a hypothetical space that exists within organizations which is used by the employees for their firm related activities. Such activities that involve the application of skills and special competencies create a space for the

working teams within which they share, create, ideate, and curate tacit knowledge related understanding that are so essential for organizational functioning. Any modern day organization's productive efficiency is linked to leveraging of intellectual asset and knowledge resources, of which tacit knowledge constitutes as an invisible asset. Therefore, firms should give and create more space for cultivation and transcription of tacit knowledge into its explicit component, for which a space similar to TKS is highly desirable. The full paper appeared in the California Management Review, (1999) Winter, Vol. 1 No. 2

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## **Globalisation, E-Governance and Development: Exploring the Role of the State**

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### **Abstract:**

The recent advances in knowledge, innovation and technology in the world beckon to a better world. Good Governance is the use of Information Technology to deliver public services in a more convenient citizen centric and cost effective manner. Good Governance relates to the quality of relationship between the government and the citizens whom it serves and protects. Good Governance consists of four important pillars viz accountability, transparency, predictability and participation. Citizens want excellence in governance of services delivered on time and at minimum costs. In the fast changing scenario, good governance has become not only necessary but also essential in a set up where people are the biggest stakeholder. In this direction, a number of initiatives have already been made for government officials, legislators and various other key players to come together to learn and explore and achieve the objectives of growth and development.

**Key Words:** Good Governance, Development, Globalisation, State, Information Technology, Government

### **Introduction**

The transformation of governance, on the historical analysis of American Public Administration provides some good discussions on government and governance. Government is an institutional superstructure that society uses to translate politics into policies and legislation. Governance is the outcome of the interaction of government, the public service and citizens throughout the political process, policy development, programme design and service delivery. Governments are institutionalised institutions that contribute to governance. Representative government seek and receive citizen support, but they also need the active cooperation of public servants. Governance is the outcome of politics and programmes. Easy accessibility and outreach determine the nature of governance against government.

### **Globalisation: A Multifaceted Phenomenon**

Globalisation is a complex phenomenon which encompasses a great variety tendencies and trends in the economic, social and cultural spheres. It has a multi- dimensional for purpose of simplicity. It may be described as increasing and intensified flows among countries of goods, services, capital, ideas, information and people which produce cross- border integration of a number of economic, social and cultural activities. There are four main driving forces behind increased interdependence

a) trade and investment liberalisation b) technological innovation c) entrepreneurship, and d) global social networks. Although many believe that technological innovation and entrepreneurship are the main forces behind globalisation, these forces can not alone explain the process of enhanced economic integration. National governments have played a pivotal role in allowing greater interdependence and economic integration of specific activities through the elaboration and adoption of market-oriented policies and regulations. In other words, Economic globalisation is the result of policy decisions made by individual countries that allow global market forces to operate. It is of great importance to underscore the political source of economic globalisation in order to avoid interpreting this phenomenon as a deterministic force about which a little can be done. The real issue in which countries set the rules, whom do they favour and how can the powerful also influence policy-making in the international arena, and do it in ways that will benefit them. Some countries do not have as much leverage as others in setting the international economic and political agenda, due to significant powerful imbalances among nations that are reflected in international institutions. As a consequence, the present form of globalisation is largely shaped by the rules advanced by one part of the world, the most influential and these rules do not necessarily favour developing countries and countries in transition.

#### Role of the Government

Beating in kind that governments have played a crucial role in allowing for growing integration in a number of areas, increased interdependence has received a great impetus also from technological innovation, as well as the constant reduction in transportation and communication costs. These factors are responsible for drastically transforming the case, speed, quantity and quality of international information flows, as well as physical communications. In particular, information technology and multimedia communications are producing shrinkage of distance and acceleration of change. Due to technological advances transportation and communication costs have declined drastically. The end of state monopolies where and when it has happened and thereby the introduction of greater competition in the telecommunication sector, is also responsible for a sharp decline in communication costs.

#### Innovation

Thanks to technological innovations and greater economic liberalisation, entrepreneurs, especially Multinational Corporations, have taken full advantage of more open markets to spread production processes all over the world (Annual Report of WTO, 1999). The opening up of economic opportunities allows the movement of foreign capital, technology and management, largely from Transnational Corporations (TNCs), to host country entrepreneurs and corporations. Economic globalisation is mainly characterised by the rapid expansion of international trade, foreign direct investment and capital market flows. The last 50 years have seen trade expanding faster than output by a significant margin, increasing the degree to which national economies rely on international trade



in overall activity (Annual Report of WTO, 1998). The decline in transportation costs and technological innovation, in particular of internet, have contributed to an increase in the volume of trade, financial flows and accelerated economic transactions by decreasing the time and methods by delivery and payment of goods and services.

Greater economic integration is not the only relevant aspect of globalisation. Improvement in the technological spheres have enabled in expensive, instantaneous communications and massive diffusion of information affecting styles of politics, culture and social organisation. The globalisation of technology has contributed not only to the explosive growth of information exchange via the internet, but also to the expansion of education opportunities and the creation of transnational social networks. Information, which has been the monopoly of the few, is becoming accessible to wider and more diverse audiences. The relative ease of accessing information has increased citizens ability to share views, to become aware of their rights, to make their demands known and increase their influence generally. As a consequence, citizens are joining together to demand improved levels of services and higher standards of behaviour from their governments.

Globalisation has also allowed a greater awareness of international issues. Now a days people have greater access to and knowledge of other cultures as well as social problems and issues. What is more, social protests has taken on a different form. It is not any longer confined to one particular country or to local issues; it transcends national borders. International and regional organisations such as NGOs and Transnational networks based on shared interests rather than on. However NGOs are by no means invention of the past decades , some notable NGOs such as save the Children, were founded at the beginning of the 20th century, while other even earlier as in the case of the International Red Cross. What has changed is perhaps the increasing number of NGOs and their growing political leverage.

### Impact of Globalisation

The lifting of trade barriers , liberalisation of world capital markets and swift technological progress, especially in the field of information technology, transportation and telecommunications , have vastly increased and accelerated the movement of the people, information, commodities and capital. Correspondingly they have also broadened the range of issues which spill over borders of nation-states acquiring international norm- setting and regulation and therefore, consultation and formal negotiations on a global or regional scale. Many of the problems afflicting the world today such as poverty, environmental pollution, organised crimes and terrorism are increasingly transnational in nature and cannot be dealt with only at the national level, or by state to state negotiations. Greater economic and social interdependence seems to affect national decision- making processes in two fundamental ways. It calls for a transfer of decision to the international level and due to an increase in the demand for participation it also required many decisions to be transferred to local levels of government. This implies that public policies are undertaken at different levels. Thereby globalisation entails complex decision- making process, which take place at different levels, namely sub- national,

national and global, paving the way to a growing multilayered system of governance. As a matter of fact, two realities co-exist. One is the so-called borderless virtual world where geography does not count and communication and business transactions can occur in a matter of seconds. The other world is that of the every day life of people in which borders still count, local realities are still complex and very different among themselves, and most fundamentally where social and economic problems still need to be addressed. In addition, although there may seem to be cultural convergence, this phenomenon is only superficial and it does not affect the core cultural values of different countries. Role of the state globalisation may require that the state improve its capacity to deal with greater openness, but it does not seem to undermine its size nor its fundamental role within the national and international landscape. To be sure the state remains central to the well-being of its citizens and to the proper management of social and economic development. The state is also responsible for adopting policies, which are conducive to greater economic integration. In brief Globalisation does not reduce the role of the nation-state but redefines it given the pressures and responses it must give at the local, national and international levels. Experiences show that globalisation does not affect all countries to the same extent. In general and as recently experienced, if it is true, for instance that the negative externalities of a financial crisis in one region of the world affect other regions around the globe, it is also true that some countries suffer more than others because they lack the capacity to contain the adjustment costs of globalisation. This leads to the question of why some countries have not been able to minimise the costs of globalisation or have been marginalised. Globalisation and greater openness to the world economy can benefit fully a country and its people only in the presence of solid democratic institutions, which help redistribute the gains from open trade, investment, technological transfers and greater exchange. Globalisation has the potential of increasing prosperity and human development for all, but this is predicted on how it is pursued. In turn this depends on democratic processes being in place at the sub-national, national, international levels and on domestic policies which help those sectors of society which are hit by the negative effects of globalisation, for example unemployment that results from the restructuring of the economy. In order to ensure that society at large benefits from globalisation, countries need to a) reinforce democratic state institutions and promote, when needed, decentralisation b) strengthen social processes, in particular social safety nets c) reinforce social capital, and d) build capacity in the public sector to support the creation and application of knowledge, innovation and technology for development.

### Strengthening Democratic Institutions

A democratic state, which is proactive and strategic, is required to arrest and in the medium term, reverse poverty and underdevelopment. Combating poverty both nationally and internationally represents an essential dimension of a strategy of restoring public trust and rebuilding human capital, which is necessary not merely for development but also for the effectiveness of democratic governance. In brief, more than ever before what is needed today is strong democratic state

endowed with institutions that are capable of coping with both domestic and international problems and challenges. Strong democratic institutions are vital in providing a solid framework of political, economic and social rules and in creating an enabling environment for prosperity of people. In order to seize the benefits of globalisation, developing countries need to strengthen and modernise their democratic institutions. "Our runaway world does not need less, but more government and this only democratic institutions can provide" (Giddens, 2000, p.100).

An intelligent democratic state is one that intervenes strategically by creating the conditions that support constructive endeavours for people-centered growth. Its role should be catalytic and supportive, i.e., promoting without investing and supervisory/regulatory. Yet creating an enabling environment for the private sector involves more than removing obstacles. First to create a political and economic system in which entrepreneurship can flourish; second to facilitate entrepreneurial undertakings. The first task requires a stable and secure political order in which contracts are enforced, necessary adjudicating machinery existing for resolution of disputes, and the social order is backed by democratic institutions. The second task involves the establishment of financial, legal and market institutions and of a regulatory apparatus that enables people to open a business without too much difficulty to have access to affordable credit and to invest in productive activities.

Governments should take lead in simplifying procedures and regulations for the registration and licensing of business. Without simplifying bureaucratic procedures and rules to set up a business, entrepreneurial initiative will be stifled. The OECD recently elaborated new standards on corporate governance, workplace conditions, environmental safeguards, bribery and protection for whistleblowers. However the rules are not legally binding, although governments are expected to clear security and health standards in the workplace. In brief, poorly managed states and exclusionary politics contribute to holding back economic and social development. To be sure, economic growth alone is not sufficient to sustain equitable human development. Providing health care and education, public infrastructure, safety nets for the unemployed, equal opportunities for all and the respect of basic human rights is a fundamental responsibility of the state, which is not unrelated to the goal of economic prosperity for all and to the enhancement of people's freedoms and quality of life. Poverty is reduced and development is more easily achieved when the state has a larger redistributive role, which is all the more important today in order to minimise the negative effects of globalisation.

#### Problems of Market and Policy Failure

Globalisation does not confer benefits on all countries automatically nor does it generate benefits at no cost. All of the market failures that can occur in domestic economies also appear in the global economy. In reality markets do not always operate as they are supposed to in theory. When they deviate from fundamental principles, market failures can produce economically and socially undesirable consequences. Market failures appear when consumers and producers do not bear the full costs of their actions, when prices do not reflect social costs and benefits, when consumers are

manipulated or misled by advertising or do not have access to appropriate or regulating mechanism (the invisible hand) will push producers to adjust either the amount of goods and services offered or the price at which they offer them.

In essence a competitive market economy is a process of exchange through which individuals, households and business acting in their own perceived interests exchange money factors of production goods and services. Distribution depends on participants ability to obtain money by selling their labor or by earning interest and dividends on investments and for business organisations to earn revenue from the sale of goods and services. When a market works effectively it is an extremely efficient means of providing consumers with a wide range of goods and service, creating value and wealth, and allocating resources to their best uses in society. The market provides information on price and values that allow individuals, households and business organisation to make economically rational decision. Competition raises the quality of goods and services and lowers prices over time by rewarding participants who act on market signals and by punishing bankruptcy those who do not, market expansion generation jobs, providing workers with higher incomes and more resources to consume and save.

Government have an important policy role in creating condition that allow these factors to develop or be strengthened within their countries in order to enhance national competitiveness . the United Nations Conference on Trade and Development points out that “ the basic policy challenge facing most developing countries remains how best channel the elemental forces of trade and industry to wealth creation and the satisfaction of human wants”.

#### Role of Government in Fostering National Competitiveness

The most important roles of governments in fostering and promoting competitiveness in a global economy includes a) government controlled, centrally planned economies or non- functioning market systems b) initiating and sustaining macroeconomic reforms c) strengthening legal institutions for economic transactions d) enacting and implementing policies that support private enterprise development e) improving government efficiency accountability and responsiveness f) providing infrastructure and overhead capital g) protecting the economically vulnerable, and h) strengthening and supporting organisations of civil society.

#### Initiating and Sustaining Reforms

Governments in those countries seeking to expand their international trade and investment, create jobs, increase incomes and wealth and improve the standards of living for their citizens must find ways to create a domestic economic system in which most of all goods are available for purchase or sale on the market. Governments can help make markets competitive by allowing prices to reflect true relative scarcities in the economy encouraging decision makers to behave according to rules of the market and allowing producers to obtain fair profits. In most countries this means finding effective ways of implementing structural adjustment policies, liberalizing trade and investment, creating or strengthening property rights and developing a legal framework for economic transactions.

### Implementing Structural Adjustment Policies

Governments in most countries periodically make structural adjustments that enhance the financial viability of productive enterprise. Such policies aim at establishing a system in which private enterprises survive or fail on the basis of profit-making capability rather than on central government plans, bureaucratic controls and budgetary support and that are penalised for inefficient or unprofitable activities by the possibility of bankruptcy or liquidation. Timely availability of adequate, reliable, accurate and relevant data that has become a sine qua non not only of sound policy-making but also of the measurement, monitoring and evaluation of public sector performance. It carries in it the prospect of major reforms in the whole field of governance and public administration.

Globalisation may be said to bring greater opportunities to many countries provide specific conditions are met. It can foster prosperity, only if free trade principles are not upheld at the expenses of consumers, health and the environment and if profits are not gained at the expense of workers basic rights. That is to say greater market openness cannot be divorced from a profound debate about common social goals and complementary policies. The promotion of a higher quality of life and the protection of human dignity should be regarded as the end of any effort to globalise. Accordingly globalisation cannot mean the abandonment of all things to market forces. In other words "the economic sphere cannot be separated from the more complex fabric of social and political life and sent shooting off on its own trajectory. To survive and thrive, a global economy must have a more solid foundation in shared values and institutional practice. It must advance broader and more inclusive social purposes. Basic needs must be satisfied as an end in itself, but also a means to allow people to be able to seize to a greater extent the benefits of globalisation. This is especially true in developing countries where people can benefit more from the rapid transformations if the quality and access to education and health are ensured; if physical infrastructures, including transport and communication networks, hospitals and water systems are built or improved; if poverty amidst plenty is reduced and if the technology gap is narrowed that is to say if people have greater opportunities to make choices. What people can positively achieve is influenced by economic opportunities, political liberties, social powers and the enabling conditions of good health, basic education and the encouragement and cultivation of initiatives and the state has a very important role to play in this respect.

As emphasised globalisation can be a powerful and dynamic force for growth and development. If it is properly managed, the foundations for enduring and equitable growth at the international level can be laid. For that it is essential to preserve in the search for consensual solutions through open and direct dialogue that takes account of the fundamental interests of all. In sum globalisation as either a totally positive or negative phenomenon is a simplistic approach. Ultimately globalisation benefits society at large in countries that enjoy some degree of political stability that have in place adequate infrastructure equitable social safety nets and in general strong democratic institutions. Thus one of the main pre-conditions to ensure that the benefits of globalisation are evenly spread throughout

the developed and the developing world and within a given country is good governance and an efficient and effective public administration.

### Market System

Market System are the engines of national economic growth and the means through which private enterprises become competitive in a globalizing economy. However to operate effectively, market systems require a strong institutional framework. Globalisation and the technological innovation that drives economic, social and political interactions across national boundaries can bring substantial benefits to people in countries where governments focus on enacting and implementing market-supporting policies and creating and sustaining the institutions needed to make markets open, equitable and competitive. Studies of countries that have gone through the transition from closed, planned, controlled economies to open market systems, indicate that successful transformation requires not only economic policy reforms but also political liberalization. Creating the institutions and policies supporting efficient market systems and facilitating national competitiveness requires long-term political commitments by government with strong developmental orientations.

State seeking to participate in and benefit from a global market economy must create and sustain institutions that promote or strengthen seven underlying attributes of market systems that make them more open to domestic and international transactions. Governments have an important role to play in strengthening the following attributes economic motivation- markets systems depend on societal acceptance of material gain and the necessity business organisations to make profits as a primary motive for individual production and investment private productive property in market systems governments must protect private ownership of income and adequately rewarded freedom of enterprise to employ private property effectively. Owners must be permitted to mobilize the resources needed to make it more productive market-based decision-making in market-systems economic and business decision must be made by market signals, that is primarily through consumers decisions affecting supply and demand competition which is a basic attribute of market economies and the primary motivator for individuals and producers to divide labour specialise, develop comparative advantage, improve quality, cut costs and innovate equality of opportunity free markets require institutions that assure all individuals and groups the opportunity to engage in economic activity through the ownership of property and the formation of enterprises on fair sale of their labour for income and societal rule setting and guidance in order for markets to operate efficiently and effectively participants must establish and adhere to institutionalised “rules of the game” and government must establish a “Rule of Law” and enforce regulations within which markets can function efficiently.

### Conclusion

The world is going through one of the most remarkable periods of transformation in human history. Globalization is sweeping across nations. Rapid flows of goods, services, capital, technology, ideas, information and people across borders; increased financial integration of the world economy; and rise of knowledge as a key driver of economic growth are resulting in new challenges and opportunities for development

There is a need for building capability of the state and its apparatus to adapt to the new realities and exploit the opportunities for development and poverty reduction presented by globalization. They have to do so in an environment where their control over national trade and investment policies is dwindling and where international cooperation is assuming critical importance.

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## Managing Digitalization

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**Activity Theory and digital Trust: Empirical Evidences**Erik Paolo S. Capistrano<sup>1)</sup> and Markus A. Launer <sup>2)</sup>

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**Structured Abstract****Purpose:**

The purpose of this research is to empirically test Capistrano and Launer (2022)'s proposed theoretical model of digital trust. To recall, this model was derived from a theoretical discussion of digital trust in the workplace (Marcial and Launer, 2019), which was then respecified based on Engeström (1987)'s refinements on Leontiev (1978)'s activity theory in the context of human-computer interactions (HCI). Further referring to Marcial and Launer (2021), nine main research hypotheses were developed for this particular research, each positing their respective influence towards individuals choosing to trust the technologies in their workplace. As this is the first attempt to do so, a small sample from a selected geographical region was used to test the validity and reliability of the posited variables, and the overall robustness of the proposed research model.

**Design/methodology/approach**

Based on Capistrano and Launer (2022)'s proposed theoretical model and taking into consideration Marcial and Launer (2021)'s questionnaire validation, there are nine proposed hypotheses in this research.

Regarding individuals' perceptions of the technologies employed at work:

- H1a: Individuals' level of trust towards electronic devices provided at work influence their choosing to trust the technologies in their workplace.
- H2a: Individuals' level of trust towards hardware and software systems installed at work influence their choosing to trust the technologies in their workplace.
- H3a: Individuals' level of trust in the information systems implemented at work influence their choosing to trust the technologies in their workplace.
- Regarding individuals' perceptions of their co-workers influence their choosing to trust the technologies in their workplace:
- H2a: Individuals' level of trust towards management and other internal entities at work influence their choosing to trust the technologies in their workplace.
- H2b: Individuals' level of trust towards the information technology and data support at work influence their choosing to trust the technologies in their workplace.

- H2c: Individuals' level of trust towards external entities at work influence their choosing to trust the technologies in their workplace.

Regarding individuals' perceptions of their work processes influence their choosing to trust the technologies in their workplace.

- H3a: Individuals' perceptions on information systems operations at work influence their choosing to trust the technologies in their workplace.
- H3b: Individuals' perceptions on the data protection and privacy practices at work influence their choosing to trust the technologies in their workplace.
- H3c: Individuals' perceptions on responsible netizenship influence their choosing to trust the technologies in their workplace.

This research utilized the quantitative approach to produce its empirical results to validate the proposed theoretical model. Marcial and Launer (2021)'s validated questionnaire was used to collect and analyze the responses from 790 respondents from Southeast Asia. Confirmatory factor analysis (CFA) via AMOS was employed to test of the validity and reliability of the derived measurement model, while multiple regression via SPSS was used to test the proposed research hypotheses.

#### Findings:

Out of the original 103 question items, 50 were retained after CFA, hereby improving the parsimony of the measurement model. Furthermore, the regression results show that four of the nine proposed hypotheses found statistically significant support. These are the: (1) level of trust in hardware and software systems installed at work (H1b), (2) level of trust in the information technology and data support present at work (H2b), (3) perceptions on the information systems operations implemented at work (H3a), and (4) perceptions on the current data protection and privacy practices employed at work (H3b). Hence, a cursory examination of these results implies that out of the three major areas influencing digital trust in the workplace, work processes seem to be the priority consideration.

#### Theoretical implications:

Firstly, this research provides added empirical validation on the proposed measurement items on digital trust in the workplace. However, this research also extends the discussion on digital trust in the workplace by providing a theoretical foundation to develop a model that posits a set of independent variables and their respective effects towards a defined dependent variable.

Fortunately, based on the resulting measures on robustness of both the measurement model and the regression model, there is enough empirical evidence to imply that the proposed theoretical model based on the arguments posited by activity theory and human-computer interactions can be robust enough to examine digital trust in the workplace. Hence, this research presents an alternative theoretical approach to this topic that can be used for future academic works involving technologies, people, and processes in the workplace.

**Practical implications:**

As workplaces continue to evolve and incorporate more and more technologies, there are also corresponding changes in the roles of their people internal and external to the organization and in the processes that govern organizational dynamics. This research has made some significant progress establishing a theoretically-sound research model to describe the respective relationships and effects of technologies, people, and processes towards digital trust in the workplace.

Hence, organizations can use this model and these findings to better improve overall digital trust perceptions in the workplace. As this research has shown, organizations should recognize that there are at least three major areas which they should work on if they are to improve digital trust in the workplace: (1) the technologies that are employed, (2) the people who work internally and externally with them, and (3) the general and specific processes implemented at work. Furthermore, as this research has also posited, there are specific provisions for each of these three major areas that organizations should be aware of as well.

**Originality/value:**

The most significant value-adding contribution of this research is, as mentioned, its offering of a theoretical alternative in the study of digital trust. To the best of the authors' knowledge, this degree of synthesis between a pre-determined conceptual model of digital trust in the workplace (Marcial and Launer 2019; 2021) and a respecified version based on a theoretical integration of activity theory and human-computer interactions (Capistrano and Launer, 2022) is one of the few attempts to develop such an alternative approach. This research further extends this by undertaking a quantitatively-sound empirical validation of this alternative model.

**Keywords:** digital trust in the workplace, activity theory, human-computer interaction

**Paper type:** Research paper

**Artificial Intelligence Management in Hospitality and Foodservice Industry**

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**Extended Abstract**

Information and communication technology (ICT) plays a crucial role in digitized organizations, fostering operational efficiency and gaining a competitive edge. In the Fourth Industrial Revolution (4IR) era, industries, including hospitality and food services, extensively leverage advanced digital technologies like artificial intelligence (AI), machine learning, smart sensors, robots, big data analytics, and the Internet of Things (IoT) for innovation and value creation. In developed economies, hospitality and catering providers are at the forefront of deploying these technologies to enhance the quality of care and operational efficiency. The integration of AI, encompassing machine learning, natural language processing, and smart robots, offers substantial opportunities for innovation within the knowledge-intensive. The adoption of AI-based technologies is transforming how hospitality and catering providers deliver services and manage operations (Li, Bonn & Ye, 2019; Ruhet, 2020; Almaki et al., 2021; Lee & Yoon, 2021, Walter, 2023)

Artificial Intelligence (AI) has transformed global industries, including hospitality and foodservice. This article conducts a literature review and bibliometric analysis to assess AI's impact on the service sector in recent years. Current developments involve the integration of AI technologies enabling predictions about the industry's future and responses to economic challenges. Big data, AI, and robots are actively employed to enhance productivity and customer value in hospitality and catering sector. Businesses in the field must leverage AI's advantages to stay competitive. In recent years, AI increasingly employed as a tool for business strategy, contributing to enhanced operational efficiency and competitiveness (Mariani, 2019; Ruhet, 2020; Samala et al, 2020; Lee & Yoon, 2021; Sharma, Jain & Dhir, 2022; Walter, 2023).

The integration of AI-based technologies into daily life has become imperative, making their application indispensable for all organizations. With the widespread availability of smart mobile apps and devices in the digital age, consumer expectations have shifted towards differentiated, personalized, and responsive services, coupled with a demand for secure flexibility. Given this scenario, it is crucial to examine real-world cases that exemplify the current use of AI by hospitality and catering organizations. These cases provide valuable insights into how AI is employed for client care and the efficient management of operations in response to the evolving expectations and needs of consumers (Lee & Yoon, 2021).

Artificial intelligence (AI) is defined as the field of computer science that deals with the simulation of intelligent behavior in computers. Artificial intelligence is also the ability of machines to imitate intelligent human behavior (Merriam-Webster.com Dictionary). It is the ability of a computer or

computer-controlled robot to perform tasks commonly associated with intelligent beings. The term is often used to refer to projects to develop systems equipped with human-specific intellectual processes such as the ability to reason, discover meaning, generalize, or learn from past experience (Encyclopaedia Britannica). Artificial intelligence (AI) is a machine-based system that can operate with varying levels of autonomy and can, for explicit or implicit purposes, generate results such as predictions, recommendations or decisions affecting a real or virtual environment (Artificial Intelligence Act, EU Legislation in Progress, PE 698.792, June 2023).

As reported by the latest report on Artificial Intelligence (AI) worldwide published by the Statista (2023) research agency, in 2022, the global total corporate investment in AI nearly reached 92 billion U.S. dollars, marking a slight decrease from the previous year. However, its value is projected to grow twentyfold by 2030, reaching almost two trillion U.S. dollars. In 2018, there was a temporary downturn in yearly AI investment, but this was merely a short-lived occurrence. Since 2016, AI investment has witnessed an astonishing growth of more than sixfold, signifying remarkable expansion in the market. Notably, private investments constitute a significant portion of the total AI corporate investment, underscoring the global importance of AI development.

The market for AI is anticipated to experience robust growth in the next decade. The AI market spans across numerous industries, encompassing supply chains, marketing, product manufacturing, research, analysis, tourism, hospitality, and more. These fields are expected to incorporate artificial intelligence into their business structures to varying extents. Chatbots, image-generating AI, and mobile applications stand out as major trends that will enhance AI capabilities in the upcoming years. Statista (2023), forecasts that the chatbot market's size will reach approximately 1.25 billion U.S. dollars in 2025, reflecting a substantial increase from its 2016 market size of 190.8 million U.S. dollars (Statista, 2023).

AI creates opportunities, but also faces a number of challenges, especially in areas such as (Piwowar et. al., 2023):

- AI ethics.
- privacy and security – the challenge of protecting privacy and information security.
- changes in the labor market – AI may lead to the automation of some professions.
- investments in infrastructure – the development of AI requires large investment in equipment and in education.
- legal regulations.
- natural environment.
- equal access of all countries to AI.
- bias.
- human safety.

The growing trend of innovative digital solutions facilitates communication with clients and influences relevant consumer behaviour, particularly in the hospitality and food service market. The development of new digital technologies contributes to the emergence of innovative business

models, such as virtual catering establishments (dark kitchens), robotic and smart hotels, or virtual travel in the metaverse, transforming the global tourism market. This transformation is driven, among other factors, by customer expectations and experiences, as well as competitive pressure from FinTech providers.

The primary objective of this study was to identify and explore real-world cases that exemplify the current use of AI by hospitality and catering organizations. This review article offers a comprehensive and up-to-date overview of the current state of AI in the hospitality and food service industry. It also discusses associated challenges, encompassing ethical and legal considerations and the necessity for human expertise. By doing so, it enhances understanding of the significance of AI in the service industry and supports hotels and restaurants in effectively adopting AI technologies. Theoretical and practical implications of the findings are presented. The focused question explores the impact of applying AI in hotels and foodservice settings and the potential outcomes of this application. It is essential to recognize that this research will lay the foundation for anticipating future trends concerning the utilization of advanced mobile technologies, especially during times of crisis, and will extend its implications to various sectors of economic activity. The insights gained from this study will not only contribute to a deeper understanding of the current landscape but will also provide a framework for forecasting the evolving role of modern technologies in shaping the future of business operations in hospitality and foodservice industry, particularly in response to challenging circumstances.

**Keywords:** Artificial intelligence, digitalization, hospitality, foodservice, management

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## Digitalization and Employee Voice

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### Abstract

The paper is a review paper aimed at synthesizing existing knowledge on the concept of digitalization and employee voice so as to determine how digitalization has impacted employee voice in the organizations.

### Introduction

The phenomenon of the adoption of digital technologies in business and society has been referred to as digitalization (Strohmeier, 2020; Cijan et al., 2019). Our ability to work, communicate, and interact in businesses is changing fundamentally as a result of widespread digitalization. Researchers suggest that the workplace today has undergone significant changes and change is now accepted as the norm (Brougham & Haar, 2018). For the time one is currently living in, is of new industrial revolution and substantial modifications to our working practices can be anticipated as a result of this revolution (Cakula & Pratt, 2021). In such a changing environment employee voice has the potential to benefit organizations as a crucial information source for managerial decisions (Detert & Edmondson, 2011; Vakola & Bouradas 2005; Morrison & Milliken, 2000). As an organization will be able to better handle the change if its staff members are responsible, innovative, and committed to continuous improvement (Morrison, 2011). In order to take prompt corrective action, organizations turn on to their staff members to contribute original and creative ideas as well as to report any difficulties or problems that may be forming within the organization (Kaur & Arora, 2023; Quinn & Spreitzer, 1997). However, in order to ensure contribution from employees, they must be provided with the chances of and avenues for their voice (Kougiannou & Mendonça, 2021) and digitalization has proved to be instrumental in providing employees the advanced avenues for voice. Encouragement of voice builds on socio-technical relationships that permit frequent digital and in-person responses to employee inputs, making it clear how the inputs are interpreted, and guarantying employees' anonymity in the channel (Ellmer & Reichel, 2020).

### Problem Statement

Considerable research has been carried out on the concept of employee voice (Srivastava et al., 2019). Recently, academics have focused more on current events and how they relate to employee voice. One research stream looks at the development of technology and the impact of the digital revolution on employee voice (Knoll et al., 2022). With respect to workplace communication, tremendous change has been reported in recent years and workplace communication dimensions (Employee Voice and Employee Silence) are found to be significantly influenced by the digitalization.

The exchanges between employees and their managers are extended and made more intense by digitization and ICT usage (Palumbo, 2022). The COVID-19 pandemic further changed the way employees communicate, by requiring the employees to work from their homes (Oz, & Crooks, 2020). Even prior to the COVID-19 health crisis, the scientific community has been paying increasing attention to the digitization of workplaces (Chakraborty et al., 2021).

This impact digitalization is having on employee voice is of significant research interest and has a great scope for contribution as little is known about the burgeoning EVs (Employee Voices) connected to remote work and workplace digitization (Della et al., 2022) and more of conceptual and empirical evidence is needed to have a clearer picture of employee voice and digitalization (Knoll et al., 2022).

#### Objective or Purpose of the study:

Considering the review forming part of this study, it can be said that there are not many studies that takes the review research approach to the relationship between employee voice and digitalization, hence in this research an attempt has been made to ascertain how digitalization has impacted employee voice in the workplace context and its subsequent impact on employees and the organizations. In doing so, the disparate research has been gathered and suggestions and guidance to both researchers and practitioners are offered. Organizations must adapt to the changes, seize the opportunities they present, and balance those efforts with an awareness of and action against any negative effects. Thus, the given study focuses on assisting the firms in maximizing the advantages of digitalization as a route for employee voice while reducing the potential negative consequences by providing guidelines based on the research done hitherto. The study has both theoretical and practical implications as it integrates previous knowledge on how digitalization has facilitated or inhibited employee voice in the organizations and its subsequent impact on both the employees and the organization.

#### Method:

The goal of the paper is to decipher the digital facilitators and barriers to employee voice in general organizational context. In order to achieve this objective a review of the previous research concerning digitalization and employee voice has been undertaken. The research is tapped on the basis of keywords such as “digitalization and workplace”, “digitalization and workplace communication”, “digitalization and employee voice”, “social media and employee voice”, “digitalization and employee silence”. The database of Google scholar has been used to search for the relevant literature. Further, manual search from reference section of various papers, for relevant articles has also been carried out. Finally studies carried out in English language, having the element of digitalization and its various components, employee voice, workplace communication and employee silence formed the part of this review.

### Observations:

One of the major forces of change organizations are dealing with is digitalization. Nowadays, digital technologies have penetrated in every aspect of the organizations and it is not possible to even think of organizations without it (Cijan et al., 2019) and the internal workplace communication is no exception. Companies with a clear edge in realizing and maintaining competitive advantage are those that comprehend the new voice mechanisms and are able to harness and channelize the power of employee voice (Miles & Mangold, 2014). Employee voice is found to be significantly influenced by digitalization. Employees now have a variety of chances to express their opinions through anonymous channels, thanks to the development of digital technologies. Digitalization has provided organizations with a variety of voice channels which were earlier limited to the traditional means of communication such as face to-face meetings, surveys etc. Artificial intelligence, Internet of Things, and machine learning (a subset of AI) are among the digital technologies that are fundamentally altering how customers and employees interact with businesses (Vanktesh, 2018). Anonymous digital voice is the most salient form in comparison to the traditional notion of voice and with respect to the use of communication technologies (Kim & Leach, 2020). AI enabled chatbots serve as a direct voice mechanism for organizations, giving staff members the chance to express their ideas and issues while also receiving individualized and personalized attention leading to increased engagement (Dutta et al., 2023). Although organizations use a variety of digital technologies, the use of anonymous social media becomes particularly meaningful when examining voice (Kim & Leach, 2020). With wider reach and immediate nature social media has the ability to change how business interactions are conducted and how employees are heard (Holland et al., 2016). However, evidence suggests that the use of digitalization for ensuring employee voice has a dark side as well as it represents both opportunity and risk (Cakula & Pratt, 2021). Technological invasion is found to have positive influence on employee silence (Jungst, 2023). Employees experiment with various modes and trajectories of voice that are independent of the organization in an effort to end management suppression and bring about change in the workplace (Kougiannou & Mendonça, 2021). Also as people do not have face to face communication the message may lose context and significance. When it comes to richness and intimacy, technology-mediated communication (such as videoconferencing or messenger applications) generally lags behind face-to-face conversation (Willkinson et al., 2021). Face-to-face interaction is necessary for people to establish trust, exchange ideas, and feel comfortable contributing their opinions in the digital domain. Digital communication alone is insufficient (Bernauer & Kornau, 2022). Employees also tend to be cautious about the use of digital tools as voice mechanisms (Bernauer & Kornau, 2022; Oz & Crooks, 2020). The effectiveness of digitalization as a voice enabler in workplace is found to be influenced by various contextual factors (Miles & Mangold, 2014); also the negative impact of digitalization on voice has been reported (Cervellon & Lirio, 2017). The material agency of a digital voice channel per se can encourage or discourage voice independently of administrative replies (Ellmer & Reichel, 2020). Efforts are required on the part of the organizations, and employees as well to get the best

out of the use of digitalization as voice mechanism. As it has been found, that management would want the employees to represent their organization on social media, however the employees tend to be less involved than expected for the same (Cervellon & Lirio, 2017).

#### Conclusion:

For workers, having a voice is essential because it gives them the power to improve organizations and influence organizational decision making (Bucher et al., 2023). The organizations as well, can make the use of employee voice for its effectiveness by welcoming the opinions from employees. Employee voice would be encouraged in all forms and on all platforms in an organizational communication climate that supports freedom of speech (Kim & Leach, 2020). The organizations can do so by supplanting the already existing conventional voice mechanisms with digital voice channels (Bucher et al., 2023). This integration of traditional and digital voice mechanisms will help overcoming the weaknesses of these voice channels when employed individually. Also digitalization has created as many problems as advantages (Cijan et al., 2019) and its drawbacks should be born in mind while making it operational in the organization.

#### Recommendations:

An integrated system comprising traditional and digital mechanisms of voice should be introduced in the organization (Bernauer & Kornau, 2022). Establishing of an appropriate organizational context for voice is important and also employees must be provided with the needed guidelines and support (Miles & Mangold, 2014). As these systems can enhance communication if properly set up and managed effectively. The voice raised by employees should be properly responded by taking the needed action. Voice outcomes and behaviors are built on a "material" component in addition to being primarily "social" hence the features of the channel should be so designed that it promotes employee voice. Employees should be provided with psychological safety for voicing their opinions and the anonymity of those raising voice might prove to be helpful in promoting the voice through digital means (Ellmer & Reichel, 2020). Employees may actively use anonymous online platforms in addition to more traditional communication channels if they believe their company is willing to value employee opinions only if follow-up activities, dialogues, and communications are carried out meaningfully with the employees. Any inaction when employees raise concerns is likely to foster skepticism and mistrust of the HR procedures, leadership, and technology (Kim & Leach, 2020). While moving from silence to voice, organizations should instead reevaluate their approach to voice and make sure that it does not think of suppressing voice in anyway, otherwise employees end up strategically setting voice mechanisms to protect their interests (Kougiannou & Mendonça, 2021). The working of the digital voicing system can be streamlined by clearly defining roles and responsibilities as it improves accountability and ensures that e-voices are heard and ideas are effectively implemented (Bernauer & Kornau, 2022). Also it is required on the part of employees that they show the willingness to voice and engagement in organizational decisions (Holland et al., 2016).

### Originality:

This paper is among the few attempts to review the existing research dealing with the impact of digitalization on employee voice in general organizational context. It integrates what is currently known about the impact of digitalization on employee voice and provides guidance based on the existing knowledge as to how to get the best out of this impact.

Keywords: digitalization, employee voice, workplace communication

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## **Digital Trust and Higher Education Challenges in Developing Countries**

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### **Abstract**

This research paper explores the critical intersection of digital trust and higher education challenges in developing countries. Establishing and maintaining trust in digital educational environments is paramount in an increasingly digitized world. The paper examines developing nations' unique challenges in fostering digital trust within their higher education systems. It investigates the impact of digital trust on accessibility, quality, and equity in education. The study aims to provide insights and recommendations for enhancing digital trust in higher education and promoting inclusive and effective learning opportunities in developing countries by delving into these issues.

**Keywords:** Digital trust, inclusive education, cyber security, privacy, ethics, encryption, cyber threats, educational challenges, developing countries

### **Introduction**

Digital trust, often called online or cybersecurity trust, is a multifaceted concept that plays a fundamental role in the modern digital landscape. It encompasses the confidence and assurance individuals, organizations, and entities have in the security, reliability, and ethical conduct of digital systems, services, and interactions (Chatterjee, et al., 2023). Security is a cornerstone of digital trust (Mukherjee et al., 2021). Users must believe that their data, transactions, and communications are protected from unauthorized access, breaches, and cyber threats. This involves encryption, secure access controls, and robust cybersecurity measures to safeguard sensitive information. Privacy, closely linked to security, also involves the responsible handling of personal data and the assurance that it won't be misused. Users need to trust that digital systems and services will be available and function as expected. Downtime or service disruptions erode trust. System reliability, redundancy, and uptime guarantees are crucial for building and maintaining digital trust. Transparent practices, policies, and disclosures are essential for digital trust (Paliszkiewicz & Chen, 2021). Users should clearly understand how their data is collected, used, and protected. Openness about terms of service, data handling, and potential risks fosters trust (Robinson, 2020). Trust in digital interactions often depends on verifying the parties' identities. Authentication methods, such as two-factor authentication (2FA), biometrics, and strong passwords, are used to ensure that individuals and entities are who they claim to be. A positive user experience contributes to digital trust (Yan, 2014). Intuitive interfaces, easy navigation, and responsive design are crucial for building and maintaining trust in digital platforms and services. Trust and identity are fundamental for social survival, aiding societal recognition and trust and enabling effective communication, interaction, and transactions.

Trust and identity are essential in physical or virtual interactions, and trust management plays a vital role in maintaining trust levels and fostering enduring relationships and successful business transactions (Kumar & Pradhan, 2020). Adherence to industry-recognized cybersecurity best practices is a significant factor in building trust (Abbas et al., 2023). This includes vulnerability assessments, timely patching, and regular security audits to ensure the resilience of digital systems. Trust is also shaped by the ethical behavior of organizations and individuals in the digital realm (Paliszkiewicz et al., 2022). Ethical practices in data handling, content moderation, and the prevention of online harassment contribute to a trusted digital environment. Adhering to relevant regulations and standards, such as GDPR, HIPAA, or PCI DSS, is essential for building digital trust. Compliance is committed to safeguarding user data and adhering to legal and industry-specific guidelines (Kayhan, 2022). User feedback and reviews play a vital role in establishing trust. Positive reviews and endorsements from peers can enhance the trustworthiness of digital products and services.

Trust is not static; it must be earned and maintained over time. Continuous improvement in security measures, user experiences, and ethical practices is necessary to sustain and strengthen digital trust. In today's interconnected world, digital trust is critical for e-commerce and online services and sectors like healthcare, finance, education, and government. Building and maintaining trust in these digital interactions is an ongoing process that involves technical, operational, and ethical considerations. Trust is a foundation that underpins the successful adoption and utilization of digital technologies. This becomes a significant concern for developing nations as almost all educational institutions have gone online, with varying degrees of implementation from blended to entirely online. Developing nations face unique challenges in fostering digital trust within their higher education systems. One of the primary challenges is the digital divide, where limited access to technology and the internet hampers both students' and institutions' ability to participate in online learning (Frolova, 2020). For example, in rural areas of countries like Bangladesh India or parts of Africa, lack of internet infrastructure and access to devices can severely limit students' engagement in digital learning, hindering the establishment of trust in online education (Alam et al., 2023). Another challenge is the lack of resources and investment in cybersecurity infrastructure. Developing countries often struggle to allocate funds and expertise to protect digital systems from cyber threats. For instance, universities in some African countries might not have the financial means to implement robust cybersecurity measures, leaving their systems vulnerable to attacks that can erode trust in online education (Kabanda, 2018; Lejaka et al., 2023; Chimbunde, 2023; Khan et al., 2023). Moreover, the absence of a unified regulatory framework in some developing nations can lead to data privacy and student information security issues. This can result in concerns about how personal data is handled in online learning environments, affecting students' trust in educational institutions and the broader digital education ecosystem.

Language barriers and localization are additional challenges. In countries with diverse linguistic backgrounds like Africa and India, accommodating different languages and dialects in digital learning



platforms can be complex and hinder trust-building, as some students may feel excluded or face difficulties in understanding course content (Weyer, 2019). The rapid technological advancements and the need for ongoing digital literacy training can be demanding for faculty and students in developing nations. Inconsistent access to training resources and resistance to change can slow the development of digital trust in higher education.

## Conclusion

In conclusion, developing nations face multifaceted challenges in fostering digital trust within higher education, encompassing access disparities, cybersecurity limitations, regulatory issues, language diversity, and digital literacy gaps. These challenges require concerted efforts and investments to build a trusted digital educational environment serving students and institutions effectively.

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## **Mapping Organizational DNA: Leveraging Data to Uncover The Unseen Patterns That Drive Performance**

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### Extended Abstract

Performance reviews can never replace the intricacies involved in a business today and the dynamics associated with them. Diagnostic tools echoing an organization's genetic code or invisible DNA that is the reason for performance must be designed for decision-makers. Accordingly, this paper provides an in-depth overview of the proposed Mapping Organizational DNA Framework leveraging publicly available information and research. To establish spatial relations between multiple data sets of different types, multi-dimensional data is used as well as sophisticated analytical mapping techniques to represent those links visually. This process seeks to expose an organization's natural weaknesses and growth opportunities through the exploitation of public information. The first step in problem identification includes gathering data on existing stakeholders' opinions on how success was determined. Tracking DNA signs means interconnected patterns throughout a five-dimensional database ranging from such sources as financial report cards, customer satisfaction surveys, employee retention analysis, tracking a variety of different projects, and even the sentiments captured by internal email correspondences. Provide for exploration of multi-strategic angles and other relations that have been veiled and which explain performance outcomes over the years via interactive data visualization. This framework finally enhances functioning in the organization through structured identification and analysis of invisible but influencing trends. This process involves leveraging publicly available data and studies for deeper leadership insights that enhance real potential-based growth for organizations.

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## **Why Do We Need Big Data Analytics Capabilities and Knowledge Sharing for Firms Eco-innovation and Environmental Performance?**

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### **Extended Abstract**

In the knowledge-based industrial era, firms must create, develop and share knowledge. Firms build their knowledge from employees' long-term experiences, routines, know-how and interaction with each other (Islam & Asad, 2021). Green absorptive capacity (GAC), on the one hand, converted knowledge sharing (KS) to knowledge applications (Kang & Lee, 2017; Pacheco, Alves, & Liboni, 2018). This last used for entrepreneurial commercialized purposes (Zahra, Filatotchev, & Wright, 2009). Firms entrepreneurially green-oriented (GEO) aims to increase eco-business growth through delivering ecofriendly products, clean technologies and eco-processes (Makhloufi, Laghouag, Meirun, & Belaid, 2021). On the other hand, big data analytics capabilities (BDAC) provide firms with massive data, understanding and anticipating customer behavior, predicting future eco-business opportunities and strengthening firms with accurate information and analytics results (Ciampi, Demi, Magrini, Marzi, & Papa, 2021). The core issue of the study is to emphasize the strategic role of BDAC and GAC in fostering GEO firms. Given the vital impact of green organizational ambidexterity (GOA) through green exploitative learning and green explorative learning (Chen, Chang, & Lin, 2014; Shafique, Kalyar, & Mehwish, 2021). Testing and understanding how KS and GOA will level up the GEO-eco-innovation relationship is essential. The study applied the dynamic capability view (DCV) as a theoretical foundation to predict the dynamic environmental capabilities of the multi-mediation moderation model. The study extend the body of knowledge of the DCV and support past studies (Hanifah, Abd Halim, Vafaei-Zadeh, & Nawaser, 2022; Shafique et al., 2021; Teece, 2016, 2018, 2023; Teece, Pisano, & Shuen, 1997; Zahra et al., 2009; Zahra & George, 2002; Zahra, Sapienza, & Davidsson, 2006).

Modern firms must acquire advanced management techniques to handle large-scale data by identifying, tracking valuable data, storing, and disseminating data across various technological devices and programs (Ferraris, Mazzoleni, Devalle, & Couturier, 2019). The obtained valuable insights, ideas and generated knowledge to predict future threats and opportunities and foster eco-business operations outcomes (Drosio & Stanek, 2016; Z. Khan & Vorley, 2017). BDAC assists corporations in reducing time, establishing appropriate decision-making, tracking customer behavior, analyzing complex behavior and anticipating future business trends (El-Kassar & Singh, 2019). This implies that firms' dynamic capabilities can be strengthened and benefit from leveraging the generated knowledge and insights, which, in turn, reconfigured, developed and integrated with existing ones to create unimitated capabilities (Mikalef, van de Wetering, & Krogstie, 2021). Firms characterized by GEO (e.g., eco-innovativeness, eco-proactiveness and risk-taking orientation)

intend to deliver eco-friendly products, invest highly in clean technologies, polish eco-business operations and respond to environmental concerns (Shafique et al., 2021). As a result, given the mentioned green issues and the massive data obtained, firms GEO should deploy BDAC to advance their green operations.

Applying BDAC to advance green practices support firms' flexibility and entrepreneurial business agility. GEO's primary purpose is to deliver eco-products and promote eco-business processes may associate with the high cost and uncertainty of business failure (Demirel, Li, Rentocchini, & Tamvada, 2019). Therefore, BDAC enables GEO through accurate information, decision-making choices, profitable green business models, entrepreneurial activities with less cost, future customer behavior and advanced eco-business process techniques (El-Kassar & Singh, 2019). Hence, BDAC is driving eco-business growth while addressing environmental concerns.

GAC purposely seeks to convert the developed obtained knowledge from external and internal sources (BDAC) to knowledge application (Pacheco et al., 2018). It plays a significant role in fostering GEO achievements by supporting and leveraging green practices to polish environmental activities impacts (Zhang, Liang, Feng, Yuan, & Jiang, 2020). GAC drives green value-added by strengthening entrepreneurial green businesses (Makhloufi et al., 2021). It helps GEO innovativeness, proactiveness and risk-taking by understanding customer needs, reconfiguring business processes, enhancing green products, developing new ones, and anticipating future opportunities (Rodrigo-Alarcón, Parra-Requena, & Ruiz-Ortega, 2020). The DCV asserted that BDAC and GAC develop firms' dynamic capabilities by empowering existing knowledge to support managerial-operational skills, routines, know-how, new products development, processes and individual practices (Hanifah et al., 2022; Lozada, Arias-Pérez, & Edwin Alexander, 2023; Zahra et al., 2006). This, in turn, leads to promoting ecofriendly products and processes, increasing resource efficiencies, and enhancing the firm's image and brand reputation (Lozada et al., 2023; Lozada, Arias-Pérez, & Perdomo-Charry, 2019). The study, for the first time, if any proposing and empirically testing the relationship between BDAC, GAC and GEO. It is thus extending the body of green entrepreneurship, BDAC, and the DCV lens.

In this context, DBAC assists modern organizations in analyzing massive up-to-date data to create unimitated knowledge and insights to foster the absorption of potential threats and grasp green business opportunities (Waqas, Honggang, Ahmad, Khan, & Iqbal, 2021). Therefore, collecting and analyzing large-scale data is to develop an in-depth insight related to green businesses. However, deploying and integrating BDAC within firms' dynamic capabilities, namely GEO, KS, and GAC, is necessary to achieve superior eco-innovation outcomes (Ciampi et al., 2021; A. Khan, Tao, & Li, 2022; Z. Khan & Vorley, 2017). The study suggests that entrepreneurial firms that possess solid BDA capabilities respond quickly, with high forecasting, predicting customer behavior, anticipating rivals' strategies, and radically restructuring businesses, which, in turn, results in high entrepreneurial agility (Ciampi et al., 2021). To conclude, being entrepreneurially green-oriented means firms face

uncountable environmental pressures; thus, investing heavily in BDAC as a major powerful weapon to deal with large-scale data based on green business issues is advised. BDAC provides firms GEO with valuable knowledge, in-depth insights, prediction and innovative, profitable business models that might generate green business growth (Waqas et al., 2021). In addition, the extent to which GAC influences GEO depends on the outcomes generated from BDAC. This last seen as the primary source GAC uses to clarify firms' business issues and provide solutions. Thus, understanding how BDA capabilities and GAC work together is another managerial task managers must practice improving overall outcomes.

Talented employees possessing years of experience, learning, know-how and accumulation of routines and skills, firms and individuals can create and establish their unimitated knowledge (Hanifah, Abd Halim, Vafaei-Zadeh, & Nawaser, 2021). The knowledge-creation process after long experiences is seen as one of the dynamic strategic capabilities that offer strategic value-added (Islam, Zahra, Rehman, & Jamil, 2022). Thus, the knowledge acquired improved business processes, product development, and managerial and individual cognitive skills (Islam & Asad, 2021). The DCV argued that knowledge is the most strategic weapon to promote entrepreneurial orientation (Pittino, Martínez, Chirico, & Galván, 2018). The KS capacity of an entrepreneur develops a firm's dynamic abilities (Li et al., 2020). Studies such as (Carmeli, Gelbard, & Reiter-Palmon, 2013; Kang & Lee, 2017) argued that KS empowers employees' dynamic capability to foster product development, enabling an entrepreneur to absorb and predict business changes and search for opportunities. Researchers Rafique, Hameed, and Agha (2018) advocate that knowledge management is insufficient unless firms recognize KS as a dynamic capability that fosters green entrepreneurial activities. Hanifah et al. (2022) confirm that KS supports entrepreneurial innovativeness. This implies that an entrepreneur's capacity to deliver eco-friendly products, level up green processes and proactively be green behavior is in need and stimulated by KS to do so (Hanifah et al., 2022). Given the vital role of KS on green innovation (Lin & Chen, 2017) and KS on entrepreneurial orientation (Hanifah et al., 2022). It is crucial to predict the potential moderating effect of KS on the relationship between GEO-green innovation, especially in environmental and institutional pressures. By doing so, this study would extend the body of the DCV by elaborating the significance role of KS as green dynamic capability contributing to GEO achievement.

Organizational ambidexterity refers to firms' integral dynamic capability that consists of a dual orientation of exploration and exploitation activities (Shafique et al., 2021). The importance of ambidexterity is allowing firms to exploit existing competencies, search and explore new business opportunities (Úbeda-García, Marco-Lajara, Zaragoza-Sáez, Manresa-Marhuenda, & Poveda-Pareja, 2021). This means firms can benefit from short-term opportunities through exploitation while exploration supports innovation development to obtain long-term advantages (Shafique et al., 2021). Importantly, exploration activities focus on searching, experiments and discoveries, while exploitation addresses the selection, resource efficiency and implementation (Chen et al., 2014).

The strategic advantage of being ambidextrous is that it fosters an organization's capacity to respond to short- and long-term changes and track eco-opportunities; therefore, it levels up the GEO achievements (Jansen, Simsek, & Cao, 2012). Entrepreneurial ambidexterity reflects their proactive strategies and activities to determine, track and capture eco-business opportunities against rivals and anticipate future market changes (Tuan, 2016). It means that exploitation, on the one hand, intends to develop existing knowledge and upgrade competencies, know-how and practices that allow for polishing eco-business processes and products (Shafique et al., 2021).

On the other hand, exploration gave a definite possibility to create and develop knowledge, determine potential opportunities and mobilize valuable resources to build unimitated capabilities integrated with the existing ones. Moreover, following the vital role of ambidextrous, integration of exploration and exploitation supports GOE by identifying eco-friendly solutions and advancing green business operations (Shafique et al., 2021). As a result, GOA addresses active learning and leveling p knowledge development, which, in turn, deploy the capacity to innovate, proactive behavior and risk-taking, anticipating sustained eco-opportunities (Jansen et al., 2012), and thus drive GEO achievements. However, GOA influences eco-innovation (Chen et al., 2014) and drives GEO (Shafique et al., 2021). Predicting the possible moderating role of GOA on the relationship between GEO-green innovation is impressive, especially when entrepreneurs need to reconfigure business processes and develop new products to match customer needs. Therefore, by addressing this gap, this study enables GEO to overcome environmental issues.

This research proposes the DCV lens as an appropriate theoretical foundation to address whether BDAC can develop the level of GAC to enhance firms' GEO achievement. Literature shows that the DCV is mainly applied to explain the potential relationship between BDAC, GAC, GEO and eco-innovation (Ferraris et al., 2019; Mikalef, Boura, Lekakos, & Krogstie, 2019; Mikalef et al., 2021). The DCV overcomes the limitation observed in both perspectives, resource-based and knowledge-based theories, in explaining the strategic value of BDAC to polish the firm's dynamic capabilities. The resource-based view (RBV) regards the generated data (information) as valuable but does not emphasize their potential value on business processes. At the same time, the knowledge-based view (KBS) does not fully address the strategic choices enabled by BDAC to foster problem-solving options. Specifically, the DCV viewed BDAC as a resource of value-creation and its potential benefits. The DCV also helps to examine how firms reconfigure big data assets and processes on the one hand—and understand how to extract knowledge and dissemination and efficiently employ it within a business operation. To conclude, the DCV considers BDA a dynamic capability that allows firms to distinctively own unimitated capabilities to create strategic insights (Mikalef et al., 2021). This study, therefore, emphasizes the RBV and the KBS deficiencies by bridging these gaps and extending the body of the DCV.

Following the discussion above, several gaps emerged in the literature. Studies have not addressed the relationship between BDAC, GEO, GAC and eco-innovation. Understanding how BDAC is

leveraged in GEO and GAC is still ambiguous. To what extent does BDAC improve GEO-eco-innovation is of utmost importance? To what extent will BDAC enhance the GAC-GEO and GEO-eco-innovation outcomes? The discussion above addresses the significant effect of BDAC on businesses and in some studies on eco-innovation. Nevertheless, the situation is different in the context of GEO and GAC. Therefore, given entrepreneurs' environmental concerns, this study assumes that BDAC may help develop GEO and GAC to achieve high eco-business growth and reduce resource degradation. Thus, the study aims to advance BDAC knowledge, the DCV lens, KS and eco-innovation literature. Drowning upon the DCV, the study develops and empirically tests the proposed hypotheses.

### Theoretical framework

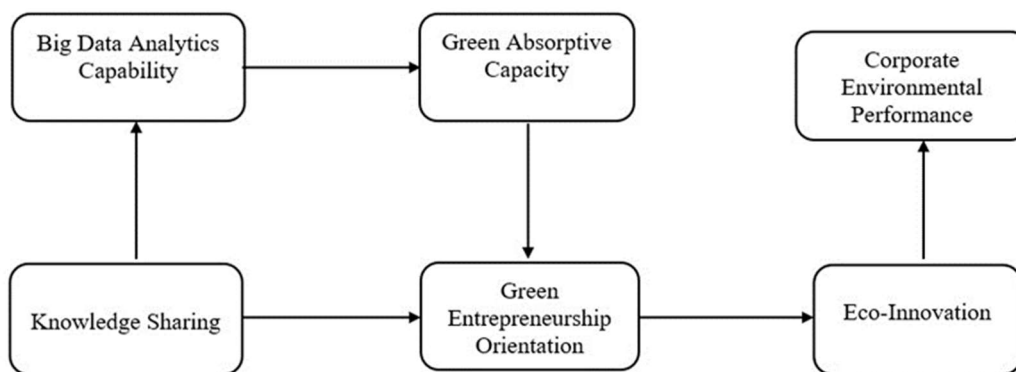


Figure 1 Research Model

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**Artificial Intelligence a powerful Paradigm for digital Mindmapping**Azra Tajhizi <sup>1)</sup> and Tuba Kizilkan <sup>2)</sup>

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**Extended Abstract**

Artificial intelligence (AI) has emerged as a powerful paradigm for digital mind mapping, revolutionizing the way information is organized and processed. Mind mapping, a technique that visually represents ideas and concepts, has traditionally relied on manual input and human cognition. However, with the advent of AI, mind mapping has been elevated to new heights. AI enables the creation of intelligent mind mapping tools that can automatically generate and organize ideas based on user input or existing knowledge bases. These tools leverage machine learning algorithms to understand patterns and relationships within vast amounts of data, allowing for more efficient and accurate mind map creation.

One key advantage of AI-powered mind mapping is its ability to handle complex and diverse information sources. By integrating with various data repositories, such as online databases or personal documents, AI can extract relevant information and present it in a structured manner within the mind maps. This not only saves time but also ensures that no valuable insights are overlooked. Furthermore, AI enhances collaboration in mind mapping by facilitating real-time sharing and editing among multiple users. With intelligent algorithms that can suggest connections or identify knowledge gaps, AI promotes collective intelligence and fosters creativity within teams.

Another significant aspect of AI in mind mapping is its capacity for natural language processing. By understanding human language, AI-powered tools can interpret spoken or written instructions to generate corresponding mind maps. This feature greatly simplifies the process of creating mind maps, making it accessible to a wider range of users.

However, challenges remain in the field of AI-powered mind mapping. Ensuring data privacy and security is crucial when dealing with sensitive information stored within these tools. Additionally, striking a balance between automation and user control is essential to avoid over-reliance on AI algorithms.

Artificial intelligence has revolutionized digital mind mapping by providing powerful tools that automate processes, enhance collaboration, and improve efficiency. As technology continues to advance, further integration of AI into mind mapping will undoubtedly unlock new possibilities for organizing information and stimulating creativity.

In recent years, the integration of technology in education has revolutionized the way we teach and learn. One such technological advancement that has gained significant attention is Artificial

Intelligence (AI). AI has proven to be a powerful paradigm for digital mind mapping in English Language Teaching (ELT) classes, offering a plethora of benefits for both teachers and students.

First and foremost, AI-powered mind mapping tools provide an interactive and engaging learning experience. Traditional mind mapping techniques often involve pen and paper, limiting creativity and collaboration. However, with AI, students can explore their ideas using various multimedia elements such as images, videos, and audio recordings. This dynamic approach not only enhances students' critical thinking skills but also encourages them to express their thoughts more effectively.

Furthermore, AI-based mind mapping tools offer personalized learning experiences tailored to individual students' needs. These tools can analyze students' performance data and provide real-time feedback on their progress. By identifying areas of improvement or misconceptions, teachers can intervene promptly and provide targeted support to each student. This personalized approach ensures that no student is left behind and fosters a more inclusive classroom environment.

Another significant advantage of using AI in mind mapping is its ability to automate mundane tasks. Teachers often spend a considerable amount of time grading assignments or organizing information manually. However, with AI-powered tools, these tasks can be automated, freeing up valuable time for teachers to focus on more meaningful interactions with their students. Additionally, AI algorithms can analyze vast amounts of data quickly and efficiently, providing teachers with valuable insights into student performance trends or areas that require additional attention.

Moreover, the integration of AI in ELT classes promotes learner autonomy by encouraging self-directed learning. Students can access mind mapping tools outside the classroom environment at their own pace and convenience. This flexibility allows them to review concepts independently or collaborate with peers remotely. By empowering students to take control of their learning journey through AI-based mind mapping tools, they become active participants rather than passive recipients of knowledge.

However, it is important to note that while AI offers numerous advantages for digital mind mapping in ELT classes, it should not replace human interaction entirely. The role of the teacher remains crucial in guiding students' learning process and providing emotional support when needed.

In conclusion, Artificial Intelligence has emerged as a powerful paradigm for digital mind mapping in ELT classes due to its interactive nature, personalized learning experiences, automation capabilities, and promotion of learner autonomy. By leveraging the potential of AI-powered mind mapping tools effectively alongside traditional teaching methods, educators can create an engaging and effective learning environment that prepares students for the challenges of the digital age.

In recent years, the integration of technology in education has revolutionized the way we teach and learn. One such technological advancement that has gained significant attention is Artificial Intelligence (AI). AI has proven to be a powerful tool in various fields, including education. In English Language Teaching (ELT) classes, AI offers a unique opportunity to enhance learning experiences through digital mind mapping. This article explores how AI can be utilized as a paradigm for digital mind mapping in ELT classes, providing numerous benefits for both teachers and students.

### Understanding Digital Mind Mapping:

Digital mind mapping is an innovative approach that allows learners to visually organize their thoughts and ideas. It involves creating diagrams or visual representations of concepts, which helps students understand complex topics more effectively. Traditional mind mapping techniques involve pen and paper, but with the advent of AI, digital mind mapping tools have emerged as a game-changer.

### The Power of Artificial Intelligence in ELT:

1. **Personalized Learning:** AI-powered digital mind mapping tools can adapt to individual student needs by analyzing their learning patterns and preferences. These tools can provide personalized recommendations and suggestions based on each student's strengths and weaknesses, allowing for a tailored learning experience.
2. **Enhanced Collaboration:** Digital mind mapping platforms equipped with AI capabilities enable real-time collaboration among students. They can work together on shared projects, brainstorm ideas collectively, and provide feedback to one another. This fosters teamwork and enhances communication skills while promoting critical thinking.
3. **Intelligent Feedback:** AI algorithms embedded within digital mind mapping tools can analyze students' work instantly and provide intelligent feedback on their progress. This immediate feedback helps students identify areas of improvement, reinforcing their understanding of concepts while saving teachers valuable time.
4. **Multimodal Learning:** AI-powered digital mind maps allow for the integration of various multimedia elements such as images, videos, audio clips, and hyperlinks. This multimodal approach caters to different learning styles and engages students through interactive content.
5. **Data-Driven Insights:** With AI's ability to collect vast amounts of data from student interactions with digital mind maps, teachers gain valuable insights into individual performance trends and overall class progress. These insights enable educators to make data-driven decisions regarding instructional strategies or interventions tailored to specific needs.

### Implementation Strategies:

To effectively incorporate AI-powered digital mind mapping into ELT classes:

1. **Teacher Training:** Educators should receive training on how to use AI-powered tools effectively within the curriculum framework.
2. **Integration with Curriculum:** Aligning the use of digital mind maps with existing lesson plans ensures seamless integration into ELT classes without disrupting the overall teaching process.

3. Gradual Implementation: Start by introducing small-scale projects or assignments using digital mind maps before gradually expanding its usage across various topics or units.
4. Encourage Creativity: Promote creativity by allowing students freedom in designing their own mind maps while ensuring they adhere to specific learning objectives.

#### Conclusion:

Artificial Intelligence offers immense potential for transforming English Language Teaching through its application in digital mind mapping activities within classrooms. By leveraging AI-powered tools, educators can enhance personalized learning experiences while fostering collaboration, critical thinking skills, and multimodal engagement among students.

Keywords: AI, Mindmap, Paradigm

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## **The future of Artificial Intelligence behind English Learning Classes**

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### **Extended Abstract**

The use of Artificial Intelligence (AI) in English Language Teaching (ELT) classes has gained significant attention in recent years. This abstract explores the various applications and benefits of AI in ELT, highlighting its potential to enhance language learning experiences. Intuitive artificial intelligence (AI) has revolutionized the way we learn and interact with technology. From virtual assistants to personalized recommendations, AI has made our lives easier and more efficient. Now, this powerful technology is being harnessed to revolutionize the way we learn English as a second language.

English is the global language of business, education, and communication. As such, there is a growing demand for effective and personalized English learning solutions that cater to the diverse needs of learners around the world. Intuitive AI has the potential to meet these demands by providing personalized and globalized English learning experiences.

Artificial intelligence (AI) is one aspect of computational innovation that has increased interest in the development of artificial intelligence (AI) technology (Cheng and Day, 201). Many artificial intelligence technologies have been implemented to achieve this computational creativity and innovation. According to Rahman (2009, p. 33) artificial intelligence (AI) creates computers' software to filter knowledge and perform other autonomous specialized tasks such as computation or student research. Artificial intelligence (AI) has developed and taken over intelligence devices that function and resemble the human brain, such as computer systems (internet platforms) and computer machines (robots) (Karsenti, 2019). Artificial intelligence (AI) is also known as machine intelligence (Mehrotra, 2019).

One of the key benefits of using intuitive AI for English learning is its ability to personalize the learning experience based on each individual's unique needs and preferences. Through advanced algorithms and machine learning, AI can analyze a learner's strengths, weaknesses, and learning style to create a customized curriculum that maximizes their potential for success. This level of personalization ensures that learners receive targeted instruction that is tailored to their specific needs, ultimately leading to faster and more effective language acquisition.

Furthermore, intuitive AI can provide real-time feedback and support to learners as they engage with English language materials. Whether through interactive exercises, immersive simulations, or virtual conversations, AI can offer instant corrections and guidance that help learners improve their language skills in a natural and intuitive way. This immediate feedback not only accelerates the

learning process but also builds confidence in learners as they navigate their English language journey.

In addition to personalized instruction, intuitive AI also has the capacity to globalize English learning by providing access to diverse cultural content and authentic language experiences from around the world. By leveraging vast amounts of data from different regions and communities, AI can expose learners to a wide range of accents, dialects, idioms, and cultural nuances that reflect the true diversity of the English language. This exposure not only enhances linguistic proficiency but also fosters cross-cultural understanding and empathy among learners.

As intuitive AI continues to evolve and improve, it holds great promise for transforming the way we learn English as a second language. By offering personalized instruction and globalized content experiences, AI has the potential to make English learning more accessible, engaging, and effective for individuals across different backgrounds and proficiency levels.

Intuitive artificial intelligence meets personalized and globalized English learning represents an exciting frontier in education technology. As this technology continues to advance, it has the potential to empower individuals around the world with the skills they need to thrive in an increasingly interconnected global society.

Artificial intelligence (AI) has been making waves in the education sector, and its impact on language learning is particularly noteworthy. With the rise of intuitive AI, students are now able to access personalized and interactive English learning experiences that cater to their individual needs and preferences.

One of the key benefits of intuitive AI in English learning is its ability to adapt to each student's unique learning style. Through advanced algorithms and machine learning, AI can analyze a student's strengths and weaknesses in language acquisition and tailor lessons accordingly. This personalized approach not only enhances the effectiveness of the learning process but also boosts students' confidence and motivation.

In other words, AI is the addition of human intelligence to machines to perform tasks. According to Mehrotra (2019), artificial intelligence (AI) is a computer technology that explores the analysis and development of intelligent machines and applications. Having a machine that can think and act like an intelligent person is AI science. The core of AI technology lies in this smart intelligent (Wang, 2019). According to Whitby (2009), AI is the research studies and attempt in the intelligent behavior of humans, animals and machines to find solutions. The word AI includes the words "artificial" and "intelligent" (Ahmet, 2018). The word "artificial" does not mean real, but an imitation, but not so completely false as to be called a fraud. "intelligence" is something that can replace the real items in some situations because the former features are better qualities in the context. Intelligence is a very complicated word. It includes aspects such as rationality, self-awareness, emotional intelligence, consciousness, mindfulness and creativity.

Furthermore, intuitive AI provides students with real-time feedback on their language skills. Whether it's pronunciation, grammar, or vocabulary usage, AI-powered language learning platforms can



instantly assess a student's performance and offer constructive feedback. This immediate feedback loop helps students identify areas for improvement and make necessary adjustments, ultimately accelerating their language acquisition.

Another advantage of intuitive AI in English learning is its ability to create engaging and immersive learning experiences. Through interactive exercises, virtual conversations, and gamified activities, AI-powered platforms can make language learning more enjoyable and effective. By incorporating elements of entertainment and interactivity, students are more likely to stay engaged and committed to their language studies.

Moreover, intuitive AI can also facilitate communication between students and native speakers of English through chatbots or virtual assistants. This allows students to practice their conversational skills in a low-pressure environment while receiving instant support from an AI tutor.

In addition to personalized instruction and interactive experiences, intuitive AI also offers convenience and accessibility for English learners. With the flexibility of online platforms, students can access language learning resources anytime, anywhere. This level of accessibility enables learners to fit English practice into their busy schedules without compromising on quality or effectiveness.

While intuitive AI has undoubtedly revolutionized English learning for students, it is important to note that it does not replace traditional teaching methods entirely. Rather, it complements them by providing additional support and resources for both educators and learners.

Advances in technology and digital platforms have made teaching and learning English easier. This will give you the opportunity to improve your English skills (Shin, 2018).

Intuitive artificial intelligence has significantly enhanced the way students learn English by offering personalized instruction, real-time feedback, engaging experiences, convenience, and accessibility. As technology continues to advance in the education sector, it is clear that intuitive AI will play a crucial role in meeting the diverse needs of English learners around the world.

AI is required to create expert systems and find solutions to complex problems such as cognitive or natural language processing (Devi et al., 2020). AI as a language teacher delivers personalized instruction, giving students the amount of feedback and scaffolding they need to achieve proficiency. All of this happens in a low-stakes environment (students are more likely to take risks and make mistakes). The greatest promise of AI is the idea to spend less time developing your skills.

The future of artificial intelligence in English Language Teaching (ELT) classes is rapidly approaching, and it is essential for teachers to understand how this technology will impact their classrooms. As AI continues to advance, it is becoming increasingly integrated into various aspects of education, including language learning. In the ELT field, AI has the potential to revolutionize the way teachers deliver instruction and support students in their language acquisition journey.

One of the most significant ways that AI will impact ELT classes is through personalized learning. With the help of AI-powered tools, teachers can create individualized learning experiences for each student based on their unique needs and learning styles. These tools can analyze students'

performance and provide targeted feedback and recommendations for improvement. This level of personalization can significantly enhance students' language learning outcomes and make the teaching process more efficient for educators. Ribeiro (2020) states that artificial intelligence in English language teaching (ELT) is the most reliable and realistic way for English teachers to use it. Additionally, AI can assist teachers in assessing students' language proficiency more accurately. Through automated grading systems and language assessment tools, teachers can gain insights into students' language skills in real-time. This allows for more timely interventions and targeted support for struggling students.

Furthermore, AI-powered chatbots and virtual assistants can provide additional support to both teachers and students outside of the classroom. These tools can offer instant feedback on grammar and vocabulary usage, engage students in conversational practice, and provide supplemental materials for further study. By leveraging these technologies, teachers can extend their reach beyond traditional classroom hours and provide continuous support to their students.

However, as with any technological advancement, there are also challenges that come with integrating AI into ELT classes. Teachers will need to adapt to new roles as facilitators of technology-enhanced learning experiences rather than traditional lecturers. They will also need to develop a deeper understanding of how to effectively integrate AI tools into their teaching practices while maintaining a human touch in their interactions with students.

Artificial intelligence (AI) is a challenging and innovative area in English education (Zhu, 2017). Artificial intelligence technologies can help create global classrooms open to all, including those who speak different languages, have visual or hearing disabilities (Marr, 2018).

Finally we can say that the Artificial Intelligence (AI) is the intelligence of machines and the branch of Computer Science that aims to create it. AI textbooks define the field as "The Study and Design of Intelligent Agents" where an intelligent agent is a system that perceives its environment and takes actions that maximize the chances of its success.

The future of artificial intelligence in ELT classes holds great promise for both teachers and students. By embracing AI-powered tools and leveraging them effectively, educators can create more personalized learning experiences, improve assessment processes, and extend support beyond the confines of the classroom. However, it is crucial for teachers to stay informed about these advancements and be prepared to adapt their teaching practices accordingly in order to fully harness the potential benefits that AI has to offer in ELT classes.

The integration of AI technology in ELT classes has the potential to revolutionize language learning experiences. By providing personalized content, real-time feedback, and authentic language data analysis, AI can enhance the effectiveness and efficiency of language instruction. However, careful consideration must be given to privacy concerns and the role of human teachers to ensure a balanced and successful implementation of AI in ELT classrooms.

Keywords: AI, personalization, customization

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## **Evaluating the Impact of Instructional Content on YouTube: An In-depth Investigation**

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### **Purpose**

The transformation of digital platforms led platforms like YouTube evolve from mere entertainment hubs to essential educational resources. Today, YouTube stands as a pivotal platform for disseminating academic knowledge and instructional content. However, amidst this expansive content library, understanding what truly resonates with viewers remains complex. This investigation delves deep into metrics and indicators to demystify the attributes that make educational content on YouTube impactful. The aim of this study is to critically evaluate the impact of instructional content on a chosen YouTube channel. A two-pronged strategy is adopted: firstly, quantifiable metrics such as views, thumbs-ups, thumbs-downs, commentary, and subscriber influx are scrutinized; secondly, advanced textual analysis is employed on viewer comments to extract qualitative feedback.

### **Theoretical framework**

For a comprehensive analysis, a well-known educational channel with varied content types was selected. Data was collated over a one-year span to capture the channel's trajectory, content variation, and audience interaction. Advanced textual analysis tools were employed to segregate comments into categories of positive, neutral, and negative feedback, yielding insights into viewer preferences and areas of contention.

Sentiment analysis is a branch of natural language processing (NLP) that aims to extract and analyze opinions, emotions, and attitudes from text. It has a wide range of applications, including customer service, marketing, product development, and social media analysis.

One of the most common approaches to sentiment analysis is lexicon-based sentiment analysis. This approach involves using a lexicon of words and phrases with known sentiment scores to analyze the sentiment of text. Another common approach to sentiment analysis is machine learning-based sentiment analysis. This approach involves training a machine learning model to classify text as positive, negative, or neutral. The model is trained on a dataset of labeled text, which means that the sentiment of each text sample is known. Machine-learning based sentiment analysis is employed in this study.

In recent years, there has been a growing interest in developing methods for sentiment analysis in social media and other online communities. This is because social media platforms generate a vast amount of text data that can be used to understand public opinion and trends.

Research on the relationship between YouTube video likes and comment sentiment suggests that there is a positive correlation between the two. This means that videos with more likes are more likely to have positive comments. For example, Zhang et al. (2021) found that there was a positive correlation between YouTube video likes and comment sentiment. The study also found that this correlation was stronger for videos with more views and subscribers.

Lee et al. (2020) conducted a cross-cultural analysis of the relationship between YouTube video likes and comment sentiment. They found that the relationship was similar across different cultures. However, the relationship was stronger for videos on certain topics, such as music and entertainment.

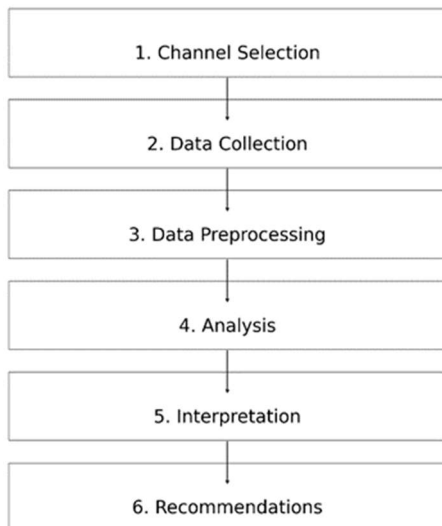
### Methodology

The evaluation begins with the meticulous selection of an educational channel on YouTube. This selection is informed by specific criteria, including content diversity, subscriber count, target audience, and upload frequency. Once an appropriate channel is identified, the focus shifts to data collection. This involves amassing quantifiable metrics such as video views, likes, dislikes, comments, and the surge in subscribers after each video's release. Additionally, comments from each video are extracted to serve as a qualitative data source for subsequent sentiment analysis.

After gathering the data, the next phase is data preprocessing. During this phase, any anomalies or outliers are removed, and the data is structured into a format conducive for analysis, typically spreadsheets or databases. With the data primed, the analytical phase commences. This encompasses a descriptive analysis where basic statistics, like average views or likes for videos, are computed. Concurrently, sentiment analysis is conducted using natural language processing tools, categorizing viewer comments into positive, neutral, and negative sentiments. Another integral part of the analysis is discerning potential correlations between the quantitative metrics and sentiment scores, aiming to identify patterns or trends.

Following the rigorous analysis, the results are interpreted to draw conclusions about the attributes of videos that resonate most with viewers. This interpretation considers factors such as content type, video duration, and the presenter's delivery style. Insights from the interpretation phase then form the basis for actionable recommendations. These recommendations aim to provide content creators with strategies and guidelines to amplify the impact and effectiveness of their instructional content on YouTube. Flowchart of the study is given in Figure1.

Figure 1 Flowchart of the study



## Results

Initial data scrutiny highlighted intriguing patterns. Content that incorporated real-world illustrations, engaging segments, and lucid explanations often witnessed elevated viewer interaction. An intriguing observation was that a high thumbs-up to thumbs-down ratio didn't necessarily equate to high viewership, suggesting other influential factors at play in retaining viewers. Delving into comment sentiments, it was evident that viewers valued content clarity, relatability, and the presenter's delivery technique. Conversely, criticism often revolved around content depth, pacing, and occasional technical glitches.

The research underlines the multifaceted nature of content impact. Quantifiable analytics provide a window into audience participation, while qualitative feedback provides the depth of insight. This understanding provides content creators with a framework for iterating and refining their content, leveraging direct input to improve delivery and relevancy.

## Discussion and conclusion

This study yielded some crucial recommendations for content creators: Interactivity is essential: Using quizzes, polls, or interactive elements to engage the audience can improve viewer retention. Utilize the Power of Real-World Examples: Examples that are relatable make abstract topics more tangible and easier to grasp. comments is Gold: Reviewing and acting on audience comments on a regular basis can lead to continuous content enhancement.

Diversify material Delivery: To appeal to a wide range of learner preferences, consider combining several material types, such as animated explainers and live sessions. Understanding the effectiveness of content is critical in the continuously changing digital education scene. Through its extensive analysis, this study provides a roadmap for educators and content providers to evaluate, assess, and optimize their instructional resources on platforms such as YouTube. The research proposes a holistic strategy to gauging the pulse of digital learners and shaping material that not

only educates but also resonates by combining quantitative measurements with qualitative sentiment analysis.

Keywords: YouTube Education, Sentiment Analysis, Content Effectiveness

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**Integrated Intelligence, Digital Wisdom and the Futures of the Internet**

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**Extended Abstract**

In the era of information overload and the crisis in sensemaking, the concept of Digital Wisdom represents a potentially useful framework to strategize for the future of the internet, the digital society and the internet in general. In this paper, futurist Marcus T Anthony introduces the key concepts of Digital Wisdom (Anthony 2022, 2023a,b; 2022) and Integrated Intelligence (Anthony 2008, 2015, 2023a,b), highlighting their significance in addressing the current challenges faced as we enter the age of generative AI. This paper draws upon key concepts in the discipline of Foresight, and Inayatullah's (2018) analytical Futures Studies method of Causal Layered Analysis. Firstly, Anthony defines Digital Wisdom as a transformative concept that transcends mere digital literacy, emphasizing the cultivation of inner wisdom and introspection. Integrated Intelligence refers to the harmonious integration of human intelligence, and incorporates an understanding of both personal and collective aspects of mind – both rational and intuitive cognitive functions. The paper explores the urgent need to establish an Authentic Self in individuals, considering the prevailing meaning crisis and the fragmentation that have emerged in the digital age. After briefly summarising the empirical and report-based evidence for Integrated Intelligence, Anthony introduces the concept of Digital Wisdom, and outlines its three key domains: knowing yourself, knowing your fellow humans, and knowing technological systems. This paper primarily focuses on the first domain, "know yourself," as it is the foundation of Digital Wisdom. It shall be argued that in order to foster Digital Wisdom in society requires a re-valuing of introspection and intuitive insight. Anthony stresses the importance of instilling these values and skills in parenting, education and work environments (including management), while emphasizing their potential to revolutionize how we navigate the digital landscape and our personal lives, work and education. In summary, this paper outlines the concepts of Digital Wisdom and Integrated Intelligence, elucidating their potentially vital role in transforming the digital society. By prioritizing inner wisdom and self-understanding, we can foster Digital Wisdom and pave the way for a more enlightened world that honors the human spirit.

**Keywords:** digital wisdom, integrated intelligence, meaning crisis, authentic self, introspection, intuition, artificial intelligence, information technology, disinformation and misinformation

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**Generation Z on the last mile logistics - a case study of Poland**

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**Extended Abstract**

The last-mile logistics is responsible for delivering goods to the final customer. The importance of this area of business activity increases because we are dealing with the e-commerce boom and the increase in the importance of the on-demand logistics (Lozzi et al., 2022).

The more purchases consumers make online, the more packages need to be delivered. Researches are being carried out on how to use the underutilized potential of logistics, with regard, e.g. to localization of delivery points (Stokkink & Geroliminis, 2023) and route network planning (He et al., 2022). These challenges also refer to the so-called shared (Chen & Kong, 2023) and sustainable logistics (Silva et al., 2023).

The current perception of the last-mile logistics largely influenced by the rapid development of the Internet. The dynamic development of e-commerce in B2C (Business to Customer) relationships, has forced the need to implement modern solutions in deliveries. The implemented solutions enjoy the greatest trust among Generation Z (born 1996-2012), considered to be digital, absorbing all technical innovations in the easiest and fastest way. Mobile applications (Jaska et al., 2022) and social media (Werenowska & Jaska, 2022) are an inherent attribute of the youngest consumers. The functioning of the last-mile system must also take into account the key attributes of the modern consumer in general: uncertainty and instability of behavior (Özarik et al., 2021). The entire distribution system is increasingly supported by AI solutions, e.g. in the field of communication, complaints or making returns (Giuffrida et al., 2022).

The aim of the study was an attempt to identify the factors affecting the confidence of Generation Z in modern solutions currently used in the last-mile logistics and those that are still at the implementation stage. The study is based on the diagnostic survey conducted in Q3-Q4 2023. The online survey was created using Microsoft Forms software and distributed via social media first of all. Statistical analyzes were performed using an Excel spreadsheet and the Statistica 13.3 program. It was used to calculate descriptive statistics,  $\chi^2$  coefficients and C-Pearson contingency coefficients. The level of significance in the article was assumed to be  $\alpha = 0.05$ . 773 respondents took part in the study, of which 694 questionnaires were included in further analysis.

The five modern forms of delivery presented to respondents included: via an UAV (unmanned aerial vehicle), an AGV (automated guided vehicle) with the lockers, a mobile robot, directly to the trunk of the car and via a crowdsourcing platform.

For example, the research shows that there is a very weak, statistically significant relationship between gender and the possibility of using UAV (drones) deliveries ( $p = 0.0000$ ,  $C = 0.1972$ ).

56.19% of men consider that option and only 35.95% women. Taking into account an AGV with the lockers, men also more often (72,9%) indicated that they were interested in this type of deliveries (60.5% of women expressed positive opinions on this topic). There is a very weak relationship between the variables ( $p=0.0006$ ,  $C=0.1268$ ). Another presented solution was delivery directly to the trunk of the car. Both women (88.61%) and men (82.27%) were not particularly interested in this form of delivery. There is a statistical relationship between the variables ( $p=0.0177$ ).

To sum up, the most popular form of delivery among Generation Z was delivery by an AGV with parcel lockers. Other forms of proposed deliveries are of marginal importance. Generation Z has a moderate attitude towards future-proof delivery methods. Apart from deliveries by AGV's, no option received more than 50% of responses. It should be noted that deliveries to the trunk received the least number of indications. Reluctance to this solution may be related to the sense of security and the need to provide the trunk, which can be used for dangerous purpose. Less than half of the surveyed did not communicate with AI. According to them, „The problem is getting along with the algorithm programmed for standard answers, not for solving unique problems. It is waste of time!“.

Some limitations were encountered while conducting the research. The questions asked were of a general nature: about shopping habits, delivery preferences, feelings towards selected options, but also about general experience with cooperation with AI. These questions should be deepened, perhaps a complementary method of in-depth interview or even an experiment using a bot communicating with the consumer should be used. Another limitation was the difficulty in reaching with the questionnaire to representatives of Generation Z in primary (13+) and secondary (15+) schools. It is worth deepening research on the use of artificial intelligence in the last-mile logistics and extending the research to other age groups, even to seniors (65+). It is one of the main future research target to achieve.

Keywords: generation Z, trust in technologies, the last-mile logistics, e-commerce, delivery.

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## **An Investigation on the Impact of Technostress on Employee Performance in the Context of digital Transformation**

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### **Abstract**

In the context of digital transformation, techno-stressors, which are caused by rapid changes in technology and the inability to meet the changing competencies, have been examined to have a negative impact on organizations and employees. Despite the urgency of investigating effective coping strategies to handle techno-stress, this topic is hardly underexplored. In addition, the impact of task adaptation behavior on employees' job performance still remains unclear. Thus, this study has developed a research model by applying the coping theory to explore how employees cope with technostress caused by digital transformation and the effect of task adaptation behavior on their performance. The targeted respondents are the employees working in companies that adopt digital transformation and are confronted with new changes in performing tasks. They will be approached through a questionnaire survey. This study sheds new light on investigating employees' performance under digital transformation. The study also advances the theoretical understanding of digital transformation and enriches the technostress literature. This research is also expected to facilitate systems providers and systems designers to scrutinize the adaptation behaviors of employees in relation to new changes in the system, thus allowing them to effectively plan and design new IT functions.

### **Introduction**

With the emergence of the 4.0 industrial revolution and the push of the period of uncertainties, the world is at a breakthrough point in the digital transformation process. Digital transformation is the process of changing an organization's structure, processes, functions, and business models due to the adoption of digital technologies (Matt, Hess, & Benlian, 2015; Sahu, Deng, & Mollah, 2018), has become a strategic choice for most enterprises (Brivio et al., 2018). On the global scale, enterprises are expected to spend close to \$4.6 trillion on Information Technologies (ITs) in 2023, an increase of 5.1% from 2022 (Gartner, 2022).

The digital transformation of organizations is essentially a systematic process to enhance the productivity of employees with the help of cutting-edge digital technologies (Brivio et al., 2018). However, due to the process of rapid digital transformation, the nature of work has significantly changed. This uncertain context requires employees to familiarize themselves with digital tools and use them in the workplace as they need to apply new modern digital technology and use it to perform various tasks at work. In addition, due to the nature of frequent update IT systems of digital

transformation, employees are the first and foremost factor in the organizations perceive major changes, thereby experiencing unexpected consequences following an IT implementation (Boudreau & Robey, 2005; Morris & Venkatesh, 2010; Venkatesh, Bala, & Sykes, 2010). Thus, an organization's success, especially in the digital transformation context, depends heavily on how well employees are performing their jobs, so it is critical for organizations to understand this importance and how to improve their employees' performance. This is significantly urgent regarding the Vietnam labor market, which has an excess of low-skilled people and a shortage of high-tech workers. Thus, in this study, a well-designed model should be formulated to investigate how businesses can increase job performance.

Regarding the dark side of technology transformation, the introduction of digitalization can pose a threat to both a company and its employees through misuse, abuse, and overuse, resulting in "technostress" (Gaudio, Turel, & Galimberti, 2017). Since disruptive technologies result in an overhauling of an organization (Hammer, 1990) and involve radical transformation (Lyytinen & Rose, 2003), they can be threatening to individuals. As far as technostress is concerned, studies show that technostress negatively affects employee performance (Tarafdar, Pullins, & Ragu-Nathan, 2015; Tarafdar, Tu, Ragu-Nathan, & Ragu-Nathan, 2007; Tarafdar, Tu, Ragu-Nathan, & Ragu-Nathan, 2011). Specifically, employees may encounter several techno-stressors related to unfamiliarity with new technology and constant technological updates, as well as feeling overwhelmed by the copious amounts of information induced by technology (Tarafdar et al., 2007). As far as technostress is concerned, studies show that technostress negatively affects employee performance (Tarafdar et al., 2015; Tarafdar et al., 2007; Tarafdar et al., 2011).

In explaining the effects of stressors, the Coping theory indicates that stressors influence performance outcomes through primary appraisal and secondary appraisal, which determines what coping strategies are adopted, leading to different performance outcomes. Although Coping Theory has been widely applied to technostress research, only in recent years have a few studies begun to conceptualize the appraisal and coping processes. Through two-step appraisal despite its importance, a theory-based understanding of the appraisal and coping processes regarding technostress seems underexplored.

Regarding prior studies, since technologies are becoming an integral part of modern society humans' life, employees are unavoidable to experience some daily irritations that might accumulate and eventually turn into stressors to people. Several scholars have investigated the negative impact of techno-stressors on particular outcomes; for instance: performance (Brooks & Califf, 2017), productivity (Hung, Chen, & Lin, 2015), discontinuance usage behavior (Maier, Laumer, Weinert, & Weitzel, 2015). Thus, there is a necessity to explore coping strategies or solutions to deal with threatening encounters, which is significantly important. Despite its crucial, there are a few studies applying coping strategies to examine effective responses to handle techno-stress.

In addition, organizations are facing more and more uncertainty, and employee roles are becoming more dynamic and flexible, which are required to cope with these changes and uncertainty

(Campbell, 2012). Despite the integral part of employees' job performance in the fast-changing nature of organizational activities, the impact of techno-stressors and coping on job outcomes remains scarce. This context motivates us to explore coping strategies to handle techno-stressors and the effect of adaptation behaviors on their job performance.

## Literature Review

### The Stress Coping Theory

Originally proposed by (Lazarus, 1966), stress coping theory describes the process by which individuals cope with disruptive events, manage distress, and address the problems causing the distress (Folkman & Moskowitz, 2004) in their environment, such as the introduction of new IT (Fang, Benamati, & Lederer, 2011). In addition, there are 2 central components entailed with this theory, namely cognitive appraisals and coping processes.

According to this theory, stressors or stress stimuli belong to the external and environmental stress situations that affect humans (Selye, 1956) and comprise three types including major modifications that have a significant impact on the large size of the population like natural disasters; significant changes influencing an individual such as tragic circumstances like a death or the loss of a loved one that are beyond a person's control; and daily hassles – unimportant or minor things occurring daily, though less significant, such as being lonely or having too many responsibilities (Lazarus & Cohen, 1977). The last type is more important in comprehending adaptation and health behavior (Lazarus & Folkman, 1984).

Prior to initiating coping activities, two types of appraisals, primary and secondary appraisals, are conducted to assess the potential consequences of the encounter (Lu, 2014). In terms of the primary appraisal phase, an individual will assess the characteristics of the situation and its personal relevance and significance, such as whether an encounter is a threat or an opportunity (Folkman, 1992). In our study, digital transformation in organizations that lead to technostress is categorized as stressful appraisals. At this step, employees will judge they are at threat of being affected by the hassles coming from IT changes and implementation and the harms that technostress may cause to them.

In secondary appraisal, the person evaluates if anything can be done to overcome, prevent harm, or restore a troubled person-environment relationship (Folkman & Lazarus, 1986). One makes such an evaluation with respect to his or her coping resources and options, and it is usually perceived as the sense of control the person has over the situation and over the self (Carver & Scheier, 1994). Therefore, in this study, perceived controllability, which means the degree to which an individual feels that he or she has the ability and resources to deal with a new IT, is adopted as the secondary appraisal. When encountering technostress, employees will judge whether their coping resources can improve the situation by proposing some prospective strategies to deal with. This is because of the difference between the level of control over IT implementation of individuals, the evaluation of this factor is of importance (Bala & Venkatesh, 2016).

After the completion of the cognitive appraisal comes the coping stage. Depending on the results of the above-mentioned two appraisals, an individual will employ distinctive coping strategies to deal with a stressful situation (Goodhue & Thompson, 1995). Following the study of Lazarus and Folkman (1984), coping is defined as a person's continually shifting cognitive and behavioral strategies to deal with particular external and/or internal demands that are deemed to be stressful or above their current capacity. Coping refers to endeavors or the adaptational or affective acts that people resort to respond to or hamper, decrease, diminish, or eliminate any disruptive circumstances that occur to them. To put it another way, coping also refers to direct action and remedy or intrapsychic coping (Lazarus, 1966; Lazarus & Launier, 1978). Hence, in reaction to the outcomes of an appraisal, individuals may use a variety of coping strategies relying on the cognitive appraisals that have been classified as either problem- or emotion-focused (Folkman 1992; Lazarus and Folkman 1984; Stone et al. 1992), which possibly leads to varying performance outcomes (Zhao et al., 2020). In other words, the differences between individuals' coping outcomes probably lay in the extent to which coping is deployed to the situations to alleviate stress or what may be done to lessen the affective effects of stressors.

The two main categories of coping strategies are problem-focused and emotion-focused coping (Zhao et al., 2020). According to Beaudry and Pinsonneault (2005), problem-focused coping strategies seek palliative for specific situational issues, and emotion-focused coping strategies depend on altering one's views of the circumstance without altering the issue itself (Beaudry & Pinsonneault, 2005; Lazarus, 1991). To be more specific, problem-focused coping is specifically concerned with behavioral efforts to alter or amend the originals of the distress and/or address the problems such as diminishing ego engagement, adjusting aspiration level, looking for alternative sources of gratification, setting new standards of behavior, or raising the horizon and sharpening new skills. Meanwhile, emotion-focused coping refers to the efforts to manage a person's distress by decreasing or intensifying affective sufferings, such as avoidance, distancing, and wrestling positive value from negative situations (Tamres et al., 2002; Chen et al., 2019). Thus, the self-preservation strategy is considered an emotional-focused coping strategy, which is possibly appropriate for individuals restoring stable emotions and avoiding the pressures generated by technostress. The coping literature enables us to acknowledge the general principles of technostress mitigation. In conclusion, in this study, disturbance handling and self-preservation strategies will be utilized to describe the coping strategies that employees choose to cope with the technostress generated by digital transformation and their sense of control.

In the stress coping theory, coping behaviors are also stated; however, just like coping techniques, different research paradigms would lead to different coping behaviors. Regarding IS field, prior authors employed exploratory or exploitative task adaptation, and discontinuance behaviors as the adaptational outcomes (Chen et al., 2019; Bala & Venkatesh, 2016; Hurbean et al., 2022). Within the scope of this study, in order to cope with stressors caused by technological changes, employees are in need of developing adaptation skills, thereby bringing the definition of task adaptation. Thus,



exploitative and exploratory task adaptation are employed as two coping behaviors after coping efforts.

### Technostress

An early definition of digital transformation is the process of using digital technologies to ameliorate the works of organizations, nowadays the concept has become much wider and it has a deep impact on business and organizational activities, processes, competencies, and models (ElMassah & Mohieldin, 2020; Khanboubi & Boulmakoul, 2019). It also refers to the transformations prompted by the massive adoption of digital technology that generates, processes, shares, and transfers information (Gebrihet & Pillay, 2021). It builds on the advancement of a number of technologies, including software engineering, computer technology, telecommunications networks, and the effects of their use (Nicolás-Agustín, Jiménez-Jiménez, & Maeso-Fernandez, 2022; Teng, Wu, & Yang, 2022). Due to the unique nature of digital technologies, digital transformations introduce many challenges to businesses, managers, and their human resources, especially threats from technostress (Abedin & Babar, 2018).

Technostress is first known as “a modern disease of adaptation caused by an inability to cope with the new computer technologies in a healthy manner” (Brod, 1984). After 2000, many studies have examined the effects of technostress on a range of ICTs, including corporate systems, mobile gadgets or applications. Technostress is now defined as a “modern disease of adaptation” that manifests as motivation to adopt new technologies as well as a dependence on them (Tarafdar et al., 2007). It also occurs when a person has a negative evaluation of their experience when carrying out tasks using technology at work (Bondanini, Giorgi, Ariza-Montes, Vega-Muñoz, & Andreucci-Annunziata, 2020; Maier et al., 2015).

Users can experience technostress before, during, or after adopting technology in a variety of ways (Salo, Pirkkalainen, & Koskelainen, 2019; Tams, Thatcher, & Grover, 2018). Technostress in the workplace is a result of people's attempts and struggles to deal with rapidly changing ICTs and the altering physical, social, and cognitive requirements associated with their use.

The technostress's manifestation has been assessed through the occurrence of different aspects and variables - techno-stressors, coping responses, and outcome variables (Hurbean, Dospinescu, Munteanu, & Danaiața, 2022; Tarafdar, Cooper, & Stich, 2019). Stressors or stress-creators were initially defined as “discrepancies between environmental demands and internal standards that upset the state of equilibrium” (Lazarus & Folkman, 1984). The same authors also demonstrated how this imbalance worsens the person's well-being and necessitates action, which takes the form of coping responses.

Tarafdar et al. (2007) stated that stress creators related to technostress include five situations that end users deal with as a result of their organizational usage of ICT including Techno-invasion, Techno-overload, Techno-complexity, Techno-uncertainty, and Techno-insecurity linked with the use of IT in the organization.

Within the scope of this research, we only pay attention to the phenomenon of technostress occurring when employees perceive stress originating from their experiencing too much information, system features, and communication in a short period of time, in other words, it is normally called techno-overload (Ragu-Nathan, Tarafdar, Ragu-Nathan, & Tu, 2008) and its complexity (Tarafdar, Tu, & Ragu-Nathan, 2010), which require employees to spend time and effort to learn and understand various aspects of ICT, and the continuing changes and upgrades in an ICT unsettle employees and create uncertainty for them. Particularly, techno-overload, techno-complexity, and techno-uncertainty are conceptualized and discussed to be experienced by employees due to digital transformation.

### Hypothesis Development

#### The Relationships between Primary Appraisals and Coping Efforts

The stress coping theory presents that under primary appraisal, a person will make judgments and assessments that an encounter is irrelevant, benign-positive, and stressful (Lazarus & Folkman, 1984). Stress appraisals are related to the occurrence of either loss or harm, threat, or challenge. After the appraisal process, an individual will use distinctive coping strategies to cope with stressful events. In our research context, if an employee evaluates the demanding nature of using ICTs to complete tasks as a threat or challenge, he or she will make efforts to solve problems to acquire the potential gains and benefits (Herman & Tetrick, 2009). To be more specific, in order to minimize the negative outcomes of the technostress, employees will execute an emotion-focused effort or the combination of two kinds of efforts, namely problem- and emotion-focused strategies. Some techniques can be utilized including seeking training, decreasing the negatives sides of the new system or adjusting the IT features, or positive comparison and threat minimization, which are the reflection of disturbance handling strategies (Nach & Lejeune, 2010). Apart from that, depending on the individual's perception of the technostress, many employees will employ self-preservation strategies, which are merely emotion-focused and include some actions, such as self-deception, avoidance, or distancing (Bala & Venkatesh, 2016).

The issues of overload have been recognized at a general level as an important factor in lowering life quality in the information society. Techno-overload, in particular, makes the demand of using ICTs to finish work stressful in ways of increasing the workload and level of time pressure. High workload and time pressure are well-established challenge stressors in the corporate context (Fuglseth & Sørenbø, 2014; Tarafdar et al., 2007); therefore, in order to fulfill the demands of working faster and longer, employees will employ different ways ranging from technical training to modifying work routine or even through stabilizing emotional state by thinking the positive sides of the stressful situations or withdrawal from that issues (Zhao, Xia, & Huang, 2020).

Techno-complexity is claimed to primarily and dominantly cause stressors (Ayyagari, Grover, & Purvis, 2011). The perception of complexity in using ICTs to complete work results in employees being dissatisfied with their insufficient technical skills, and thereby having the motivation to discover

different methods to overcome this stress. The endurance of techno-complexity is different among different people as some may tend to ignore, or avoid IT implementation when they cannot adjust sufficiently to these conditions (Hurbean et al., 2022). Alternatively, others can develop a highly selective strategy by accumulating the necessary knowledge and abilities field (Hurbean et al., 2022).

Organizations frequently upgrade ICTs to address problems and enhance ICT functionalities. However, if employees are forced to switch unnecessarily from one digital technology to another, they may experience stress such as role ambiguity and role conflict in adopting new technologies (Hurbean et al., 2022). During this, employees confront more adaptational demands (Korunka & Vitouch, 1999) and have to opt for many strategies to cope with the situation.

Much research in the field of Health psychology and information systems indicates that when the perception of negative outcomes gets stronger, coping efforts are considered more seriously (Chen, Tran, & Nguyen, 2019). The Motivation Protection Theory supports this argument that people are more motivated to take protective measures when the perceived threat is more serious and probable (Maddux & Rogers, 1983). In the information systems field, perceiving a malicious IT as a threat triggers protection motivation (Liang & Xue, 2010). Otherwise stated, when people become more aware of the problems associated with too much techno-overload, IT complexity, or uncertainties, the more likely it is that they will employ coping strategies to protect themselves. Hence, the following hypotheses are proposed:

Hypothesis 1a: Employees' techno-overload has a positive relationship with their disturbance-handling strategies.

Hypothesis 1b: Employees' techno-overload has a positive relationship with their self-preservation strategies.

Hypothesis 2a: Employees' techno-complexity has a positive relationship with their disturbance-handling strategies.

Hypothesis 2b: Employees' techno-complexity has a positive relationship with their self-preservation strategies.

Hypothesis 3a: Employees' techno-uncertainty has a positive relationship with their disturbance-handling strategies.

Hypothesis 3b: Employees' techno-uncertainty has a positive relationship with their disturbance-handling strategies.

### The Relationships between Secondary Appraisals and Coping Efforts

#### Perceived controllability and disturbance handling

The results of many studies generally suggested that control was significantly related to adjustment after taking coping strategies into account (Frazier, Mortensen, & Steward, 2005; Najdowski & Ullman, 2009). Also, earlier research on locus of control reveals how it affects how one manages

stress, as people with control are more likely to utilize problem-focused coping mechanisms and limit or eliminate potential stressors (Wang, Schwartz, & Zamboanga, 2010).

In this research, threat perceptions happen with users' first appraisal of digital technologies. When users feel in control of the situation, they adopt problem- and emotion-focused adaptation techniques (Bala & Venkatesh, 2016; Beaudry & Pinsonneault, 2005). In fact, even if they believe the situation to be threatening, they may yet be convinced that they have the control required to handle it. As a result, they are probably going to increase their ability to use the system or change its characteristics. Changing the technology's features, calling for training, or modifying work procedures are a few examples of activities that (Beaudry & Pinsonneault, 2005) highlighted as behaviors suggesting a disturbance handling strategy. As a result, people will employ a disturbance-handling strategy when they see the situation as threatening but think they have control over it (Beaudry & Pinsonneault, 2005; Chen et al., 2019).

On the other hand, individuals who have a limited sense of control are, probably more likely to engage in coping strategies that involve avoidance, such as social withdrawal (Elie-Dit-Cosaque & Straub, 2011; Frazier et al., 2005); avoidant (Frazier et al., 2005; Manne & Glassman, 2000) or maladaptive coping (Najdowski & Ullman, 2009). When users perceive they have little control over the circumstance, they are more cautious in their use of technology. In addition, people are more inclined to make only a modest effort at adaptation when faced with risks and a lack of confidence in their ability to handle technology (Beaudry & Pinsonneault, 2005). As a consequence, coping efforts will be adopted as an emotion-focused strategy, users are likely to try to mitigate the bad effects the system has on them, or else they will just try to avoid using it if at all feasible (Beaudry & Pinsonneault, 2005). Thus, when staff members feel unprepared or underequipped to handle an IT (i.e., low perceived controllability), they will be more aware of the negative effects of the IT and more likely to employ self-preservation strategies, as a results (Bala & Venkatesh, 2016).

Based on the aforementioned evidence, we argue that when employees have more controllability over the workload caused by technological changes, the complexity of the new technologies and the changing speed of IT use in the workplace, they are likely to apply disturbance handling strategies and less focus on self-preservation strategies. Hence, the following hypotheses are proposed:

Hypothesis 4a: Employees' perceived controllability has a positive relationship with their disturbance-handling strategies.

Hypothesis 4b: Employees' perceived controllability has a negative relationship with their self-preservation strategies.

The Relationships between Coping Efforts and Coping Behaviors (Task adaptation behaviors).

Disturbance handling and Task adaptation

The first introduced coping strategy in this study is disturbance handling, which would be possibly utilized by individuals when they perceive the resources to cope with threats generated by the digital transformation is high (Beaudry & Pinsonneault, 2005).

With this coping strategy, individuals will work to diminish the bad effects of IT, and they may even look for a solution on their own to effectively solve it or even use it for good. At this stage, they will realize that the technology is irrefutable and this is a threat they need to face. Therefore, they need to improve task adaptation behaviors to cope with it.

According to previous studies, employees will make a significant effort to examine an IT system in order to find new features and improvised, inventive, and creative ways to complete their tasks (Bala & Venkatesh, 2016; Beaudry & Pinsonneault, 2005; Boudreau & Robey, 2005). Also, (Xue, Ekici, & Vuran, 2014) found that technological users who utilize active coping (similar to disturbance handling) devote a great deal of time and cognitive energy to addressing the difficulties of mobile phone buying in order to determine the best products to buy. They are more likely to discover things that are appropriate for them. Likewise, findings of prior studies showed that when employees find a way to handle the threat created by technology, they possibly take some task-oriented adaptation actions like adjusting work processes to reflect ever-changing technology (Majchrzak, Rice, Malhotra, King, & Ba, 2000).

Therefore, in this study, we expect that when employees deploy the disturbance handling strategy, they will look for ways to lessen how disruptive technology is to their work. Their endeavors will lead them to explore task adaptation behavior which is the result of finding the work procedures that are suitable in a fast-changing technological environment.

Besides, employees who employ the DH strategy will also tend to take some emotion-focused actions such as positive reappraisal to minimize the expected consequences and maintain a steady emotional state (Folkman & Moskowitz, 2000). During this time, they perhaps try to see the positive side of things, such as by attempting to improve themselves or gain something from the stressful circumstances (Folkman & Moskowitz, 2000; Tamres, Janicki, & Helgeson, 2002). The DH strategy such as positive reappraisal is a meaning-based coping strategy, by which a person handles a difficult situation in life by looking for the good amid all the bad. The unpleasant event is reinterpreted in a more positive way, leading the person to believe they have learned something worthwhile or advantageous from the experience, such as increased wisdom or personal development. That will keep them motivated to face the stressors.

Combined with problem-focused efforts, some adaptation measures have a tendency to be self-oriented, such as seeking training, or technology-oriented, such as modifying IT characteristics to correspond with technology (Chen et al., 2019; Majchrzak et al., 2000).

By doing so, disturbance handling employees with the desire to cope with technostress they will have positive thoughts and good things about that stressor as well as try to find opportunities to sharpen and polish their own skills. That will lead to the behavior of modification in work (exploitative task adaptation) in order to match the technology and gain benefits from undesirable situations.

Thus, based on the above theoretical discussion, we argue that there is a positive relationship between disturbance handling strategy and task adaptation (exploration and exploitative) behaviors and develop Hypothesis 5a and 5b as below:

Hypothesis 5a: Employees' disturbance-handling strategies have a positive relationship with their exploitative task adaptation behaviors.

Hypothesis 5b: Employees' disturbance-handling strategies have a positive relationship with their exploration task adaptation behaviors.

#### Self-preservation and Task adaptation

The remaining coping strategy applied when individuals consider technology as a threat and they have little resources to take it under control is self-preservation. In this case, people who deploy self-preservation strategies will try taking some passive actions such as avoiding, distancing, retaining the belief that the anticipated negative effects will not occur or decreasing their engagement with their jobs (Beaudry & Pinsonneault, 2005).

An employee using self-preservation coping makes an effort to avoid using IT to complete duties (Bala & Venkatesh, 2016), which also means that they will not make an effort to exploit or explore the IT for servicing the work task. Moreover, (Klein, Conn, & Sorra, 2001) indicated that some users will strive to shun innovation. Individuals may keep busy in an attempt to think about more positive thoughts, people may distract themselves with different events like watching television or engaging in leisure pursuits. The aim is to try to avoid the stressor—its repercussions, its reminders, and the stressor itself (Tamres et al., 2002).

It can be explained by the findings of (Beaudry & Pinsonneault, 2005) that several employees did not utilize any IT at all because they believed they could complete their tasks effectively without it. According to (Bhattacharjee & Harris, 2009), only until users changed their work structures to accommodate and benefit from IT were the benefits of technology adaptation completely apparent. Consequently, when employees employ self-preservation to cope with technostress, they probably will not realize the good in technology and consider it as a threat that they need to distance themselves from.

According to psychological research, people use physical avoidance or escape methods to deal with stressors (Lazarus & Folkman, 1984). This is in line with the organizational behavior literature, which shows that anxiety causes people to detach themselves from their employment (Hackett & Bycio, 1996). People respond to stressors by making fewer attempts to deal with the problem (Carver, Scheier, & Weintraub, 1989; Yi & Baumgartner, 2004), which negatively affects the amount of attention they pay to the task at hand and causes them to focus on off-task activities (Venkatesh, 2000).

Similarly, using self-preservation techniques like psychological distance, mental disengagement, or daydreaming and escaping to deal with stressors (Carver et al., 1989; Yi & Baumgartner, 2004) may

aid an employee in regaining emotional stability by diverting attention from the stressful situation. It can, however, also be dysfunctional because it hampers problem-solving and adaptive processes (Folkman & Lazarus, 1986), and leads to maladaptation (Billings & Moos, 1984) because employees just strive to psychologically escape the demands of the stressor without actually altering the reality of the circumstance (Folkman & Lazarus, 1986).

In short, individuals experiencing stressful situations shield themselves from the event by blocking the spread of new information about it, leading to losing the chance to explore what technology can help with their task or at least exploit another way to support them to complete the task effectively (Folkman & Moskowitz, 2000; Tamres et al., 2002). Therefore, we propose that employees undertake a self-preservation strategy when they are involved in avoidance to preserve emotional stability and diminish tensions related to using an IT will have a negative impact on their behavioral responses to try to explore or exploit task adaptation ability and develop Hypothesis 6a and 6b as below:

Hypothesis 6a: Employees' self-preservation strategies have a negative relationship with their exploitative task adaptation behaviors.

Hypothesis 6b: Employees' self-preservation strategies have a negative relationship with their exploration task adaptation behaviors.

#### The Relationships between Coping Behaviors and Job Performance

##### Exploitative task adaptation and job performance

Exploitation needs less adaptability than exploration since employees utilize a set of features learned from training or from others to accomplish their day-to-day duties (van Wijk, Beek, & Daffertshofer, 2012). Thus, people process things that they can get used to quickly and in a virtually automatic manner, increasing their job performance. According to (Orlikowski, 2000)'s research, enhancing existing ways of doing things enables people to perform more efficiently at work. (Bala & Venkatesh, 2016) argues that exploitation has a positive impact on job performance because when employees exploit an IT (e.g., use a recommended set of features to perform their tasks repeatedly), they become experts in these features and can leverage these features to improve their effectiveness and efficiency in performing their job. As a result, their job performance will ultimately improve (compared to pre-implementation levels).

Hypothesis 7: Exploitative task adaptation has a positive relationship with employees' job performance.

##### Exploratory task adaptation and job performance

According to (Nguyen, Chen, & Nguyen, 2021), previous task experience should be linked with attempts to improve employees' understanding and actions in order to better manage good results. Results also suggest that workers who improve their performance by attempting new activities have

a better chance of achieving positive outcomes, and obtaining good results. Moreover, prior task familiarity and expanded domain abilities are the boundary conditions for individual creativity, which are required for exploratory adaptation, which eventually results in favorable outcomes. Furthermore, when applying IT features to new tasks, IT users may frequently foresee possible outcomes; hence, this activity may directly project system results.

Furthermore, according to (Bala & Venkatesh, 2016) 's research, exploration-to-innovate will have a favorable impact on employees' job performance and job satisfaction following an IT implementation. Since exploration-to-innovate is a problem-focused adaption, employees will investigate the characteristics of IT to identify effective and efficient solutions to accomplish their task requirements (Carver et al., 1989). (Boudreau & Robey, 2005) revealed that employees reinvented various features of an enterprise resource planning (ERP) system through improvised learning. They claimed that reinvention enabled employees to overcome system limitations and make changes to more efficiently carry out their responsibilities.

Accordingly, we believe that employees who are able to engage in exploitative and exploratory adaptation will also flexibly adapt to changes in the changing information system and proactively manage diverse tasks and in turn, enhance expected job performance. Exploitive and exploratory task adaptation will lead to better performance in dealing with new technologies.

Hence, the following hypotheses are proposed:

Hypothesis 8: Exploratory task adaptation has a positive relationship with employees' job performance.

Based on the hypothesis development, this study proposes the research framework as below:

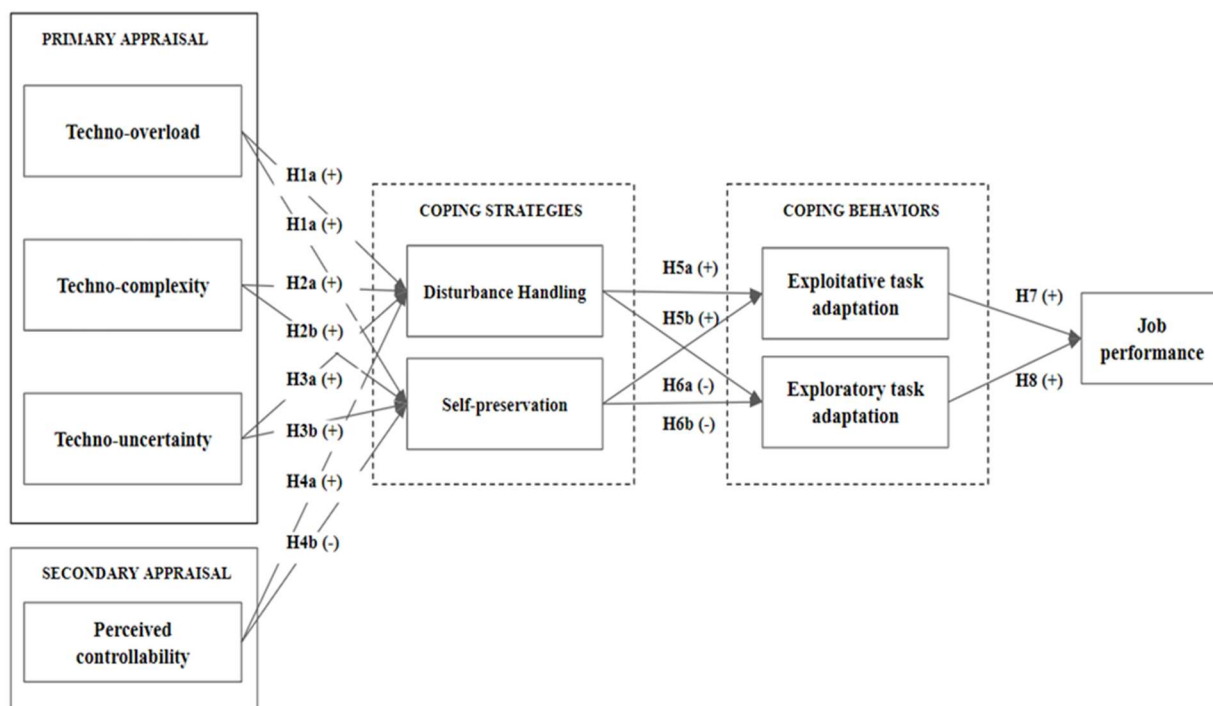


Fig. 1. Conceptual framework



## Methodology

### Measurement

To measure techno-overload, techno-complexity, and techno-uncertainty, we adapted the scales from (Tarafdar et al., 2007). Perceived controllability items were adapted from (Bala & Venkatesh, 2016). In addition, the research team adopted (Beaudry & Pinsonneault, 2005) measurements to assess disturbance handling and self-preservation, the measurements from (Nguyen et al., 2021) to measure exploitive and exploratory task adaptation. Moreover, for the job performance measurement scale, we adopted and adapted from (Janssen & Van Yperen, 2004). All items were measured using 5-point Likert scales ranging from “strongly disagree” to “strongly agree” (see Appendix).

### Data Collection

Data for empirical analysis of the research model will be collected by using an online questionnaire. Specifically, the professional network LinkedIn is used to contact the majority of our responders. We think LinkedIn user profiles have a certain level of credibility due to their career-oriented aims. In the hopes that their organization would implement a digital transformation, we use LinkedIn filter tools to target individuals whose profiles show they are employed by reputable companies. In order to enhance the number of answers, we also connect to the technological groups on the Facebook platform. A small percentage of the responders will be approached in person since they are our acquaintances.

### Data analysis

Data will be analyzed by using Smart PLS 3.0. We perform different tests to examine the validity of the research model, including factor loadings, inter-construct correlations, and descriptive analysis. A path coefficient analysis is carried out to examine the hypotheses and significance of the research model.

### Implications

We believe that this study could make significant contributions in both theoretical and practical aspects. The study is expected to offer an overview of coping strategies and behaviors toward technostress in the context of digital transformation. On top of that, based on the research results, organizations, managers, and employees can know effective coping strategies to deal with stress and increase employees' job performance.

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## APPENDIX

## Techno-overload

- TO1 I am forced by new ERP system to work much faster. Adapted from (Tarafdar et al., 2007)
- TO2 I am forced by new ERP system to do more work than I can handle.
- TO3 I am forced by new ERP system to work with very tight time schedules.
- TO4 I am forced to change my work habits to adapt to new ERP system.
- TO5 I have a higher workload because of increased new ERP system complexity.

## Techno-complexity

- TC1 I do not know enough about new ERP system to handle my job satisfactorily. Adapted from (Tarafdar et al., 2007)
- TC2 I need a long time to understand and use new ERP system.
- TC3 I do not find enough time to study and upgrade my technology skills.
- TC4 I find new recruits to this organization know more about new ERP system than I do.
- TC5 I often find it too complex for me to understand and use new ERP system.

## Techno-uncertainty

- TU1 There are always new developments in the new ERP system we use in our organization. Adapted from (Tarafdar et al., 2007)
- TU2 There are constant changes in new ERP system in our organization.
- TU3 There are frequent upgrades in new ERP system in our organization.

## Perceived controllability

- PC1 I personally have what it takes to deal with the situations caused by new ERP system  
Adapted from (Bala & Venkatesh, 2016)
- PC2 I have the resources I need to successfully use new ERP system.
- PC3 I have the knowledge necessary to use new ERP system.
- PC4 I am confident that I will be able to use new ERP system without any problems.

## Disturbance handling

- DH1 While concerned about using new ERP system, I do think it could help me to increase my performance. Adapted from (Beaudry & Pinsonneault, 2005)
- DH2 Although new ERP system is somewhat confusing, it will probably allow me to be a better controller.
- DH3 I am thinking that with new ERP system, after some adjustments, I could expect it to increase my performance.
- DH4 Overall, I can find some potential ways to benefit from new ERP system.

#### Self-preservation

- SP1 Given that I have a lot of important things to care about, I would not be likely to pay too much attention to the new ERP system. Adapted from (Beaudry & Pinsonneault, 2005)
- SP2 The new ERP system will not be much interesting for me.
- SP3 The new ERP system will not help me better than what I have already experienced.
- SP4 The new ERP system will not help me to increase my job performance.

#### Exploratory task adaptation

- ERTA1 The new ERP system led me to perform tasks that I could not do before. Adapted from (Nguyen et al., 2021)
- ERTA2 I strive to find ways to take on new work responsibilities by using new ERP system.
- ERTA3 The new ERP system have allowed me to frequently attempt new tasks I could not do in the past.
- ERTA4 Overall, the use of new ERP system has enabled me to try new and different work-related tasks.

#### Exploitative task adaptation

- EITA1 I try hard to figure out ways to do my existing work tasks better by using new ERP system. Adapted from (Nguyen et al., 2021)
- EITA2 The new ERP system led me to suggest new ways of doing things.
- EITA3 I strive to find ways to do my existing work tasks faster with features on the new ERP system.
- EITA4 Overall, I am doing my best in taking advantage of various features of the new ERP system to perform my existing tasks better.

#### Job performance

- JP1 I always complete the duties specified in my job description. Adapted from (Janssen & Van Yperen, 2004)
- JP2 I meet all the formal performance requirements of the job.
- JP3 I fulfill all responsibilities required by my job.
- JP4 I successfully perform essential duties.

## **Selected Theories of the Enterprise in the Service of Interpreting the Digitization of Management**

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### Extended Abstract

The article provides insights into selected theories of entrepreneurship that can serve as a framework for interpreting the emergence of the new era of entrepreneurship. Economic theories of entrepreneurship relate to the rationality of entrepreneurs and businesses as a whole. These theories generally tend to overlook the distinctions between individual decision-making and organizational decision-making, transitioning easily from theories of optimal behavior to theories of actual behavior.

The article analyzes the evolution of entrepreneurship concepts, focusing on economic theories, entrepreneurship, and the influence of innovation according to Joseph Schumpeter. In the classical approach to entrepreneurship, researchers often neglect the differences between individual and organizational decision-making. Schumpeter's theory assumes that decisions are made at the organizational level, simplifying the decision-making mechanisms. Additionally, the concept of entrepreneurship originates from the etymology of words meaning home, homeland, and family, interpreted as the "science of managing a well-run home." The article then presents the theory of entrepreneurship and enterprise. Schumpeter proposes a dynamic model of entrepreneurial activity where innovation is a key factor in competitiveness. According to Schumpeter, an entrepreneur is an innovator endowed with intuition, energy, perseverance, and the ability to leverage the creative resources of organizational employees. Innovations, as understood by Schumpeter, involve introducing new solutions in practice and are crucial for economic development.

The article argues that entrepreneurs must actively manage their digital identity and information communication. Social media plays a crucial role in connecting with investors and building relationships with market stakeholders. In venture capital investment research, the author indicates that entrepreneurial traits such as vision and optimism increase the chances of obtaining funding. However, investors negatively assess entrepreneurs' goals focused on non-financial objectives, highlighting the need for financial support for various forms of entrepreneurship by public institutions. The subsequent part introduces the theory of fractal enterprise by Nonaka, Kodama, Hirose, and Kohlbacher. These authors propose a new organizational model based on the concept of "dynamic fractal organization". They argue that there are no pure organizational forms, and complete knowledge availability in an organization is absent. Knowledge is converted from tacit to explicit through conversion processes at all organizational levels, creating a knowledge-creating spiral. The key concept is the "triad" relationship between hidden knowledge, explicit knowledge, and phronesis, allowing the inclusion of evaluative judgments in the knowledge creation process. Through the notion

of "ba," representing the flow of knowledge in an organization, the conversion process of hidden and explicit knowledge drives a sustained knowledge transformation.

The article further discusses the evolution of industry, starting from manufacturing through the era of steam engines, mass production, and up to Industry 4.0. The latest stage involves smart manufacturing, where new information technologies, artificial intelligence, the Internet of Things, machine learning, and others create a cyber-physical business environment. Industry 4.0 changes the social dimension of relationships and business, emphasizing individual creativity and innovative solutions. It serves as a starting point for revolutionary changes in production, sustainable development, and the social dimension of human activity.

In conclusion, the integrated approach to knowledge flow within an organization and industrial transformation within Industry 4.0 underscores the need for flexibility, innovation, and sustainable development to achieve success in a dynamic business environment.

The article aims to critically interpret the identified entrepreneurship theories in the context of the ongoing technological revolution. The selected theories provide a framework for interpreting the changes occurring in the economy, referred to as Industry 5.0. The contemporary economy is characterized by dynamic developments in distribution systems, including e-commerce, self-organization of businesses termed virtual organizations, and the development of business models such as digital twins. Digitalization contributes to changing cost structures and, most importantly, involves a shift in the mindset of both workers and management. Employees begin thinking in terms of cyberspace, cyber-security, and marketing in new markets, redefining management.

The subsequent part of the work conducted bibliometric research on keywords related to "Industry 4.0" in the Scopus database. This research provides a new perspective on areas where advanced studies on new technologies are conducted. The analysis indicates that China, the United States, Germany, India, and the United Kingdom are the main areas of research on Industry 4.0. Bibliometric research points to two significant groups: a Chinese-focused group and a dispersed group of authors from the United States, India, and Europe. This diversity may result from different factors, such as scientific ethnocentrism (Chinese authors) or the availability of full-text publications by Chinese authors. The examined publications from the Scopus database (13,092) in English containing the keyword "Industry 4.0" also addressed issues such as sustainable development, digital transformation, innovation, trade, and the COVID-19 pandemic.

In the summary, attention is drawn to the emerging concept of Industry 5.0 – arising as the digital reindustrialization of European economies. The Industry 5.0 concept involves adapting the infrastructure of enterprises and increasing the digital skills of employees. The digitalization process includes the implementation of new technologies, such as the Internet of Things (IoT), databases, digital twins, and blockchain. IoT enables remote access and data exchange between people and machines.



Keywords: Enterprise 5.0, enterprise theory, industry 4.0, digitization of organizational structures, new management bibliometric analysis.

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**Community Guidelines and Safety: A Case of TikTok's Users**

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**Extended Abstract**

This paper reviews the community guidelines and safety for TikTok's users based on scholarly articles and online sources. The content analysis was adopted in this study. The results reveal TikTok's mission is to foster innovation and happiness by constructing a global community where individuals can share and create, learn about the world, and establish connections worldwide. Maintaining a supportive environment for expanding the community is the absolute priority. Community Guidelines ensure that all individuals are welcomed and protected in this area by establishing standards and a common code of conduct. It prioritises authenticity, diversity, safety, and inclusion at TikTok. Viewers are encouraged to engage with what inspires them, and creators are encouraged to celebrate what makes them unique. It is believed a secure environment facilitates this openness. TikTok values the community's international character and endeavours to consider the diversity of cultural norms in the regions conducting business. TikTok aims to foster an atmosphere conducive to sincere exchanges by promoting genuine content on TikTok. The Community Guidelines apply to all users and content. Using a combination of human and technological moderation, strive to enforce them proactively, ideally before users report potentially objectionable content to the platform. Additionally, TikTok encourages community members to register any content or account they believe violates the Community Guidelines using the tools provided on TikTok.

**Keywords:** TikTok, users, guidelines, community, safety

**Introduction**

TikTok's mission is to foster innovation and happiness. The cultivation of a secure and inclusive atmosphere for all individuals contributes to the realisation of this. Community Guidelines support a secure TikTok experience that users are accustomed to and appreciate by serving as a code of conduct for the app. Although our Community Guidelines are accessible to the public, and TikTok strongly advises all users to be acquainted with them, the following are a few to remember when contributing to and interacting with content on the platform. At TikTok, the mission is to inspire creativity and bring joy. And this is made possible through the fostering of a safe and welcoming environment for everyone. Community Guidelines serve as a code of conduct for the app and help support a secure TikTok experience that people know and enjoy.

TikTok makes the Community Guidelines publicly available and encourages everyone on TikTok to be familiar with them. Here are a few to keep in mind as you're creating and engaging on TikTok:

1. Violence and hateful behaviour (Acts of violence and hate speech)

We desire that all TikTok users feel empowered to express themselves. Videos that instigate or incite violence or hostility towards an individual or a collective, encompassing but not limited to race, ethnicity, religion, or sexual orientation, are not tolerated on TikTok and may result in suspensions and bans.

2. Harassment and bullying (Assault and abuse)

TikTok strives to establish a welcoming and secure environment for all users. For this reason, TikTok strictly prohibits any form of abusive behaviour, regardless of its motivation. Additionally, uninvited or otherwise inappropriate conduct is not tolerated on TikTok.

3. Violence and hateful behaviour (Acts of violence and hate speech)

TikTok wants everyone to feel empowered to express themselves on TikTok. It is why videos that incite or provoke violence or hatred against an individual or a group of people, including race, ethnicity, religion, sexual orientation, and more — are not welcome on TikTok and can lead to suspensions and bans. TikTok is an international community that values artistic expression over violent or shocking content. Discourse that portrays self-harm, animal cruelty, or any other form of self-harm-inducing content is not permitted for members of this thriving community. Videos that are explicit or provocative are not allowed on the platform.

4. Harassment and bullying (Assault and abuse)

TikTok seeks to create an environment where everyone feels welcome and safe. That's why TikTok does not condone abusive behaviour or for any reason. Nor does TikTok tolerate any uninvited or otherwise inappropriate behaviour. Pornography, nudity, and sexually explicit material are strictly prohibited on our platform. Strictly prohibited are all materials that portray or endorse non-consensual sexual acts, encourage the dissemination of non-consensual intimate imagery, or solicit adult sexual activity.

5. Minor safety (Content that is misleading or infringing)

TikTok is an environment that fosters genuine self-expression and ethical conduct. The community looks to you to verify that you are who you claim to be and that the videos you upload to TikTok are your own. Videos that violate the intellectual property rights of others, including trademarks, copyrights, or misleading content, are strictly prohibited on the platform. Guidelines make every effort to ensure that our policies are transparent. Consequently, if a video is removed for contravening our policies, we shall inform the video's originator of the specific Community Guidelines that were

transgressed, allowing the video creator to contest the decision. Guidelines are convinced that maintaining transparency regarding our actions and intentions is crucial to sustaining our community's trust.

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## **Bibliographic Analysis of Published Studies on the Concept of "Trust in the Digital Age" Between 1977-2023**

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### Extended Abstract

The period we are in is referred to as the "digital age"(Yu & Jlnajun, 2020; Zhang, Chen, 2023). Businesses need to change their business models to take advantage of the rapid changes that have occurred with the full advent of the digital age so that they can move faster and adapt faster to the rapidly changing atmosphere (Zhang, Chen, 2023). In this sense, the concept of trust in the digital age also reveals its importance in this process. Therefore, building a reliable digital asset and protecting customer data has become a major priority. Reliability is a factor that increases the competitiveness of businesses in the digital age.

With the spread of digital age, information technologies and the internet, it has gained an important place in workplaces and in our lives. In this period, access to information has accelerated, communication has become easier and the way we do business has changed. However, the digital age has brought with it some security risks. Activities such as data sharing, online shopping, and social media use on the Internet carry the risk of personal and sensitive information being stolen or in the hands of malicious people. Therefore, trust in the digital age refers to the measures taken by individuals and institutions to ensure security online. Since digital security aims to protect computer systems, networks and data; Individuals can protect their accounts by using strong passwords, as well as their computers by using reliable antivirus programs and security software. Institutions, on the other hand, can protect their systems by using firewalls, security software and up-to-date software. In addition, they can raise awareness by providing regular safety training to their employees. In the study, it was determined that there were 761 works published between 1977-2023 in the Scopus Database related to trust in the digital age. This study was conducted to examine the published works on trust in the digital age and to identify gaps. On 07.09.2023, as a result of scanning the title, content and keywords related to the concept of "Trust in the Digital Age" in all languages and all publication types, 761 works were accessed and analyzes were carried out. Analyzes in this study; It was carried out within the framework of year, author, field, publication type, place of publication, institution, supporting institution, country and language categories. In this study, bibliometric analysis type was applied. The type of bibliometric analysis is used to examine scientific productivity, publication trends, the impact of authors and institutions, citation of publications, and similar features in a subject or research area. In addition, it is used for many purposes such as evaluating academic research, determining new research areas, and measuring the performance of researchers and institutions (Sipahi Döngül, 2023). Bibliometric analysis of the studies was analyzed

with the VOSviewer (Version 1.6.9) package program. VOSviewer is a software tool used to create and visualize bibliometric networks. To illustrate these networks; It can include journals, researchers, or individual publications, and can be created based on citation, bibliographic matching, co-citation, or co-authorship relationships (url-1).

According to the findings of the study, the most published year on the subject is 2022 with 146 works. When evaluated on the basis of authors, the authors of 26 works could not be reached. Ziefle, M. has 5 works, Virkar, S. has 4 works, Kassem Sap, K. has 4 works, Watkinson, A. has 3 works, Nicholas, D. has 3 works, Masa'deh, R. has 3 works, Jamali has H.R. 3 works, Huda, M. has 3 works, Groshek, J. has 3 works. It was determined that the articles were mostly published in the field of social sciences with 286 works, followed by computer engineering with 265 works, health with 171 works, business-management and accounting with 127 works. When evaluated in the context of publication type, journal articles lead with 470 works. The places where the most works on the subject have been published are Lecture Notes In Computer Science Including Subseries Lecture Notes In Artificial Intelligence And Lecture Notes In Bioinformatics 16 works, Journal of Medical Internet Research 16 works, ACM International Conference Proceeding Series 12 works, Sustainability Switzerland 9 works, Lecture Notes In Networks And Systems 9 works. When evaluated on an institutional basis, University College London with 20 works, University of Oxford with 13 works, and The University of Sydney with 10 works are at the forefront. Information about the institution supporting 570 works could not be accessed. National Institutes of Health 13 works, Wellcome Trust 12 works, National Science Foundation 8 works, Horizon 2020 Framework Programme 8 works, National Institute for Health and Care Research 7 works, Engineering and Physical Sciences Research Council 7 works, Medical Research Council 6 works, Economic and Social Research Council 6 works, National Health and Medical Research Council 5 works, The European Commission 5 and the Bundesministerium für Bildung und Forschung 5 are among the institutions that support the work.

The country with the highest number of publications is the USA with 175 works. With 727 works, the highest number of articles were published in English. It shows that although this topic is of global interest, it is more predominant in the English literature.

The number of works with only open access is 316. In this study, it was concluded that the publications on trust in the digital age were insufficient. Trust in the digital age is an issue that concerns not only individuals and institutions, but also society in general. Because digital security breaches can affect not only individuals, but society in general. For this reason, it is important to be aware of digital security and to ensure security in order to benefit from the advantages of the digital age without any problems. The limitations of the study are that it did not include studies published in databases such as WOS and Pubmed. For future research, works in these databases may be included. In this context, it is thought that it will provide the opportunity to present a more detailed examination by filling the gaps in the literature on digital trust.

Keywords: trust, digital age, information technologies, workplaces

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## **Employees as Foe or Friend: The Impact of Artificial Intelligence on Employee Outcomes**

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### Extended Abstract

The fourth industrial revolution (4.0) has brought about a profound transformation in the corporate world, redefining business processes and necessitating the integration of human resources with emerging business needs (Da Silva et al., 2022; Dhamija & Bag, 2020). This shift is largely driven by the pervasive adoption of Artificial Intelligence (AI), which encompasses automation in business activities through the Internet of Things (IoT), cyber-physical systems (CPS), and cloud computing (Khan et al., 2021). This digital transformation has given rise to a new normal in the form of the digital workspace, where the physical and virtual worlds coexist, enabling employees to work seamlessly in both realms (Bergefurt et al., 2022).

The growing importance of AI in organizations is evident, with a significant number of organizations prioritizing its implementation (Cao et al., 2021; Haefner et al., 2021). The adoption of AI is met with a range of perceptions, with some viewing it as an opportunity and others as a threat. A Pew Research Center survey (2019-2020) conducted across various regions revealed that while 53% of respondents believed that AI and computer systems have a positive impact on society, 33% perceived a negative impact. The ongoing debate about AI's impact on the workforce is characterized by uncertainty, as some experts refer to this era as Industrial Revolution 4.0, signaling the potential displacement of numerous jobs (Wirtz et al., 2020). Calo (2015) warns that AI has the potential to replace millions of jobs, possibly leading to increased unemployment, a concern echoed by a report from the World Economic Forum predicting job losses for approximately 75 million people (WEF, 2018).

Research has shown that AI has contributed to increased employee productivity and efficiency (Mikalef & Gupta, 2021). According to a survey by Gartner, Inc., 80% of executives believe that automation can be applied to various business decisions, and a global survey of 3,000 business executives indicates that the majority foresee AI increasing productivity and providing a competitive advantage (Ransbotham et al., 2017).

This study draws upon the Componential Theory of Creativity (CTC) developed by Amabile (1983) and Amabile & Mueller (2008) to explore and assess the impact of AI on two critical employee-level outcomes: creativity and turnover intentions. We aim to uncover the mediating role of self-enhancement motives (SEM) in elucidating how AI influences these outcomes. Additionally, we investigate the moderating influence of responsible leadership in the relationship between AI and

SEM. Utilizing a multi-wave research design, this study delves into these relationships using data from organizations in the hospitality sector.

Our findings indicate that AI is positively associated with employee creativity and negatively associated with turnover intentions, both directly and through the mediation of SEM. Furthermore, responsible leadership is found to have a moderating impact in this relationship.

The study's findings have significant practical implications for business managers and policymakers. They shed light on the impact of AI on employee creativity and turnover, as well as the moderating role of responsible leadership in these relationships. These implications can inform decision-making and strategies to leverage the advantages of AI while addressing potential workplace challenges. Managers should acknowledge that AI has the potential to enhance employee creativity. To capitalize on this potential, organizations can provide AI tools and technologies that facilitate idea generation, problem-solving, and innovation among employees. Furthermore, it is essential for managers to foster a supportive and inclusive work environment that embraces the integration of AI, cultivating a culture that values and rewards creative thinking. Achieving this can involve transparent communication about the reasons for AI implementation, offering training programs to enhance employees' AI-related skills, and emphasizing the possibilities for career growth and development. Moreover, by utilizing AI to enhance employee development and career growth opportunities, organizations can boost employee engagement and job satisfaction, ultimately reducing turnover. These practical recommendations are aimed at optimizing the benefits of AI adoption within the organization.

**Keywords:** Artificial intelligence, self-enhancement motives, responsible leadership, creativity, turnover intentions.

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## **Conditions for success for trust in artificial intelligence: First results of international studies on intuition and trust in data protection practices**

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### Introduction

The introduction and acceptance of artificial intelligence (AI) requires people's trust. AI providers must trust that users and those affected accept AI. Conversely, users must feel comfortable with AI and feel safe.

The field of AI was originally approached from a purely technical perspective. The safe handling of sensitive data between cyber-physical systems and people seems to require trust in technology. Trust is particularly important in the workplace, as in all social interactions, but requires a culture of trust (Endreß 2012). Recent findings from online community research indicate that a special mindset or culture must be established to design transitions between practices and new material arrangements in order to ensure the ability to act (Svenson 2018, 2019). There is an analogy here to work practices in general and the increasing integration of AI into operational processes. Due to global networking, culture-specific aspects should always be taken into account (Schweer 2008): Other EU member states, transition economies, e.g. post-socialist states, differ from Germany in their economic culture. In order to keep an eye on these developments, international comparative studies are indispensable.

In a scenario of increasing technical complexity, one of the problems is the emergence of digital trust, i.e. trust that arises specifically in digital contexts or with the involvement of material artifacts or AI (Corves and Schön 2020). Just like trust, digital trust can also be influenced by a variety of factors.

### Data protection practices

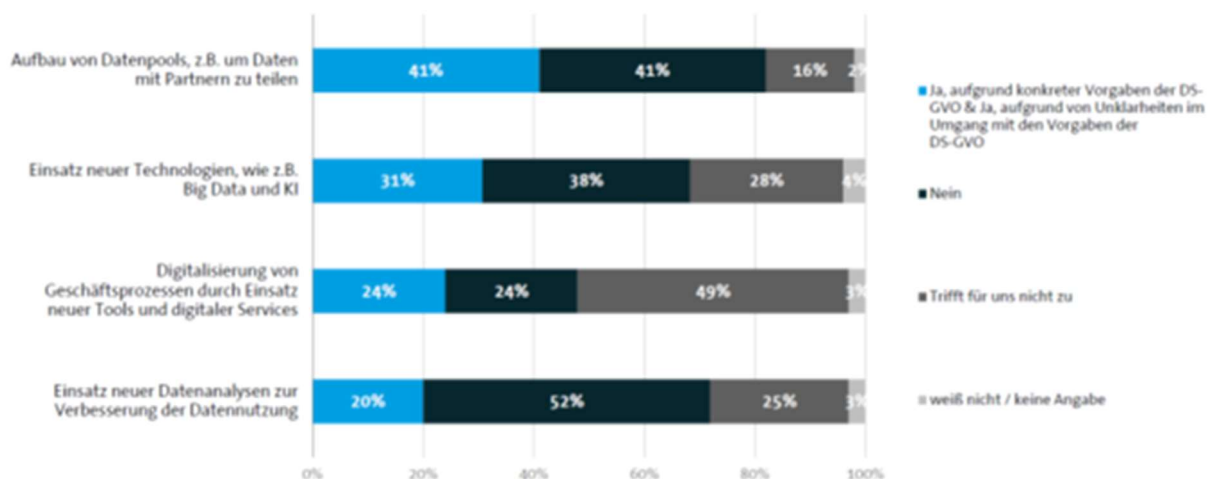
The entry into force of the General Data Protection Regulation (GDPR) has given many organizations the opportunity to rethink the way they protect personal data and information. Any natural person whose personal data is processed is a "data subject" within the meaning of the GDPR. It is therefore about the digital trust of the data subjects in the processing of data (see also, Sunyaev et al. 2020). In the healthcare sector, for example, it refers to the trust of patients in the practices of employees when handling patient data. So far, initial studies are examining the perception of interests under European law for consumers (Sørum and Presthus 2020). However, the Digital Trust at the Workplace study is about measuring an "internal" digital trust of employees in the workplace. Our study relates to digital trust in the practices of employees and managers when collecting, processing and storing personal data. These practices are anchored in the principles of the GDPR. These principles are lawfulness, fairness and transparency, purpose limitation, data minimization,

accuracy, storage limitation, integrity and confidentiality, and accountability (General Data Protection Regulation 2016). Digital trust in AI also refers to employees' practices when collecting, processing, and storing personal data.

When datafication of the workplace is carried out, it is assumed that the data subjects trust the institutions, such as companies and authorities, that collect, interpret and share the various data (Van Dijck 2014). So far, there has been little public discussion about the actual extent of digital trust (Dencik and Cable 2017). Resistance to comprehensive datafication often only arises in secret (Hintz, Dencik and Wahl-Jorgensen 2019). From the point of view of business and administration, an examination of the basic requirements of data protection, especially with regard to the handling of personal data, is essential for the responsible handling of the latter. Fundamental questions about the design of society are up for negotiation. The opening up of opportunities for intervention and control in the privacy of citizens (Weiser 1991) and also of employees must be regulated and control mechanisms implemented. According to experts, the General Data Protection Regulation partially prevents data pools, the use of big data and AI in German companies. The industry association Bitkom (2020) points out that new, innovative projects in companies can fail due to the GDPR. Bitkom Research conducted a survey on behalf of Bitkom. 504 people responsible for data protection (company data protection officers, managing directors, IT managers) from companies in all sectors with 20 or more employees in Germany were interviewed by telephone.

## DS-GVO verhindert teilweise Datenpools, Big Data, KI

Sind neue, innovative Projekte in Ihrem Unternehmen aufgrund der DS-GVO gescheitert?



Basis: Alle Unternehmen ab 20 Mitarbeitern (n=504) | Quelle: Bitkom Research

bitkom

Figure 1: Data protection regulations that prevent AI (Bitkom 2020)

This study is based on the natural control that organizations have over their employees' data. The study measures the actual trust in the behavior and practices within digital processes in organizations. It explicitly measures digital trust in compliance with the relevant data protection

standards and the responsible use of technology. In doing so, we are guided by sociological studies by Hintz, Dencik and Wahl-Jorgensen (2019), which describe norms of appropriate, responsible behavior with regard to the use of technology.

Concerns that data will be disclosed, altered, misused, hacked or even destroyed seem understandable against the background of recurring data scandals (Beldad et al. 2011). The widespread introduction of AI in German organizations demanded by the technology industry (Weber and Burchardt 2017) is counteracted by a great deal of uncertainty on the part of stakeholders and employees. In the European Union, the General Data Protection Regulation (GDPR) has formed a common data protection framework since 2018. Fabisch (2020) addresses the ethical conflicts in this context. Currently, trust in data handling is assumed (Dencik and Cable 2017), without also checking which conditions it is subject to. There is already uncertainty about the challenges of AI; there is therefore a risk of losing user acceptance. One goal from a company perspective must therefore be to generate trust among its own employees in the respective data handling along an internal digital trust journey, similar to what is discussed for consumers in data-driven marketing (see Corves and Schön 2020).

Generating trust among employees in the respective data handling along an insider's digital trust journey therefore appears to be a necessary prerequisite for the desired success of the implementation of AI in organizations. We now turn to the human processes of information processing that influence digital trust.

People in the digitalized workplace are constantly overwhelmed with information. Cognitive processing includes the use of emotions, trust and intuition to make decisions (Zinn 2008). Trust grants the ability to act and transact (Loose and Sydow 1997). If users have no experience, the degree of cognitive load from digital products increases (choice overload) (Lee and See 2004). The affective-emotional level of trust building (Corves and Schön 2020) helps to overcome cognitive load or overload and to remain able to act despite remaining uncertainty.

#### Digital trust and data protection practices

We want to find out what types of intuition employees use to make decisions. In doing so, we offer an overview of affective-emotional processes of information processing. Initial empirical results show how affective-emotional processes of information processing are used (Study 1). Furthermore, it is shown how affective-emotional processes are related to digital trust in data handling (Study 2). We investigate what type of intuition is used when employees assess the data protection practices in their companies. This means that digital trust is addressed from the perspective of employees. Using empirical research results, digital trust is examined based on the perception of company data practices.

What affective-emotional processes of information processing are used when employees assess company data practices?

Employees play an essential role in any digital transformation in the workplace, including AI. Trust-building measures by employers towards their own employees should be a top priority in order not to risk an increase in productivity (Newman 2016). Against this background, digital trust appears to be an essential part of a strategy for digital transformation (Lindstrom and Rounds 2018).

The application of the assumptions on affective-emotional decisions to the area of datafication of the workplace using Slovakia as an example shows initial findings from an emerging field of research.

#### Preliminary work and creation of the questionnaire in detail

Digital trust was examined in three sub-studies of the EU-funded ERDF research project on digital trust and teamwork (DigVert): (1) trust in companies, (2) trust between companies in supply chains and (3) consumers' digital trust in companies. The qualitative study was carried out in the DACH region of Germany, Austria and Switzerland from 2018 to 2020 (Launer et al. 2019 a and b). An international study was then carried out based on the first three sub-packages. The international follow-up project was supported by over 30 researchers from 15 countries. Study 1 examines initial results of the global dataset, Study 2 examines the results from Slovakia.

In the first two national studies, the research design for the international study on intuition & digital trust was developed and tested in detail. Exploratory, extensive pre-tests and qualitative studies were carried out for this purpose. The result is a research design that is based on the pillars (1) people, (2) technology and (3) processes.

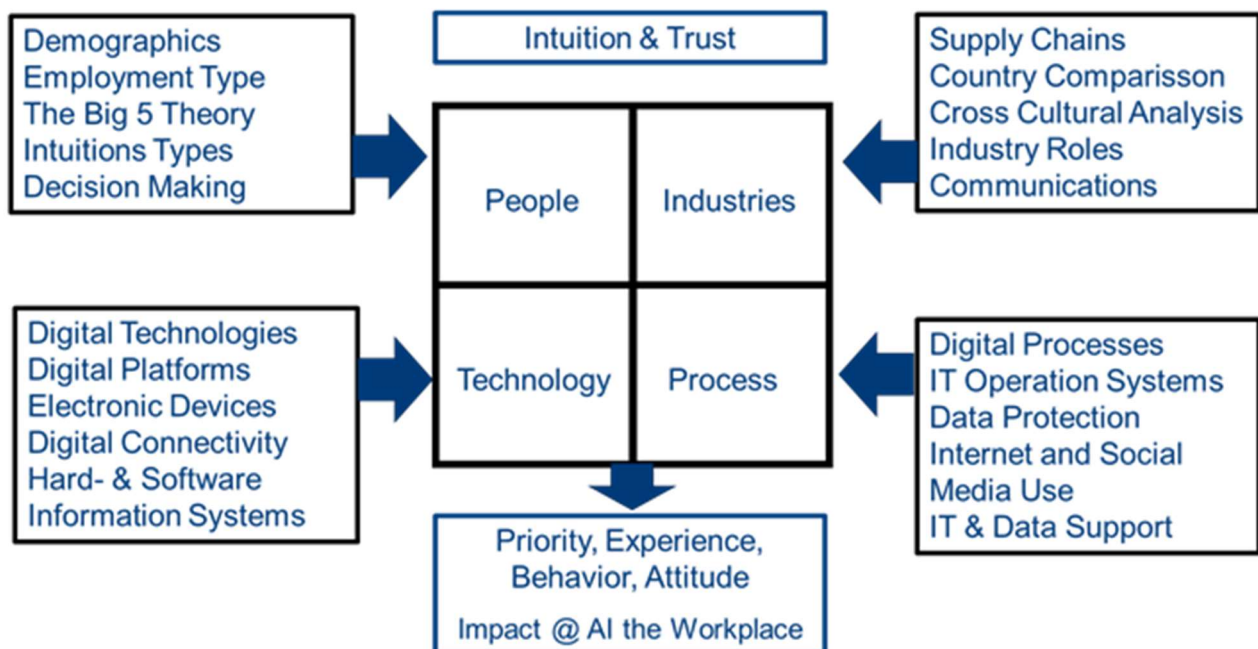


Figure 2: Research design for digital intuition and trust – basis for research into the conditions for the success of artificial intelligence

Source: Marcial and Launer (2019)

The research project Intuition (RHIA) is a basic study to investigate digital intuition. Based on the EU research project “Rationality, Heuristics, Intuition and Anticipation (RHIA)”, different types of intuition are being researched (Launer et al. 2020a).

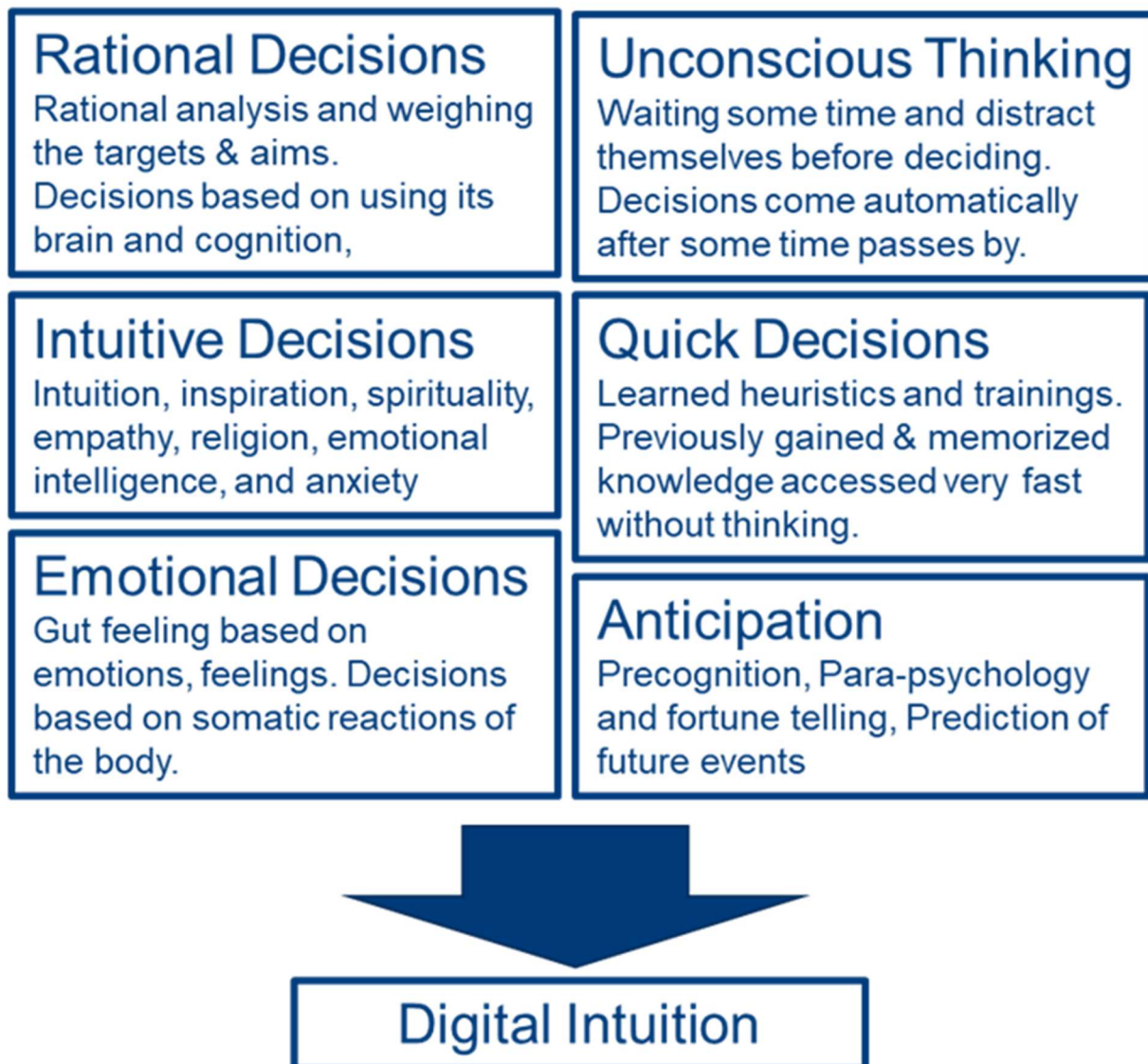


Figure 3: Different types of intuition

Source: Launer et al (2020b)

The combination of the components of affective-emotional decision-making under uncertainty and digital trust in employers' data practices leads to research into the conditions for the success of artificial intelligence and other digital technologies.



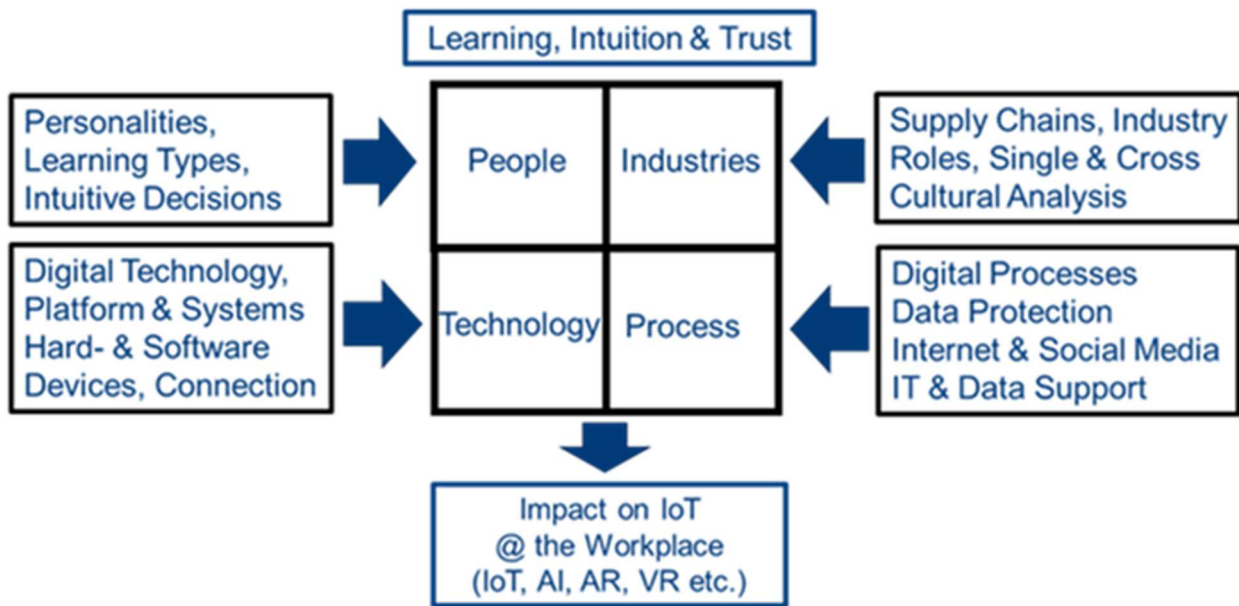


Figure 4: Combined approach to researching the conditions for the success of artificial intelligence

Source: Own illustration

#### Human information processing as the basis for decisions

Mosher (2013) and others assume that trust has a positive influence on the working atmosphere. Studies show that trust is a basic prerequisite for any decision-making in the workplace. An integrative approach from different disciplines is used to theoretically substantiate the influence of intuitive decisions on the conditions for the success of AI. The basics can be based on five building blocks (RHIBA):

- Rational, cognitive decisions based on decision theory: Alfred Kieser
- Heuristics: Gerd Gigerenzer, decision heuristics (simplifying "rules of thumb")
- Intuition research: Ap Dijksterhuis, theory of "unconscious thinking" and Gary Klein, natural decision-making processes
- Emotional intuition or the so-called gut feeling in the narrow sense
- Anticipation: Dean Radin

The scientists mentioned above have carried out various basic studies and developed theories on the various explanatory approaches to intuition. The most important studies are presented here in order to illustrate example decision-making processes in the area of intuition.

#### Rational decisions based on descriptive decision theory

Real decision-makers rarely fully conform to the rationality ideal of normative theories. Descriptive decision theories therefore reject the assumption of absolute rationality of human decisions and, in line with psychological and sociological findings, include the multiple individual and social limiting factors of human rationality in the analysis. Descriptive decision theories can therefore also be

interpreted as theories of intended but limited rational behavior. The limitations taken into account are predominantly cognitive in nature (e.g. the limited information processing capacity of humans).

#### Decision heuristics from psychology & social psychology

In business administration, heuristics have already found their way into decision theory. The introduction of (experiential) intuition and its importance in making decisions in working life has increasingly come into focus in science in recent years. Hanno Beck systematically describes different types of heuristics in his book "Behavioral Economics" (2014). Gigerenzer, Hertwig, Pachur (2011) examine decisions in limited time in their book Heuristics: "The Foundations of Adaptive Behavior". The time dimension is an important basis of the present approach. This literature forms the basis for this heuristic approach.

Gerd Gigerenzer works on limited rationality, heuristics and efficient decision trees. He investigates how rational decisions can be made when time and information are limited and the future is uncertain (see also Decision under Uncertainty). Together with doctors in the USA, he has demonstrated diagnostics of how doctors make heuristic decisions under time pressure and are often better off than after long, rational decision-making processes.

Heuristics refers to the science of arriving at probable statements or practical solutions with limited knowledge, i.e. incomplete information, and little time. It refers to an analytical procedure in which statements about a system are made with limited knowledge of the system using speculative conclusions (Gigerenzer and Gaissmaier 2011; Gigerenzer, Hertwig and Pachur 2011).

#### Unconscious thinking and decisions after stimulation

Based on the studies of the social psychologist Ap Dijksterhuis (2006; Dijksterhuis et al. 2006), it can be assumed that the more complex the choice, the more intuitive the decision is over the rational alternative.

"Intuition is the ability to gain insight into facts, perspectives, laws or the subjective consistency of decisions without discursive use of the mind" (Jung 2006, 474 f.). The psychologist Gary Klein (2003) is one of the pioneers in the field of natural decision-making processes. His work mainly deals with intuition in the world of work. He mainly deals with professional groups that have to make important and quick decisions in their jobs. This group includes police officers, firefighters, doctors, nurses, stock traders, lawyers and managers.

Klein defines intuition as the way we translate our experiences into judgments and decisions. In his model, intuition can be traced back to the experiences made by experts in their respective professions: "Experts have learned through their experience to see all kinds of things that are invisible to other people" (Klein 2003). This means that a specific situation produces certain signs. Human perception registers these signs and compares them with comparable situations from the past. These patterns from the past trigger certain actions. In his model, a second cycle runs in the

brain in which mental simulation is carried out. This checks what consequences a certain reaction will have. The processes mentioned take place unconsciously. According to Klein, intuition can be learned and improved not only through experience, but also through appropriate training programs. To this end, he has developed a training program based on the so-called "Recognition Primed Decision Model". This approach is followed in this study, even if its model cannot be fully implemented.

#### Gut feeling in the somatic sense

The somatic aspect of intuition can be explained using a body of neurophysiological research that has found interesting relationships between physical and affective elements and the ability to make rational decisions (cf. Damasio, 1994, 1996, 1999). For example, Damasio's experiments showed that a tacit awareness below the participants' conscious level triggered a somatic response (manifested as microsweating) in a variety of decision-making tasks. The information processing system that controls these feelings seemed to be activated before the participants were aware that they had made a decision.

Physiological somatic markers (for example, an unpleasant gut feeling) direct the individual's attention to the undesirable outcomes that can result from certain actions (cf. Damasio, 1999). Intuitions can also act positively to alert us to opportunities, and attuning to personal feelings (bodily senses) can lead to more informed personal decision making (cf. Goleman, 1996; Goleman, Boyatzis, and McKee 2002). See especially Sadler-Smith and Shefy (2007).

#### Anticipation

The models presented so far cannot yet describe all phenomena of intuitive decision-making behavior. Radin (2004) pursues a scientifically well-founded explanatory model. Various experiments have shown that people can anticipate the future by measuring skin resistance (polygraph principle) and pupil dilation. Meta-studies partially confirm the effects measured by Radin. By using Radin's approach, decision-theoretical phenomena that could not previously be explained can be scientifically investigated. The approach is included for completeness and to balance out chance.

#### Combined RHIBA approach

There are hardly any scientific studies to date that combine all five different approaches. In an international study with over 5,000 participants from 18 countries, initial preliminary results for certain professional groups were evaluated (partial result, see Launer et al. 2020b).

#### Empirical studies on intuition and data protection practices - Global survey (Study 1)

In this study, 1127 participants belonged to the professional groups of top managers and civil servants, emergency doctors, firefighters, police officers, priests, yoga and meditation teachers. The

bundling of the answers into the decision types (rational, intuitive, unconscious, heuristic, anticipation) could be confirmed as consistent. It became clear that there are strong differences between the answers of the individual professional groups, well beyond the error limit, i.e. highly significant. Further analyses can also usefully look at the professional groups of managers and civil servants, as they are strongly represented. Obviously, the professional groups seem to correlate strongly with the answers on intuition. This means that some professional groups have clear preferences for the use of certain types of intuition. Furthermore, this shows that the different types of intuition are actually recognized by employees and have significant significance with regard to their career decisions.

Managers	753
Public servants	146
Healthcare	85
Police / fire brigade	28
Emergency doctors	37
Priests and spiritual people	47
<u>Yoga and meditation trainers</u>	<u>31</u>
Total number of responses	1127

Table 1: Industry affiliation of respondents

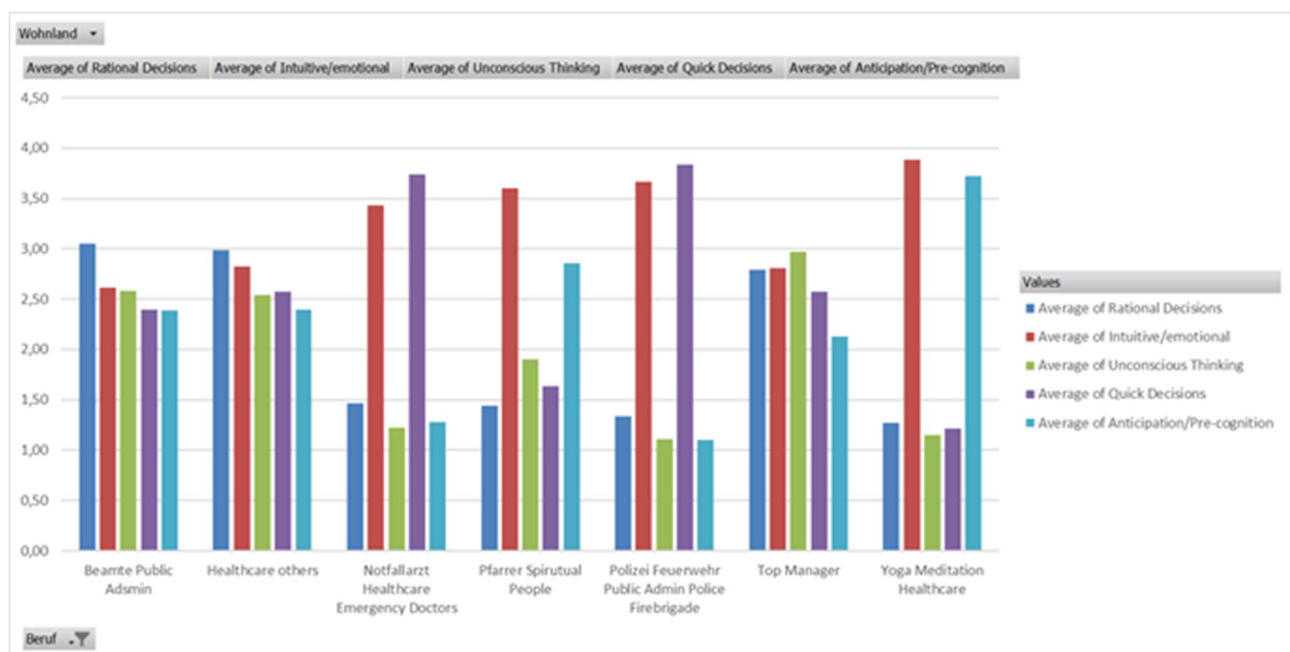


Figure 5: Distribution of typical intuition types by industry, Source: Own illustration

Figure 5 shows that basically all types of intuition are present and used. Interesting are the peaks in the figure, which indicate a particular form of some types of intuition. Public servants and civil servants have a clear tendency towards rational decisions based on descriptive decision theory (see section 3.2.1). This also applies to health care professionals. Among doctors, the decision heuristics

from psychology and social psychology (see section 3.2.2) are particularly common, presented as "intuitive/emotional" and "quick decisions", which also seems to apply to the police and fire service. For managers, the picture is relatively balanced, with unconscious thinking also being used to make decisions (section 3.2.2). Spiritual people and people who practice yoga use anticipation (see section 3.2.5).

### Survey in Slovakia - Study 2

This study is based on the dataset from Study 1 and takes a closer look at the data from Slovakia (Svenson, Ballová Mikušková and Launer 2020). A total of 228 managers (90 women) answered the questions on intuition and data protection practices. The participants were adults and had minimal to extensive experience. Bozogáňová and Piterová (forthcoming) report that Slovaks currently have one of the lowest levels of trust in national institutions and the average level of trust in supranational institutions and media in Europe. The descriptive statistics of the measured variables can be found in Table 3; mean values of all variables were calculated, the scores ranged from 1 to 4; all measurements showed satisfactory internal consistency.

	Components				
	1	2	3	4	5
EF01_10 For most decisions, it makes sense to feel.	<b>.688</b>				
EF01_11 I carefully watch my innermost feelings.	<b>.682</b>				
EF01_20 I can often predict emotional events	<b>.674</b>			.309	-.306
EF01_12 I prefer emotional persons.	<b>.649</b>				
EF01_16 I frequently make quick and spontaneous decisions based on my insights into humanity.	<b>.647</b>	-.314			.332
EF01_19 I frequently have a premonition as to what will happen.	<b>.624</b>				-.367
EF01_09 Emotions play a significant role in my decision-making patterns.	<b>.596</b>			-.333	
EF01_22 I can frequently predict the outcome of a transaction	<b>.581</b>		.310	.384	
EF01_21 Before the phone rings, I frequently know in advance who the caller is.	<b>.580</b>		.419		
EF01_08 If I am supposed to determine whom I can trust, I make intuition-driven decisions.	<b>.566</b>		-.373		
EF01_17 I frequently make quick and spontaneous decisions based on my life experience.	<b>.560</b>		-.3		.394
EF01_18 I make quick decisions by rules of thumb.	<b>.507</b>	-.387			.39
EF01_07 I am an intuitive individual.	<b>.502</b>		-.428		
EF01_01 I tend to be a rational thinker.		<b>.672</b>		.303	
EF01_02 Before I make a decision, I usually think about it for quite some time.		<b>.668</b>			
EF01_06 I prefer to make elaborate plans rather than leave anything to chance.		<b>.644</b>			
EF01_05 I think first before I act.		<b>.642</b>			
EF01_14 I never make decisions right away, and I always wait for a while.		<b>.543</b>			
EF01_15 Before I make a decision, I first focus on doing something else.	.520		<b>.523</b>	-.320	
EF01_13 If I have to make a decision, I always sleep on it.	.369		<b>.307</b>	-.596	
EF01_03 I think more about my plans and goals than other people.	.306	.324	<b>.327</b>		.532

Table 2 Rotated component matrix

	$\Omega$	N	M	SD	trust in DP	digital trust trust in PDP	digital li- teracy
<i>Age</i>							
Age	-	228	3.65 <sup>a</sup>	1.09	-.003	.088	-.087
<i>Experience</i>							
Experience	-	228	3.11 <sup>a</sup>	1.11	.120	.075	.116
<i>Expertise</i>							
IT expertise	-	228	1.45	0.65	.058	-.011	.083
<i>digital trust</i>							
trust in data protection	.914	225	2.63	0.45			
trust in personal data protection	.907	224	3.09	0.63	.384**	—	
digital literacy	.863	227	2.52	0.57	.508**	.413**	—
<i>thinking preferences</i>							
intuition (general)	.893	228	2.53	0.51	<b>.489**</b>	<b>.210**</b>	<b>.330**</b>
intuition (time)	.670	228	2.44	0.60	<b>.383**</b>	.052	<b>.343**</b>
Rationality	.776	228	3.05	0.50	<b>.368**</b>	<b>.377**</b>	<b>.193**</b>
<i>personality traits</i>							
Extraversion	-	228	2.27	0.54	<b>-.184**</b>	-.081	<b>-.193**</b>
Agreeableness	-	228	2.60	0.56	<b>-.140*</b>	.030	-.063
Conscientiousness	-	228	2.25	0.53	-.023	-.087	.082
negative emotionality	-	228	2.33	0.51	-.108	-.058	-.060
open-mindedness	-	228	2.19	0.59	<b>-.133*</b>	-.060	-.085

Note:  $\omega$  – reliability (omega), N – number, M – mean, SD – standard deviation, DP – data protection, PDP – personal data protection; \*\*  $p < .010$ ; \*  $p < 0.050$ ; <sup>a</sup> das Alter und die Erfahrung wurden als ordinale Variablen gemessen, der Wert für das Alter von 3,65 Jahren entsprach dem Alter von 29-48 Jahren, der Wert für die Erfahrung entsprach 4-10 Jahren in einem Unternehmen

Table 3 Descriptive statistics of all digital trust, thinking and personality traits

### Relationship between digital trust and preference for rational and intuitive thinking

We examined the relationships between digital trust (trust in data protection, trust in the protection of personal data and trust in digital competence) and the preference for rational and intuitive thinking and found weak to moderate positive correlations between digital trust and preferences for rational and intuitive thinking (Table 2).

We found relationships between digital trust and preferences for intuition and rationality, so we conducted a regression analysis to examine the impact of rational/intuitive thinking on digital trust/knowledge. A hierarchical multiple regression was conducted separately for trust in data protection, trust in the protection of personal data and digital competence as dependent variables. In the first step, the intuitive/rational thinking style was entered, in the second step the length of service. The regression statistics are presented in Table 4, separately for trust in data protection, trust in the protection of personal data and digital literacy.

### Trust in data protection

The hierarchical multiple regression showed that in step 1, the preference for general intuition contributed significantly to the regression model ( $F(1,223) = 70.105$ ,  $p < .001$ ,  $R^2 < .239$ ). The introduction of the rational thinking style explained an additional 9.3% of the variation in trust in data protection (change in  $R^2$  was significant,  $F(2,222) = 55.109$ ,  $p < .001$ ). Finally, the introduction of the intuitive thinking style according to Dijksterhuis - “taking time before making a decision” explained only an additional 1.9% of the variation. The introduction of experience explained only an additional

1.1% of the variation in trust in data protection. This means that the most important predictors of trust in the protection of personal data are the preference for an intuitive thinking style and the preference for a rational thinking style.

#### Trust in the protection of personal data

The hierarchical multiple regression showed that in step 1, the preference for general intuition contributed significantly to the regression model ( $F(1,223) = 36.891$ ,  $p < .001$ ,  $R^2 < .142$ ). The introduction of the rational thinking style, the intuitive thinking style - taking time before making a decision, and experience explained only another 0.2% - 2.7% of the variation in trust in the protection of personal data. Accordingly, the most important predictor of trust in the protection of personal data was the preference for an intuitive thinking style.

#### Digital competence

The hierarchical multiple regression revealed that in step 1, the preference for general intuition contributed significantly to the regression model ( $F(1,223) = 8.716$ ,  $p = .003$ ,  $R^2 < .037$ ). The introduction of the rational thinking style explained an additional 9.5% of the variation in digital competence (the change in  $R^2$  was significant,  $F(2,222) = 17.017$ ,  $p < .001$ ). The introduction of the intuitive thinking style according to Dijksterhuis - "taking time before making a decision" explained an additional 4.1% of the variation (change in  $R^2$  was significant,  $F(2,222) = 15.572$ ,  $p < 0.001$ ) in digital competence, and interestingly, the main predictors became a preference for the rational thinking style and the intuitive thinking style according to Dijksterhuis - "taking time before making a decision" explained an additional 4.1% of the variation (change in  $R^2$  was significant,  $F(2,222) = 15.572$ ,  $p < 0.001$ ) in digital competence. The preference for a rational thinking style and an intuitive thinking style according to Dijksterhuis - "taking time before making a decision" - remained the main predictor even after the introduction of the experience construct (which only explained an additional 1.3% of the variation in digital competence).

Tabelle 4 Zusammenfassung der hierarchischen Regressionsanalyse für Variablen, die das digitale Vertrauen vorhersagen

predictors	trust in data protection					trust in personal data protection					trust in digital literacy				
	B	SE	$\beta$	t	p	B	SE	$\beta$	t	p	B	SE	$\beta$	t	p
1 (Constant)	1.536	0.134		11.486	.000	1.64	0.242		6.792	.000	1.852	0.231		8.026	.000
general intuitive TS	0.433	0.052	<b>0.489</b>	8.373	.000	0.475	0.078	<b>0.377</b>	6.074	.000	0.220	0.075	<b>0.193</b>	2.952	.003
	$F(1,223) = 70.105$ , $p < .001$ , $R^2 < .239$					$F(1,223) = 36.891$ , $p < .001$ , $R^2 < .142$					$F(1,223) = 8.716$ , $p = .003$ , $R^2 < .037$				
2 (Constant)	0.795	0.183		4.331	.000	1.193	0.290		4.111	.000	1.110	0.266		4.173	.000
general intuitive TS	0.395	0.049	<b>0.447</b>	8.069	.000	0.450	0.078	<b>0.357</b>	5.785	.000	0.174	0.072	<b>0.152</b>	2.426	.016
rational TH	0.274	0.049	<b>0.307</b>	5.546	.000	0.207	0.077	<b>0.166</b>	2.695	.008	0.349	0.071	<b>0.31</b>	4.941	.000
	$F(2,222) = 55.109$ , $p < .001$ , $R^2 = .332$ , $R^2\Delta = .093$					$F(2,222) = 22.598$ , $p < .001$ , $R^2 = .170$ , $R^2\Delta = .027$					$F(2,222) = 17.017$ , $p < .001$ , $R^2 = .132$ , $R^2\Delta = .095$				
3 (Constant)	0.736	0.183		4.028	.000	1.282	0.293		4.379	.000	0.994	0.263		3.787	.000
general intuitive TS	0.347	0.052	<b>0.392</b>	6.664	.000	0.481	0.079	<b>0.383</b>	6.076	.000	0.112	0.072	0.098	1.54	.125
rational TH	0.242	0.050	<b>0.271</b>	4.793	.000	0.263	0.082	<b>0.211</b>	3.193	.002	0.260	0.074	<b>0.231</b>	3.505	.001
intuitive TS (time)	0.115	0.045	<b>0.153</b>	2.523	.012	-0.134	0.073	-0.124	-1.832	.068	0.218	0.065	<b>0.227</b>	3.338	.001
	$F(3,221) = 39.749$ , $p < .001$ , $R^2 = .350$ , $R^2\Delta = .019$					$F(3,221) = 16.345$ , $p < .001$ , $R^2 = .182$ , $R^2\Delta = .012$					$F(3,221) = 15.572$ , $p < .001$ , $R^2 = .173$ , $R^2\Delta = .041$				
4 (Constant)	0.611	0.193		3.172	.002	1.206	0.309		3.901	.000	0.822	0.277		2.969	.003
general intuitive TS	0.342	0.052	<b>0.387</b>	6.613	.000	0.479	0.079	<b>0.381</b>	6.034	.000	0.106	0.072	0.093	1.477	.141
rational TH	0.237	0.050	<b>0.266</b>	4.729	.000	0.258	0.083	<b>0.207</b>	3.128	.002	0.252	0.074	<b>0.224</b>	3.413	.001
intuitive TS (time)	0.12	0.045	<b>0.161</b>	2.654	.009	-0.130	0.074	-0.12	-1.773	.078	0.226	0.065	<b>0.236</b>	3.474	.001
experience	0.044	0.023	0.106	1.960	.051	0.028	0.036	0.047	0.774	.440	0.061	0.032	0.114	1.876	.062
	$F(4,220) = 31.156$ , $p < .001$ , $R^2 = .362$ , $R^2\Delta = .011$					$F(2,166) = 12.386$ , $p < .001$ , $R^2 = .184$ , $R^2\Delta = .002$					$F(2,166) = 12.691$ , $p < .001$ , $R^2 = .186$ , $R^2\Delta = .013$				

Notes. TH = thinking style



Table 4: Summary of hierarchical regression analysis for variables predicting digital trust

## Outlook

This paper aimed to investigate how workplace decision-making processes are related to digital trust. We focused on the use of different intuitions and investigated whether preference for a particular decision-making style can explain trust in data protection, privacy, and digital literacy.

Managers and other members of the public have a responsibility to protect the public value of privacy (Royakkers et al. 2018). The contribution to studies on trust in artificial intelligence is threefold.

First, it provides management scholars with an applied insight into the field of intuition and digital trust.

Second, we fill a gap in the literature on decision-making by conceptualizing it as research in rationality, heuristics, intuition, gut feeling, and anticipation (RHIBA). We extended available constructs by testing them on a problem from the field of workplace data protection.

The study also contributes to the academic debate on the scientific evidence for anticipation. Intuitive anticipation was not related to the decisions focused on in our study (Study 2). This study reveals interesting insights through the survey instrument. This study finds further evidence for the controversial findings on distraction before a decision, as in the work of Dijksterhuis (Section 3.2.3). The most important predictors of confidence in digital competence were the preference for a rational thinking style and an intuitive thinking style - taking the time before a decision (Dijksterhuis). The preference for a rational thinking style and an intuitive thinking style - taking the time before a decision into account (Dijksterhuis) - remained the most important predictor even after taking into account the respondents' experiences. This unconscious information processing is associated with taking time to make decisions, e.g. to distract oneself before making a decision. This enables new work to formulate and test hypotheses. In some ways, we can confirm the classic claim by Simon (1987) that both intuitive and rational thinking work alongside each other. However, sometimes people find a little distraction helpful before making a decision.

Our findings regarding experience/expertise as a basis for intuition have not shown it to be an important factor, although it may seem obvious that this aspect can explain significant variation. So it is not the case that people have more experience with information systems in organizations and therefore have more trust in data protection practices. Thus, further research is needed that measures more specific approaches to experience. Consideration should be given to whether there are processes that enable people to learn from their experiences to build expertise in a particular area (Dane and Sonenschein 2015).

Impact on management: In essence, organizations are small cultures within larger macro-cultural contexts (Dane and Pratt 2009) that shape the intuitions of their members. The dynamics within organizations can encourage people to adhere to the norms of the organization, such as data protection principles, and to refrain from morally dubious decisions (Ellemers 2017). Managers must be aware of the importance of experiences within the relevant decision-making area in matters of



data protection and privacy. Management trainers should therefore design scenarios in which people can gain a clear moral awareness of decisions (Dane and Sonenschein 2015, 86). With regard to socially acceptable behavior in the digital society, organizations are recommended to determine the status quo of their organization and thus formulate deviations from the organizational norm as an active decision (Cushman and Young 2011).

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## **Managing Education**

### **Acknowledgement of our Education Management Network**

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E-Learning was the topic of my first research semester. In an international study in Europe, Asia, and Latin America, I learned about the different approaches of Distance Learning. Thank you to my dear friend Prof. Dave Marcial from the Silliman University in the Philippines. He gave me a chance to present my results internationally in the Philippines and with the Philippines E-Learning Society (PeLS).

In 2022, we enlarged our study program on Education due to a dear friend and cooperation partner Prof. Meltem Huri Baturay from Atılım University in Türkiye and her LET IN Research & Development Institute. We proudly supported her international conference in 2022 and we will continue to cooperate.

The educational sector will experience a dramatic change in future – actually, it has already started. New technologies will influence the way we teach and how students learn. We will further research this exciting transformation, e.g. digitalization, augmented reality, blockchain, metaverse, chatGPT, and many others.

**Documenting a Research Grant Application Process between Japan and India**

Keynote Speech

Steve McCarty

Osaka Jogakuin University, Japan

**Purpose**

Research grant proposals have not yet been recognized as a genre for publication, even though they might be of reference for younger scholars to develop their own successful proposals. A grant tends to be perceived in terms of its starting and ending date of funding, but it is actually a whole process of organizing researchers and a proposed vision that maps onto the procedures and conditions set by the agencies offering competitive grants. This keynote presentation and proceedings article opens a window into the process of applying for a research fund offered jointly by the governments of Japan and India. Further dimensions addressed besides describing specifics of this case include the scope of possible documentation and publications, the cultures involved, intercultural communication challenges, and the research topic of humanizing online educational experiences.

**Broadening Documentation and Publications**

I propose expanding the types of publications to allow for the notion of a research diary, which would include the back story of the process, and give readers a fuller picture of how knowledge is advanced in a field. I further propose that a research grant application, as a blueprint for subsequent research, can be of reference to other scholars and therefore a useful genre to publish.

Grants received are certainly a valuable item on one's curriculum vitae, and are often a section of annual reports for evaluating the academic output of faculty members. However, even when contributing open educational resources to the Humanities Commons (n.d.) research repository, which has dozens of genres to select from, anything like a research grant proposal would fall into the Other category. Academic journals tend towards exclusiveness and few submission categories, but the open access Journal of Interactive Technology and Pedagogy includes Blueprints, inviting "short recipes for digital teaching and research – series of replicable steps that can be shared among instructors and researchers" (Rifino, 2023). I see our binational proposal of 1,800 words including theory and implementation as a blueprint for research.

**Overview of Applying for Grants**

Largely because grants are competitive, the conditions and procedures tend to be unnecessarily daunting and demand a strong commitment. Researchers are seen resorting to shortcuts like using AI to compose grant applications. Whereas, review panel members "are usually asked to focus on

three main questions. Does this proposal fit the call brief? Is the proposed science good and novel? And are the candidates experts in the right field?" (Parrilla, 2023). For further advice on applying for grants, see Consalvey (2023).

#### Back Story of the Indo-Japanese Project

A foremost Indian educational technologist at a university in New Delhi, with whom I have collaborated for over 20 years, found that the Japanese and Indian governments jointly offer grants for research projects or seminars for one or two years. He asked me to organize a Japan team, as one of the conditions was that members be based in the two countries. I was able to recruit Japanese researchers from four universities in Tokyo, although they were all busy with national grants and other commitments. The above-mentioned Indian Principal Investigator (PI) was also preoccupied with commitments such as offering a new Massive Open Online Course (MOOC) internationally for the Indian government on Virtual Reality (VR). As a result, I helped both sides through the process and recruited one of the Indian members. Everyone relied on my finding out the complex requirements of the two nations, as well as compiling and composing a vision of the proposed research project. After nearly three months of organizing and preparing the necessary documents, we were hard-pressed to submit the proposals by the deadline. More details about the back story are presented in the keynote speech.

#### Cultural Issues in Forming an Asian International Team

The directions of both government agencies stated that the proposals must match, yet the procedures were quite different, reflecting differences in culture and technology available. Reflecting cultural differences in time management, the Japan side felt an urgency to submit the online forms with time to spare in case any technical problems arose. Only the Indian government demanded delivery of hard copies, unwieldy when we have CVs that run dozens of pages, extending the submission to the last minute.

Many Asian cultures have less of a sense of individual human agency than of fate or destiny, or a sense of eternal, cyclical time, as in traditional Indian culture. In Japan, however, the cyclical rhythm was determined more by the demands of rice cultivation, with everyone in the village needed at times of sowing or harvesting. Thus, the Japanese business world has a strong ethic of being on time, or preferably a bit early.

In organizing people for a project, which the Japanese do relatively well, they go through an elegant and ritualistic process analogous to preparing root systems in gardening, called *nemawashi*. After seemingly long preparation, Japanese groups are finally galvanized for concerted efforts. I had a difficult time finding a Japan PI whose university would host visitors from India and administer the grant. Instead of addressing everyone and finding them unresponsive, I should have been more patient to contact professors individually, have them consult among themselves, and let a consensus emerge. After a Zoom meeting and other consultations, one

professor finally agreed to the extra work and met me in Kyoto to submit the Japan-side application forms online. Even though I could read the Japanese, his expertise from many government-funded research projects smoothly solved tricky parts of the online form.

Our application process and the two cultures are detailed further in the oral keynote presentation. However, it is easy to be left with the impression that Asians are passive, particularly Japanese, because they are reserved and acutely cognizant of group dynamics. Asians can often be satisfied by a sense of participation, holding a position or having a certain status in a group, without feeling a need to state their stance or initiate actions, which might be expected of the leader, and will only be frank behind the scenes when peers are not listening. Therefore, in my long experience leading international organizations, I find that approaching individuals with a specific request for a task works better than broadcasting various needs or calling for volunteers. Then it is found that Japanese and most other Asians are not passive but very responsive.

#### Cultural Dimensions Stated in the Project Proposal

This binational grant is offered in the fields of the social sciences or humanities. Our proposal is entitled “Indo-Japanese Collaboration to Humanise Online Educational Experiences” (utilizing British English spellings for the Indian government, which in retrospect seems unnecessary). Indian and Japanese members contributed content to the proposal on government policies promoting ICT in education, proposed deliverables utilizing AI and VR technology, and a social science approach. Cognizant of the disciplinarity requested, I added cultural issues such as the forms of humanism that India and Japan could contribute to international academic discourse on online education.

I also composed the implementation sections, having noticed that the Japanese application form calls for “concrete” plans, more specifically than the Indian form. I have found that the East-West divide is between abstract Indo-Western thought and concrete East Asian sensibilities, most notably in haiku poetry, where nature symbolism does the lifting rather than metaphysics (cf. McCarty, 2020).

The proposal aims for a balanced and humanistic approach towards new technologies, appealing to the two governments by starting the Summary as follows:

Before the world has discovered the kinds of humanism that India and Japan could contribute to global society and education, artificial technologies have raced ahead towards a more efficient but less human life for all humanity. This bi-national research group, whose members utilize cutting-edge technologies, would develop approaches to sustaining Indianness, Japaneseness, and humanness ...

The Project Description starts with definitions of humanism from India and Japan that agree with global academic standards. For definitions of online education and related terms, the proposal refers to McCarty (2021). We proposed a multidisciplinary approach as follows:

This project aims to humanize online experiences by conceptualizing and designing personalized, engaging, relevant, and accessible learning environments. As distinct from previous research, multidisciplinary approaches would combine the social sciences, humanities, Indian and Japanese cultural knowledge, humanistic values, and technology including VR and AI.

One more passage concerning a cultural dimension might suffice for our purposes. Surprisingly, “intercultural communication research finds that, contrary to the group-oriented stereotype, Japan is nearly average or balanced between individualism and collectivism, right next to India in the list of countries” (Shaules & Abe, 2007).

## Conclusion

This true case of applying for an international grant has aimed to open a window into the whole process that is rarely documented for publication. If it is of reference to younger scholars, and if the value of broadening the scope of publications has been shown, then the purpose of this keynote presentation and paper will have been served. Finally, it is important for scholars to be on the lookout for opportunities, and not be shy as a matter of networking to ask peers or granting institutions any questions that could advance one's goals.

Keywords: India, Japan, cultures, intercultural communication, online education, research diary, grantsmanship, documentation, publications

*Steve McCarty was born in Boston and became a full Professor in Japan. He currently lectures for Osaka Jogakuin University and the Japanese government foreign aid agency JICA. At Kansai University from 2015-2020 he taught international ICT classes and held a unique Global Faculty Development position. Since 1998 he is the World Association for Online Education (WAOE) President. As of these Proceedings, his CV lists 250 publications and 99 unique presentations (including 9 keynote addresses), with 566 citations to his works recognized by Google Scholar. His research and practice spans online learning, bilingualism, language teaching with technology, Japan, Asia, faculty development, and the academic life. Start from <https://japanned.hcommons.org>*

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## **Challenges in implementing portable Learning Management Systems Insights from higher Education Institutions during the Covid 19 Pandemic**

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### Extended Abstract

Amidst the backdrop of a pandemic, learning management systems have emerged as indispensable tools for facilitating online education. However, implementing these systems poses challenges, particularly in settings with limited internet connectivity, creating hurdles for educators and students. This article investigates the hurdles encountered during the deployment of Portable Learning Management Systems (PLMS) during the COVID-19 pandemic, drawing on insights from participants representing diverse higher education institutions in the country. The study examines several facets, including the participants' profiles during training, institutional characteristics, and the potential correlations between PLMS implementation and institutional profiles, user technological readiness, instructional design, motivation, interest, and an institutionalized Learning Management System (LMS).

Our findings reveal that participants with active Facebook accounts exhibit higher technological readiness. At the same time, internet experience significantly influences the ease with which they adapt to and explore the PLMS during training and implementation. In terms of PLMS implementation, the majority of the 397 participating teachers (302) are in the "Curiosity Stage," with the remaining 95 teachers falling into the "Exploration Stage" - those who have successfully installed and downloaded the PLMS. The majority of participants are from Region 7.

The data showcases various challenges, including hardware limitations, software compatibility issues, connectivity problems, and logistical hurdles. This diverse set of challenges mirrors the multifaceted nature of transitioning to online education, enhancing the comprehensiveness and depth of our research findings. One significant strength of this data is its specificity, as it offers tailored feedback for each participating institution. This level of granularity is particularly beneficial for our research, as it enables us to draw institution-specific conclusions and recommendations, addressing the unique needs and circumstances of different schools. Moreover, the analysis does not merely highlight issues but also provides constructive suggestions for improvement. These recommendations serve as practical insights for educators, administrators, and policymakers seeking to enhance online education platforms and strategies.

This study sheds light on the challenges faced by higher education institutions during the COVID-19 pandemic. It offers valuable insights into the readiness and adaptability of educators and learners when confronted with innovative learning technologies like PLMS.

Keywords: online distance learning, learning management system, portable learning management system, PLMS

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## **Programming Education and its Challenge at Tokyo Online University**

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### **Abstract**

Tokyo Online University is a new university established in 2018. The Department of Information and Management at Tokyo Online University offers education in the field of information technology (IT), including programming. Programming education consists of lectures and exercises in basic programming using the C and Java programming language. Lectures cover computer basics, fundamental programming concepts, data processing such as loops and arrays, and file input and output. Exercises cover more advanced programming techniques such as functions, recursion, and dynamic programming. A programming environment with online judge called "the CODEROOM" is provided as a learning environment for programming. The CODEROOM offers features such as a bulletin board system, direct messaging, and peer review. In peer review, students can review, grade, and comment on each other's source code. This paper presents typical examples of student activities in the CODEROOM. While there are students who have achieved high levels, it has been found that about 60% of students have never accessed the CODEROOM. This number has improved by about 10% with the revision of the curriculum, but a major challenge that how to encourage students to engage in practical training remains.

### **Introduction**

Tokyo Online University is a distance-learning university established in 2018. It has two faculties, the Faculty of Information and Management and the Faculty of Human Welfare. Among them, the Faculty of Information and Management provides education based on the Information Technology (IT) curriculum of "Computing Curriculum Standard J07" (情報専門学科におけるカリキュラム標準 J07-IT[1]), which is based on the global standard CC2001-CC2005 of IEEE/ACM.

The goal of J07-IT is to provide students with the knowledge necessary to build and maintain IT infrastructure in companies and other organizations[2]. The Book of Knowledge (BOK) in the IT area as well as our educational activities, includes various contents such as networking, information management, Web, and platform technologies. In this paper, for simplicity, we will focus on the educational activities of "basic programming," which is required in a relatively large volume[3], although the Tokyo Online University also offers other seminar courses, such as Database and managing an operating system and internet servers.

### **Overview of the University**

The School of Information and Management, which is the subject of this report, was established with a capacity of 400 students and 200 third-year transfer students, a total capacity of 2,000 students by

the end of the fourth year. The number of students enrolled as of the end of FY2021, by year of entry and gender, is as follows:

Table 1. Number of Students

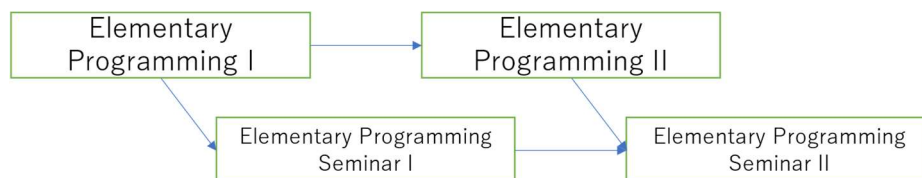
Year	Male	Female	
2018	261	76	
2019	372	175	
2020	472	213	
2021	563	263	
Total	1,668	727	2,395

The degree awarded upon graduation is a Bachelor (Information and Management), and the type of degree is Engineering. Except for some of the specialized courses (Social Research Seminar and Internship), all courses are offered through distance education.

All courses of Information Technology are compulsory. So, all students must take programming courses on a compulsory basis in order to graduate.

#### Programming Courses with C

In this paper, we focus on Elementary Programming. The courses are as follows: Elementary Programming I / II and Elementary Programming Seminar I / II. These courses are elementary courses with C programming language. All of them are quarter courses, that is, one-credit course, with 8 periods of classes.



**Fig. 1.** Relationship of courses. Arrows show prerequisite relationships.

As described in Fig. 1, Programming I corresponds to Programming Seminar I and Programming II corresponds to Programming Seminar II. Outlines of the syllabus of I / II are shown below:

#### Elementary Programming I / Elementary Programming Seminar I

1. Computers and Programming
2. Creating, testing, and debugging programs
3. Processing of Data with Loop (Min, Max, Sum and Avg)
4. Processing of Character and Array
5. Processing of String Data
6. Multi-digit Calculation
7. Programs and Commands
8. Processing of Data in Files

#### Elementary Programming II / Elementary Programming Seminar II

1. Program Specifications and Implementation
2. Programming with Functions
3. Programming with Recursion

4. Dynamic Programming
5. Headers, Modularization, Alignment
6. Searching, Sorting and Structuring Data
7. Working with Graphs
8. Problem Solving and Back Tracking

### Learning Environment

In addition to the Learning Management System (LMS) we all use in the university, we made a sandbox programming environment with online judge, called Coderoom (Fig. 2).

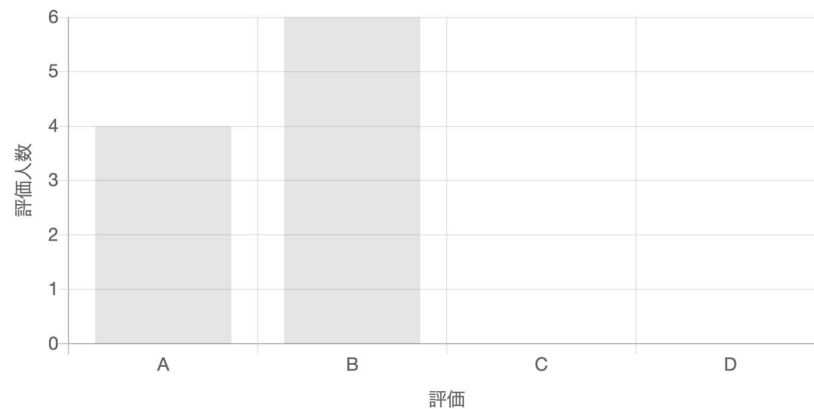


**Fig. 2.** The Coderoom. A three-column of file system, source code and scoring interface.

Coderoom provides three communication functionalities: bulletin board system, direct messaging and peer review. With peer review, students review, grade and comment on source codes of each other's (Fig. 3).

In the review process, students are required to submit not only source codes but also detailed descriptions in comment lines. They can either just grade or leave comment on the submitted source codes.

## ✓ 評価結果



## 🗨 掲示板

🔔 スレッドの対象者 (きん) と教員の投稿以外は、誰が投稿したかわからないようにユーザ[番号]の形式で表示します。(番号は投稿した順に振られます)

## 算 捷彦

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変数btについての説明が不可解です。

```
int bt = 0; //6
6 標準入力から読み取った記録の直前の時刻を保持する変数btを用意して初期値を0にする。
err |= (bt > nt); //23
23 変数btの値がntより大きい場合はエラーにする。
```

Fig. 3. Peer review

## Activities on the CODEROOM

Figure 4 is a visual representation of the assignment submission activities by students in the third semester of 2020 in Elementary Programming I. The rows represent individual students and the columns represent the 52 assignments. The assignments progress from left to right, so the difficulty level generally increases as one moves toward the right column.

In this diagram, green represents completed assignments, yellow represents assignments that were submitted but not completed due to incorrect answers, and red represents assignments that were not even submitted. As can be seen at a glance, many assignments remain untouched. Of the 228 students enrolled in this class, only 95 have submitted at least one assignment. In other words, 60% of the students completed the class period without submitting a single assignment, thus failing the course. The average completion for the 52 assignments was 8.6, and even if we limit the number of assignments to those that were submitted at least once, the number is 21.5. As can be seen in Figure 4, the percentage of students completing assignments declines as the class progresses, with only 15.2% of students submitting the final assignment.

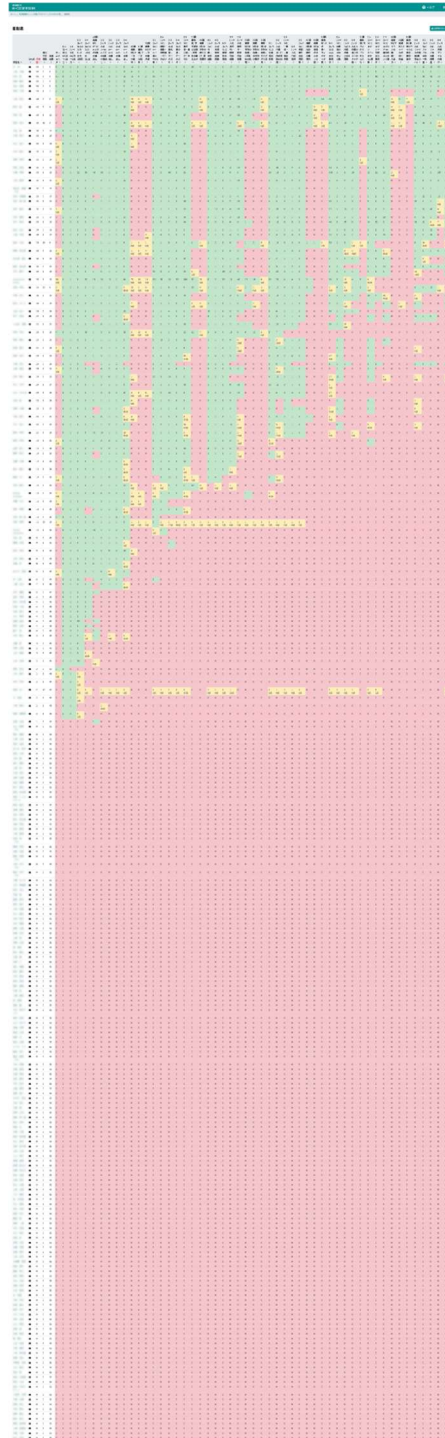


Fig. 4 Assignment Submission

The Tokyo Online University classifies grades into S, A, B, C, and F. In this class, in addition to the CODEROOM assignments, students were given examinations in the form of multiple-choice and writing tests, and 56 students (24.6%) received an overall grade of C or higher (Figure 5).



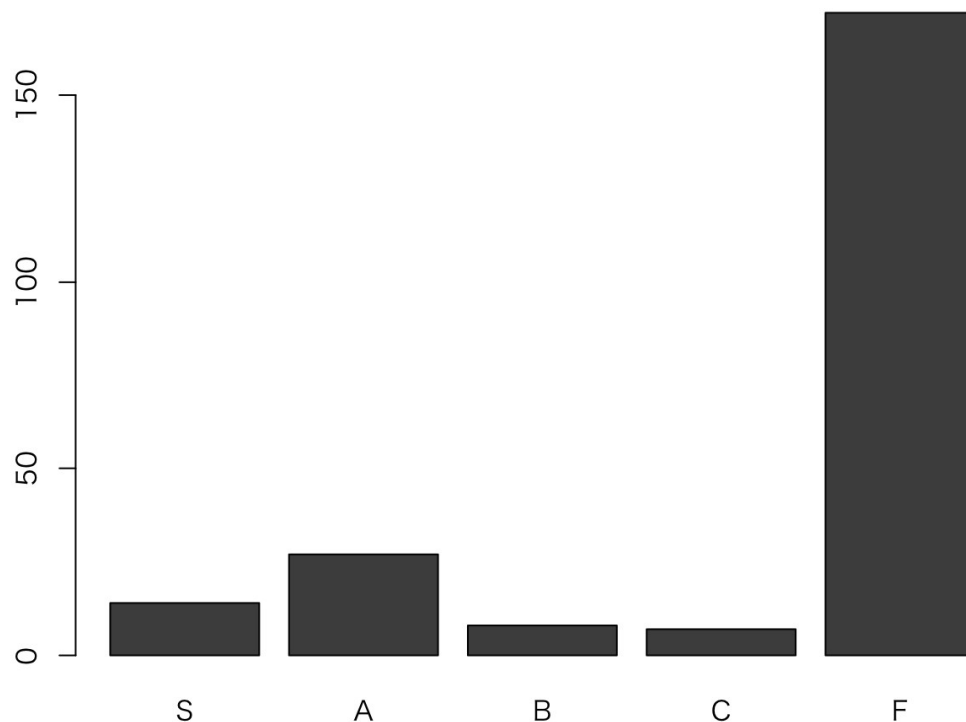


Fig. 5 Grades distribution

#### Discussion and conclusion

While this paper has focused on the programming class, the same argument can be made for classes with exercises in our distance learning program. In other words, there is a clear difference in the level of student participation between a course that requires only classroom attendance and tests and a course that includes exercises.

When designing the curriculum, we thought that programming, server construction and learning protocols, data analysis, and statistics would be painful to study just only at a desk, and that a learning environment with a quick response (like ours) would motivate students to learn. However, looking at the results, it is difficult to say that we have succeeded in motivating students to participate in those courses.

In the other Elementary Programming I courses, by reducing the difficulty level to about 16 tasks, the participation rate in CODEROOM has improved to about 50%, but this is still not enough. There is a limit to how much difficulty can be reduced, and the curriculum policy is also a factor in determining what students must satisfy in order to receive credit.

It may be a difficult task to provide the right motivation to students, but the seminar courses are the core of the department. We will continue to consider how best to encourage students to take these courses.

Keywords: Distance Learning, programming education, online judge system

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## **The Success Factors of Professional Experience Transfer by Using Service Agents of Vocational Educational Institutions in Thailand**

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1) Siam Technological College (Siamtech), Thailand

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### **Abstract**

The purposes of this research were: A: to provide educational institutions and college practitioners with guidelines for comparing academic performance and systematically comparing knowledge and experience. B: To provide the school with guidelines for comparing academic performance and transferring knowledge and experience of the same quality and standard. C: To enable people with knowledge and experience from work to obtain a comparative assessment of knowledge and experience from work into the educational system following the certificate program. This paper presents a professional experience comparison factor analysis, which consists of five main components: a) qualifications, b) conditions, c) knowledge, d) experience, and e) professional standards. The average overall score in all aspects is seen to be good, and the results of the analysis are multiple regression of professional experience transfer factors. It was found that there were 21 predictive variables through analysis that were statistically significant. ( $P \leq 0.05$ ) The results of the study can be applied in the implementation of the transfer of academic performance and transfer of knowledge and experience at the vocational certificate level and the diploma level. In the development of the transfer of professional experience using agents. It consists of three main components: a) import data, b) process, and c) output. Intelligent service agents filter and search for data by meeting the criteria for transferring professional experience to develop professional skills in advanced vocational training per the curriculum of the Vocational Education Committee. to develop professional skills in advanced vocational training per the curriculum of the Vocational Education Committee.

### **Introduction**

The transfer of knowledge and professional experience in accordance with the vocational education curriculum provides opportunities for those with professional knowledge and experience. Apply knowledge and experience to be evaluated and transferred into credits as part of the vocational course performance. It is an educational arrangement in which those who are employed have the opportunity to exchange knowledge. Gain more experience and gain new knowledge and technology, and higher educational qualifications. It leads to the upgrading of labor force education. Continuous development of professional competence and workforce development. Transfer of

knowledge and professional experience according to vocational education courses It can be very useful in various fields. In other words, the learner side reduces re-learning in subjects/groups that have already been experienced. Fewer classes Reduce travel time and save costs Learners are more interested in studying or training in the system because they have the opportunity to increase their qualifications and career advancement. Have the opportunity to choose your studies according to your needs. As for the curriculum side, that's it. Course administration with the comparable transfer of knowledge and professional experience into credits. It helps the state save per capita costs. Measurement and evaluation Training materials and courses determine competencies to provide graduates with knowledge and experience. In the business side, the employer/employee has agreed on costs and how to evaluate them effectively. The establishment earns more due to the efficient operation of employees/employees. Establishments Government agencies or self-employed people do not have to waste time and money training new personnel. In addition to that, personnel are aware of the development of their knowledge and skills at all times. Learning and practicing the specific skills needed for a job on the page improves productivity. Personnel is eager to advance their careers and develop skills that are scarce. It affects the economic and social development of the nation as a whole and the establishment. Government agencies or self-employed people can create/produce quality work according to customer needs (O. V. E. C. M. of Education., 2017).

## Literature Review

The principle of comparing professional experience means creating a coherent framework. eSKM, which incorporates ICT-related formats and reference standards: ESCO, e-CF, and BOK. Development as part of the eSKM project, the framework has highlighted the interconnected parts. Developed a prototype tool to assist with a large number of existing elements from all three (ESCO, e-CF, and BOK) so that redundancy detection methods can be analyzed. Inconsistencies and similarities Future work will describe the details of the framework. eSKM, while working on implementing a support system for applicants and employers, can find a self-assessment function for job applicants and how to match between the list of candidates and the job opening description. Training to set occupational goals and the feasibility of knowledge testing and testing methods (Fernández-Sanz, L., Gómez-Pérez, J., and Castillo-Martínez, A., 2016). Principles of comparing professional experience transfer. This means the Connecting, Filling, and Benchmarking mechanism, linking and benchmarking into the national qualification framework for both graduates of educational institutions and those who are certified to professional standards. There must be a flexible, diverse qualifications mechanism and system in place, and experience or competencies from the performance can be compared or fully completed throughout life. To obtain accreditation and upgrade qualifications in accordance with the national qualification framework. (Office of the Education Council, 2017).

The supervisory modeling of professional experience by using the intelligent portfolio with service agents. It develops practical learning and problem solving for vocational students. Step A: Preparing for smart portfolio management begins with a student orientation, telling you the purpose of learning. Guidelines for practitioners to prepare Motivate students to have a cheerful outlook, train learners to use relevant tools. Data collection in smart ports Experience accumulation governance, interaction tools, performance tools, and online resources Step B: Start by letting trainees learn how to practice in the workplace by studying theoretical content through a prepared smart portfolio and learning to the problem-based management stage. Start with Step a) Problem Scenarios Step b) A resolution plan that contains understanding the problem. Hypothesizing, defining learning objectives Step C: Problem solving actions Taking information from problem solving planning Problem solving actions by searching for information and synthesis of information. Hypothesis testing Students report through intelligent data storage, collecting objective contributions by artificial intelligence by service agents smart enough to screen. Identify and retrieve content that meets the criteria, which is done by instructors and trainers who must comply with the rubric criteria. The instructor then evaluates the work by a service representative, identifying the work. When the assessment is completed. The service representative collects all the points and distinguishes the results. Apply to vocational education at the diploma level to develop professional skills in accordance with the curriculum of the Office of the Vocational Education Commission. (Sittidat, K., & Pallop, P. 2020).

Service Agent to the Reporting Agent was responsible for creating a summary report for each article, abstract, shortened article, and specifying the level of recommendations in the summary report. In which the researcher summarizes from the articles selected by all users, counting the number of articles classified according to the level. (Stuart, J., Russell, P. & Norvig, E. 2010)

Intelligent Portfolio refers to the Intelligent Portfolio from the meaning of the scholars mentioned intelligent portfolio meant the collection of work as intended into an integrated artificial intelligence system. The service agent was intelligent enough to be able to filter, sort, and search for content that matches the conditions set by the professor. (Sittidat, K., Prachyanun, N., & Panita, W. 2020).

Multiple regression analysis is an analytical statistic used to study causal relationships based on a theoretical framework. Variance from complications is controlled by analytical statistics. If there is one or more primary or predictive variables and there is one dependent variable or outcome variable, both the parent and the dependent variables must be metric variables. The results of the regression analysis resulted in 4 useful data analysis results: 1 quantify variance in variables as described by the original variables, 2 compare the magnitude and direction of influence of each original variable on the dependent variables, and 3 create equations to predict dependent variables when the original variable values are known. 4 Study the main influence of the interaction between the primary variables on the dependent variables. 5 Comparative studies of the case averages of multiple population groups.

## Methodology

Factors comparing the transfer of professional experience to the import data. Factors comparing professional experience transfers to the import data. It consists of 5-factor groups. as follows:

A: Qualifications as follows: a) Completion of Vocational Certificate (Diploma) Work in related fields be qualified for admission to the advanced diploma level, count the working time. Have at least 3 years of knowledge and experience, b) Have experience after graduating high school or equivalent not less than 2 years, c) Completion of the diploma program, d) Completion of Bachelor of Technology or Bachelor's Degree, e) Have a grade according to the diploma program and then retake the entrance exam. (Following the standard of the Institute), f) Enroll in courses in the school setting not less than 1 semester to apply for transfer of course results, g) Have basic information for consideration to compare professional experience transfers.

B: Condition has the following elements: a) Registration for the transfer of knowledge and experience is not more than two-thirds of the number of credits according to the course structure, b) Professional experience in the workplace, c) Have knowledge of the subjects in the mentioned curriculum before enrolling in a career d) Have academic performance according to the structure of the diploma program.

C: Knowledge has the following elements: a) There is evidence of knowledge and experience, b) Have a certificate of competence, c) Have certificate of competence from the relevant authority to certify the competence of the assessed.

D: Experience as follows: a) Evidence of similar work experience at least 5 consecutive years during work, self-improvement in education, b) Proof of award, d) Evidence of social performance, e) There is evidence currently underway, f) Have a certificate showing the results of passing the national skill standard test, g) Have a career standard certificate showing occupational standards - Institute of Professional Qualifications. (Public Organization)

E: Professional Standards are as follows: a) There is evidence of improvement in core competencies, b) There is evidence of improvement in general performance and professional competence.

## Results

Multiple regression of professional experience transfer factors include : 24 independent variables were evaluated by the Curriculum Development Supervisor. Registration Supervisor Measurement and Evaluation Supervisor Teachers, Stakeholders Under the Office of Vocational Education Commission and Office of Private Vocational Education Administration 174 persons.

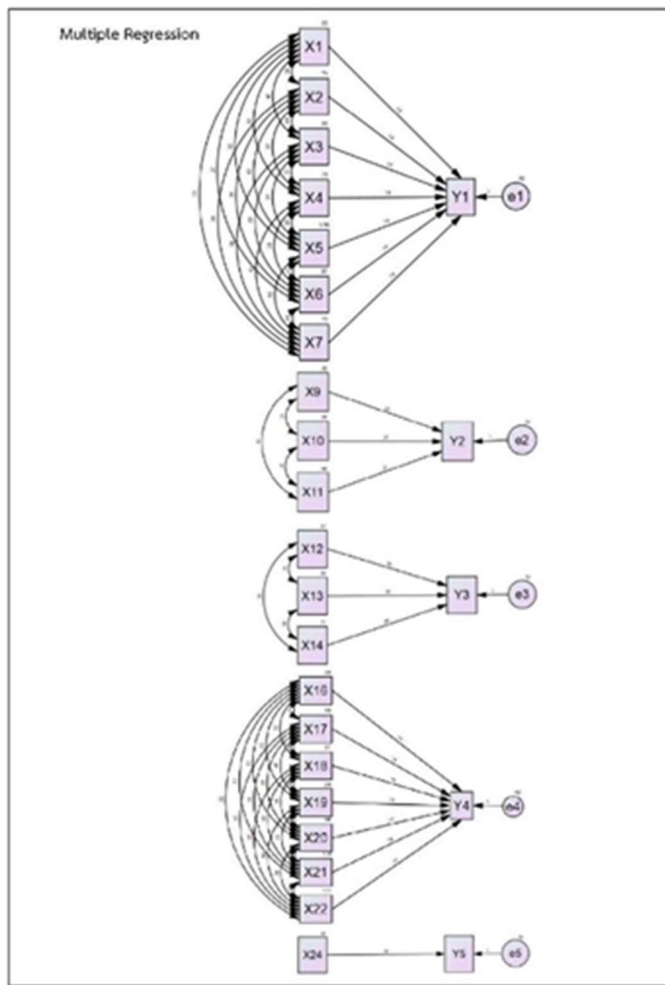


Figure 1 Regression analysis multiplies professional experience transfer factors.

$$Y1 = a + (b1 X1) + (b2 X2) + (b3 X3) + (b4 X4) + (b5 X5) + (b6 X6) + (b7 X7) + e \quad (1)$$

$$Y2 = a + (b9 X9) + (b10 X10) + (b11 X11) + e \quad (2)$$

$$Y3 = a + (b12 X12) + (b13 X13) + (b14 X14) + e \quad (3)$$

$$Y4 = a + (b16 X16) + (b17 X17) + (b18 X18) + (b19 X19) + (b20 X20) + (b21 X21) + (b22 X22) + e \quad (4)$$

$$Y5 = a + (b24 X24) + e \quad (5)$$

From Figure 1, The results of the Multiple regression analysis of professional experience transfer factors are summarized as follows

It was found that out of the 24 initial,variables 5 dependent variables when analyzing Multiple regression. There were 21 analyzed predictive variables of statistical significance ( $P \leq 0.05$ ).

## Discussion

The Development of a Professional experience transfer system based on intelligent portfolio prediction using service agents can discuss research findings. as follows Factors for predicting professional experience transfer Based on expert assessment, the overall picture is suitable for a good level, which consists of 5 groups of factors: qualifications, conditions, knowledge, experience, and professional education standards. The results of the multiple regression analysis of the 5 groups of factors showed that there were 21 predictive variables analyzed to obtain factors that covered the evidence of professional experience transfer. Research on the development of a credit library system for the transfer of knowledge, skills to upgrade labor skills according to standards or higher education found that the creation of a credit library to collect educational qualifications and work experience of applicants to help upgrade educational qualifications. Work competency is an alternative way to upgrade the capabilities and skills of workers and in line with technological advancement in production, as well as systematically collecting information related to knowledge and experience of workers and having a competency transfer system. Professional qualifications, as well as standardized courses in line with professional qualifications and work competencies, will result in the development of flexible skills and skills. In line with the upcoming production.

## Conclusions

According to the Office of the Board of Vocational Education. The Department prepared the Vocational Education Development Plan 2017-2036 by analyzing and analyzing the national strategy for the 20 years (2017-2036), the National Education Plan 2017-2036, and the National Socioeconomic Development Plan No. 12 (2017-2021) to provide for the development and direction of workforce development in accordance with the national strategy. By ensuring vocational education. 6 Battles In the second strategy, the production, and development of vocational manpower to enhance the country's operational capacity. In terms of strategy, Establish the strategy for the production and development of vocational manpower to enhance the country's operational capacity. Roadmap 10: Development of testing systems Measure and evaluate academic performance in accordance with vocational curriculum standards. A system for comparing transfers of professional qualifications and experience to enhance academic qualifications in accordance with the national qualification framework (M. E. Office Vocational Education Commission, M. E., 2017). From the summary of the process of comparing the transfer of professional experience, the factors for comparing the transfer of professional experience by using service agents are to be used in the actual performance of vocational students. Make transfer comparisons efficient. Increased effectiveness Teachers can monitor and evaluate results while transferring professional experience. As well as providing feedback on how students perform their tasks faster and more thoroughly. Officers or administrators of transfer of professional experience Check and record the name of the agency. Responsibilities within the student establishment and summary of the transfer results of the



students, which enhance the quality of professional experience transfer management that is consistent with and linked to the establishment with an emphasis on cooperation in the management of the transfer of professional experience. Students who use professional experience transfer. Transfer credits can be compared to reduce the number of academic students studying in vocational certificate programs, which is to bring practical experience to expand the knowledge of the study.

Keywords: Professional Experience Transfer, Service Agent, Intelligent Portfolio

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**Online Digitalization and digital Feedback in the Digitalized ELT Contexts**Azra Tajhizi <sup>1)</sup> and Santosh Kumar Behera <sup>2)</sup>

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**Extended Abstract**

This investigation explores the concept of online digitalization and digital feedback in the context of English Language Teaching (ELT). With the increasing integration of technology in education, online platforms have become a common tool for delivering language instruction.

This paper examines the benefits and challenges associated with online digitalization in ELT, focusing specifically on the use of digital feedback. The first section discusses the advantages of online digitalization in ELT. It highlights how digital platforms provide learners with access to a wide range of resources, including interactive exercises, multimedia materials, and authentic language samples. Additionally, online platforms offer flexibility in terms of time and location, allowing learners to engage with language learning materials at their own pace and convenience. Furthermore, online tools enable teachers to track students' progress more effectively and tailor instruction to individual needs.

The second section addresses the role of digital feedback in enhancing language learning outcomes. It explores various types of digital feedback, such as automated feedback generated by language learning software and personalized feedback provided by teachers through online platforms. The benefits of digital feedback include immediate response time, increased objectivity, and opportunities for self-reflection. Moreover, digital feedback allows for greater consistency in assessment practices and promotes learner autonomy.

However, this investigation also acknowledges some challenges associated with online digitalization and digital feedback in ELT contexts. These challenges include issues related to technological infrastructure, privacy concerns regarding data collection and storage, as well as potential limitations in providing nuanced or context-specific feedback through automated systems.

This study highlights the potential benefits and challenges associated with online digitalization and digital feedback in ELT contexts. It emphasizes the importance of leveraging technology effectively to enhance language learning experiences while being mindful of potential limitations. Future research should focus on exploring best practices for integrating technology into ELT classrooms and addressing any ethical or pedagogical concerns that may arise.

Learning skills are essential 21st century skills that help people succeed in the future. Digitalization and the current COVID-19 pandemic are the main causes of uncertainty, changes, diversity and inequality. Self-directed learning skill is a key skill in times of change and uncertainty. However, until now, there is a lack of understanding of how digital technologies support or influence self-directed learning in adults. To achieve this, the purpose of this study is to investigate, through a systematic

literature review, what is known so far in which how digital technologies can support self-directed learning in studies and adult education. New findings from this study suggest that digitalization has changed the forms of self-directed learning in informal, formal, and academic settings. However, this study provides that digital technologies can be considered as a double-edged sword. (1) Digital technology provides easy access to information that enables self-directed learning. However, (2) as the amount of available information increases, students also need to acquire more information digital literacy skills to be able to self-regulate and navigate information in a meaningful way. These two simultaneous phenomena explain the growing digital divide that has been documented in recent years.

In recent years, the field of English Language Teaching (ELT) has witnessed a significant shift towards online digitalization and the integration of technology in language instruction. This literature review aims to explore the impact of online digitalization and digital feedback on ELT contexts, specifically focusing on the use of digital tools for providing feedback on students' written assignments.

The advent of online platforms and digital tools has revolutionized the way English is taught and learned. Online digitalization in ELT encompasses various aspects, such as online language learning platforms, virtual classrooms, and computer-assisted language learning (CALL) software. These digital resources offer numerous benefits, including increased accessibility, flexibility, and personalized learning experiences for students.

Students and teachers and educators are all required to develop their digital skills success and success in the present reality. The development of digital competence, on the other hand, presents many advantages for students to access a large number of written sources in various formats, individualization, personalization and providing independent learning, learning anytime and anywhere, creating opportunities for it those unable to attend campus or full-time courses. That is why English is the language of sharing the information in digital age, teachers and learners are aware of the central role and benefits of digital tools integration (information communication technologies) for EFL teaching and learning. The digitalization process that takes place during university studies directly affects their readiness for use new digital technologies in teaching and organizing the learning at different educational levels (Cuhadar, 2018; Guillen-Gamez et al., 2019). Digital competence is therefore considered a key skill for future teachers thanks to the expansion and ever-improving computer and mobile learning that has transformed traditional training and internship, campus-based language learning in a virtual learning environment and online learning (Blake, 2013). Therefore, this study aims to contribute to this growing field of research to identify and analyze University students' perceptions of their digital competence in the learning and teaching of English in connection with online learning. At the current job perceptions of digital competence in the field of education mostly refer to self-assessment of female and male masters about the frequency of use and competence of various digital technologies, satisfaction with its use of digital tools during university studies and at the same time teaching EFL in educational institutions.

Traditionally, providing feedback on students' written assignments has been a time-consuming and labor-intensive task for teachers. However, with the integration of digital tools, the process of giving feedback has become more efficient and effective. Digital feedback refers to the use of technology to provide comments, corrections, and suggestions on students' written work. This can be done through various means, such as automated feedback systems, online writing platforms, or text analysis software.

Several studies have highlighted the advantages of using digital feedback in ELT contexts. Firstly, digital feedback allows for immediate and timely responses to students' writing, enabling them to make revisions and improvements in real-time. Secondly, it provides personalized feedback tailored to individual students' needs, helping them identify their strengths and weaknesses in writing. Moreover, digital feedback can enhance students' engagement and motivation by providing interactive and visually appealing feedback formats.

While online digitalization and digital feedback offer numerous benefits, there are also challenges that need to be addressed. Firstly, there may be a learning curve for both teachers and students in adapting to new digital tools and platforms. Additionally, there is a need for teachers to strike a balance between the use of digital feedback and face-to-face interaction, as human interaction remains crucial for effective language learning. Furthermore, issues related to privacy and data security should be considered when using online platforms for feedback.

In the digital age, it is essential for English as a Foreign Language (EFL) teachers to develop digital competence. Studies have shown that many newly qualified teachers feel unprepared in this area due to poor quality digital tools training during their education.

The development of EFL teachers' digital competence has become central in the 21st digital age and in recent times research shows the importance of identifying the level of readiness of teachers' study at higher education in online platforms (Gudmundsdottir and Hatlevik, 2018).

This has resulted in a medium-low level of pedagogical digital competence among future language teachers, particularly in the use of digital tools. The lack of adequate training and support for pre-service teachers in the use of digital competence development in education is a pressing issue that needs to be addressed. To improve this situation, there is a need to increase teachers' confidence in technology, broaden their cognitive skills in technology pedagogy, and promote a culture of meaningful technology use.

Unfortunately, the pedagogical digital competence of future foreign language teachers is still at a medium-low level of digital tools use, because the use of digital tools in teaching is insufficient (Guillen-Gamez et al., 2019).

The integration of online digitalization and digital feedback in ELT contexts has the potential to enhance students' writing skills and improve the overall quality of language education. The benefits of immediate feedback, personalized instruction, and increased student engagement outweigh the challenges associated with technology integration. However, it is important for teachers to receive adequate training and support in effectively utilizing digital tools for feedback purposes. Further

research is needed to explore the long-term impact of online digitalization and digital feedback on students' language learning outcomes.

The field of English Language Teaching (ELT) has witnessed significant changes with the advent of online digitalization. The integration of technology in ELT classrooms has transformed traditional teaching methods, offering new opportunities for both teachers and learners. One aspect that has gained considerable attention is the use of digital feedback in digitalized ELT contexts. This overview aims to explore the current research on online digitalization and its impact on providing digital feedback in ELT settings.

Online digitalization refers to the incorporation of digital tools and resources into language learning and teaching processes. With the proliferation of internet access, mobile devices, and various online platforms, educators have increasingly embraced technology to enhance their instructional practices. Online digitalization offers numerous benefits such as increased learner engagement, personalized learning experiences, and access to authentic materials.

Feedback plays a crucial role in language learning as it helps learners identify areas for improvement and promotes self-reflection. In recent years, there has been a shift towards providing feedback digitally through various online platforms and tools. Digital feedback offers several advantages over traditional paper-based feedback, including immediate delivery, multimedia support, enhanced interactivity, and increased accessibility.

The integration of online digitalization with digital feedback has opened up new possibilities for effective language instruction. Research suggests that incorporating technology into feedback processes can lead to more meaningful interactions between teachers and learners. For instance, video or audio recordings can be used to provide detailed pronunciation or speaking skill feedback that may not be possible through written comments alone.

According to Krumsvik (2007), educational digital competence "is the ability of teachers to use digital literacy for effective teaching". Understanding digital learning skills and how to use it as a learning strategy and Student education". There are two aspects to a teacher's digital literacy in which the aspect where teachers can act as "models of digital natives and use its competence by students"; (Krumsvik, 2011)

Studies have highlighted several benefits associated with the use of online digitalization combined with digital feedback in ELT contexts. Firstly, it allows for timely feedback delivery, enabling learners to address their mistakes promptly. Secondly, it promotes learner autonomy by providing opportunities for self-assessment and reflection through interactive exercises or quizzes. Additionally, the integration of multimedia elements such as videos or images enhances engagement and motivation among learners.

While online digitalization combined with digital feedback offers numerous advantages, there are also challenges that need to be addressed. One challenge is ensuring equitable access to technology among all learners, as not all students may have equal access to devices or stable internet connections outside the classroom. Additionally, teachers need adequate training on how to

effectively incorporate technology into their instructional practices while providing meaningful feedback.

This idea is developed with the research carried out by O'Dowd (2013), who estimates that remote collaboration can improve Students' foreign languages, intercultural competences and electronic competences. Also, Blake (2013) raised controversial issues that are still debated today, such as the effectiveness of distance Learning, including teleconferencing, hybrid/blended classes, and virtual vs. face-to-face classes. Likewise, Pinto Llorente et al. (2017) found that students viewed the technology tools they used positively in classes and provide them with blended learning to improve their ESL grammar skills greater independence when establishing and regulating one's own pace and personal learning in the class.

The literature reviewed demonstrates that online digitalization combined with digital feedback holds great potential for enhancing language learning experiences in ELT contexts. The integration of technology allows for more personalized instruction while promoting learner autonomy through timely and interactive feedback delivery methods. However, further research is needed to explore best practices for integrating online tools effectively while addressing potential challenges associated with equitable access and teacher training requirements in digitally transformed ELT environments. They study simultaneously in education and in their perspectives on digital competences can help teachers uncover gaps in digital skills development needed to learn and teach English to improve their training in university courses via Issues related to online education.

Overall, this literature review highlights the importance of embracing online digitalization along with effective implementation strategies for providing valuable digital feedback within digitally transformed ELT contexts.

The literature has extensively discussed the implications of digitalization in English Language Teaching (ELT). Teachers must acquire digital literacy skills and adapt to new teaching environments, while learners need to develop digital literacy skills and utilize digital tools for learning. Policymakers should focus on promoting digital equity and accessibility. In summary, the research on online digitalization and digital feedback in ELT contexts is extensive and expanding. Although the benefits are evident, it is crucial not to ignore the challenges. Further research is necessary to explore effective implementation of these digital transformations for enhancing ELT.

In conclusion, the literature on online digitalization and digital feedback in the digitalized ELT contexts is vast and growing. While the benefits are clear, the challenges cannot be overlooked. Further research is needed to explore how these digital transformations can be effectively implemented to enhance ELT.

**Keywords:** Digitalization, Digital Feedback, Automated Feedback

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## **Knowledge, Attitudes, and Practices Towards Open Educational Resources in Higher Education Institutions in the Philippines**

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### **Abstract**

Open educational resources (OER) are well-known around the world. There is a lack of information and implementation in the Philippines. With the update in education and the shift in learning modality a great need for educational resources- free and open to the public increases, especially in the outrage of the pandemic. These events and phenomena also create a schism between librarians' perspectives and practices on OER. This paper examines academic librarians' knowledge, attitudes, and practices (KAP) toward OER in higher education institutions (HEIs) in the Philippines. Specifically, this paper is aimed at assessing the level of KAP toward OER among the librarians. It also investigates the relationship between KAP-OER and the profiles of academic librarians and libraries, as well as the differences between KAP-OER and sex, higher educational attainment, and years of service. There are 57 HEIs in the Philippines were included in the analysis. An adapted questionnaire was used, and it was administered online. Results show that academic librarians were moderately aware of OERs. The respondents' and library profiles record no relationship to KAP. In contrast, print and nonprint resources can positively affect KAP. While sexes, highest educational attainment, and number of years of service shows no difference. This study concludes that Philippine academic librarians is challenged in terms of KAP-OER. Thus require the interventions for improvement. This study confirms that more research is needed. It suggests providing OER seminars and training, promoting OER through collaboration, funding, institutional incentives, and support for OER activities.

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**Keywords:** Knowledge, Attitude and Practices (KAP), Open Educational Resources, 4Rs

### **Introduction**

Open educational resources (OER) are not new to librarians, nor is flexible learning. Globally, it has produced revenue among higher education institutions (HEI) (Mwinyimbegu, 2018) offering a significant opportunity in the global free exchange of knowledge and making learning accessible and re-usable for both teachers and educators (Mwinyimbegu, 2018). Moreno-Guerrero et al. (Moreno-Guerrero, Aznar-Díaz, Cáceres-Reche, & Alonso-García, 2020) once stated that "the development of information and communication technologies (ICT) reflects technological progress in the



educational field since they advance creative academic activities and create new learning spaces. These pedagogical activities contribute to the transformation of the classroom by urging students to work on their inspiration, independence, inclusion, and mentality toward educational content. Among the ICT-based pedagogical actions is OER. UNESCO (UNESCO, n.d.) defines OERs as "teaching, learning, and research materials in any medium—digital or otherwise—that reside in the public domain or are released under an intellectual property license that permits no-cost access, use, adaptation, and redistribution by others." In Malaysia, Bahrain, and other Asian nations, as per investigation, they see the significance of OERs for educators and students. For them it gives incredible liberties in meeting user's needs considering the progressions and difficulties of the new modalities of learning, adaptable/flexible learning (Corbett & Brown, 2015). OERs offer freedom to access and use available in seeking quality information resources. The Philippines has a diverse range of OER development and implementation cases among Asian countries (Yamada, et al., 2014). However, most HEIs in the Philippines have not fully implemented OER (Calilung, 2021). The education sector also faces difficulties and challenges suffering from a lack of, if not poorly maintained, infrastructure as well as a scarcity of available materials and libraries (Pawlowski, et al., 2014). Furthermore, librarians are not fully aware of OERs due to a lack of exposure or familiarity with handling and managing OER (Calilung, 2021). This concept is based on what various researchers have embraced to bridge the gap between librarians' knowledge, attitude, and practices (KAP) towards OER and the Philippine Higher Education Institution (HEI) for higher education institutions, and between librarians', teachers', and students' competitive advantage. Actual data is gathered to better understand the Philippine academic librarian's KAP towards OER. The study assists researchers in understanding the academic librarian's KAP, whether their library has OER or otherwise.

OER is already well-known and widely used around the world. However, the Philippines lacks information and implementation of OERs, although stated in the CMO (CHED, 2020). Some OERs in the Philippines are not as developed as in other countries. According to existing literature OERs are essential to users in pursuing their education, especially now that flexible learning has been implemented. Hence, this investigation assesses academic librarians' knowledge, attitudes, and practices about OER, most especially that OERs are exceptionally useful in this pandemic where face-to-face learning is not permitted.

Higher education is confronting various difficulties involving the shift of learning modalities. Though in the pre-pandemic era the idea of flexible learning has already emerged and is practiced it accelerate and becomes a growing global industry (Corbett & Brown, 2015). Despite the positive impact of flexible learning some issues affect both students and teachers. It offers difficulties for developing countries (Gocotano, Jerodiaz, Banggay, Rey Nasibog, & Go, 2021). OER is one of these difficulties, yet a sound methodology to address difficulties (OECD, 2007). Thus, CHED encourages HEIs to use technology effectively (Parisky & Boulay, 2013) to promote flexible and adaptable learning. However, for users' success in gaining quality education, librarians should also be

potentially well-verse of the resource to support educators and learners. This study utilizes the concept of four "4Rs" of OER such as reuse, redistribute, revise, and remix (Hilton III, Wiley, Stein, & Johnson, 2010), (Wesolek, Lashley, & Langley, 2018) which is the reuse, revise, remix and redistribute. These 4Rs offers learners freedom to use all or part of the unaltered; verbatim work; adapt, modify, translate, or change the form of the work; and, combining OER with other OERs to produce new materials (David, 2014). Despite the Philippines acceptance of OER, there still a need to assess librarians OER mindfulness and practices (Arinto & Cantada, 2013). There are only a few studies that have been conducted on the subject. In the report's discoveries from a fundamental review of OER in 2011-2012 in the Philippine higher education which cannot give generalized data to librarians KAP. In this way, it is imperative to evaluate academic librarians' KAP towards OER. Academic librarians are typically experts in finding and collecting authoritative resources whether print or digital in form. Thus, when it comes to OER consciousness librarians' is higher (76.9%) than that of educators' (58%)" (Santos-Hermosa, 2014). A case recorded that explores librarians' attitudes about OER was conducted (Malbon, 2017) in Australia and the USA it appeared that teacher-librarians are aware of OER and record positive result, however some of them are unclear on their views. Although librarians know about OER they do not see themselves as OER specialists (Malbon, 2017). Despite this, they are ready to study OER adding to their role and professional responsibility as to help faculty and students which include advocacy, promotion, and discovery; evaluation, collection, preservation, and access; curation, creation, and facilitation; and funding (Braddlee & VanScoy, 2019), (Okamoto, 2013), (Braddlee & VanScoy, 2019) in addition to the main areas of the library's involvement such as description and classification, management, preservation, dissemination, and promotion of OER. Training and workshop opportunities, library collaborations with various academic and support departments, and campus-wide collaboration committed to assist faculty in understanding the various OER adoption and creation. With that, this article aims to profile academic librarians, HEIs (academic library) and the level of librarians KAP towards OER. Specifically, this paper provides a descriptive-correlative analysis of KAP among the respondents in terms of revise, reuse, remix, and redistribute elements of OER openness. Ultimately, this paper fills in the limited literature on OER in developing countries like the Philippines, where OER is not as developed.

### The Theoretical Backgrounds

This study attempted to provide a theoretical framework for the study of knowledge, attitude, and practices at the individual level. The proposed model is a combination of KAP and the four Rs of OER openness. This framework was used to assess the KAP-OER of the academic librarians in the higher education institutions in the Philippines.

It primarily assesses the baseline levels of awareness about OER and practices before designing and implementing interventional programs in the population of interest. OERs are known to be educational resources that are available to anyone free of charge and under an open license to allow

others to retain, reuse, revise, remix, and redistribute (Commonwealth of Learning, 2017). These 4Rs of OER serve as a basis for measuring the academic librarians' KAP, as shown in the illustration in Figure 1.

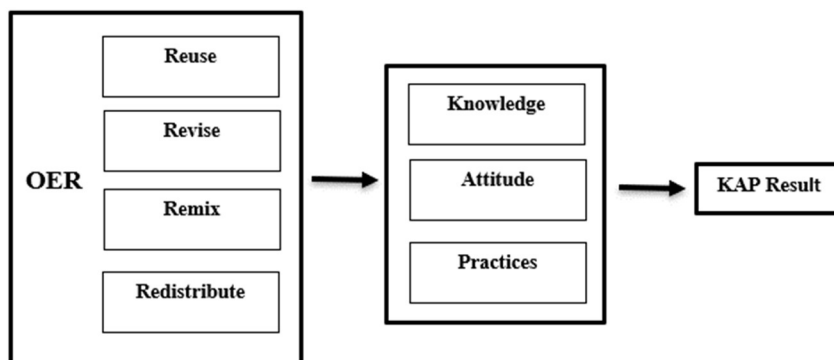


Figure 1. Conceptual Framework: Knowledge, Attitude, and Practices towards Open Educational Resources in Higher Education Institutions in the Philippines.

On the one hand, knowledge means participant understanding of any given topic (Kaliyaperumal, 2004), in this case, academic librarians' understanding of OER.

It is the ability to receive, retain, and use information mixed with experience and skills. On the other hand, an attitude refers to participants' feelings about the topic (Kaliyaperumal, 2004), which is a propensity to react in a definite way to a specific situation (Badran, 1995); in this case, to an OER.

While practices are how participants demonstrate their knowledge and attitude (Kaliyaperumal, 2004), they also prove their knowledge and attitude. It means applying rules and knowledge regarding action (Badran, 1995). The KAP is treated as a cohesive variable and was used in determining the level of the academic librarians' KAP, and all items in the components possessed knowledge, attitude, and practices. The result of the librarians' KAP about and towards the OER in relation to its four concepts of openness was taken to determine the other variables' relationships and differences as stated in the study's objectives.

## Research Methods

The study employed a descriptive-corerelative analysis on KAP using an adapted survey questionnaire through Google forms conducted in the 57 HEs in the Philippines offering BLIS program. The study's respondents were the 57 academic librarians from different schools and libraries in the entire Philippines. They were either those with prior knowledge or those without knowledge of OER.

The instrument used in data gathering to accomplish the study's specific objectives was a survey questionnaire. The statements on the instrument were adapted and modified from the principles in the studies of the following authors (Braddlee & VanScoy, 2019), (Okamoto, 2013), (Mishra & Singh, 2017), and (Smith & Lee, 2016). The data was analyzed using Pearson r, Cronbach Alpha, Measures of Central Tendency such as mean/percentage, Frequency, Chi Square, Spearman Rho and One

Way ANOVA using Microsoft Excel and SPSS software. Pearson correlation coefficient and Cronbach Alpha were used to analyze the test-retest and internal consistency of the instrument for the KAP-OER.

Table 1 contains the total number of HEIs in the Philippines according to the three island groups: Luzon, Visayas, and Mindanao, based on PLAI, Find University, and for each of the HEI's websites. It was revealed that 30 (52.63%) came from Luzon, 15 (26.32%) from Mindanao, and 12 (21.05%) from the Visayas.

The respondents' demographic profile in terms of sex, higher educational attainment, and years of service 50 (87.72%) of the 57 respondents were females, and 7 (12.28%) were males. Thirty-seven (64.91%) have a master's degree in LIS, 9 (15.79%) have a Doctorate degree in LIS, 8 (14.04%) have a bachelor's degree and 3 (5.26%) have post-Doctorate. While on respondents' years of service, the average is 18.93 out of 1079.25 total years of service in the LIS profession.

The libraries' demographic profile recorded that 40 (70.18%) were from private colleges/universities and 17 (29.82%) were from state colleges/universities. In terms of regions 10.53% were from Region X Northern Mindanao Region. Four regions shared the same percentage at 8.77 %, these are Region III Central Luzon Region, National Capital Region (NCR), Region V Bicol Region and Region VII Central Visayas Region. Likewise, another four regions shared the same frequency at 4 (7.02 %) namely Region I Ilocos Region, Region IV Southern Tagalog Region, Region VI Western Visayas Region, and Region XI Davao Region. Three out of 57 were from Region VIII Eastern Visayas Region and Region XII Soccsksargen Region (Central Mindanao), and 2 (3.51%) were from Cordillera Administrative Region (CAR). Meanwhile, Region IX the Zamboanga Peninsula and CARAGA (Region XIII) both have one (1.75%), while 0 from the Autonomous Region in Muslim Mindanao (ARMM). In terms of resources, the average total number of print resources (in volumes) is 81,620 and the average total number of non-print resources (in volumes) is 41,980. The average total databases subscribed is 23.39, while the average total open educational resource sources available in HEIs library is estimated at 1761.89.

The self-constructed survey questions are based on the concept 4Rs of OER (Hilton III, Wiley, Stein, & Johnson, 2010), tested and validated through reliability and validity survey. The statements on KAP were concern on re-use, revise, remix, and redistribute, general academic librarians' practices in terms of advocacy, curation, content development, cataloging and metadata, discovery, funding, information literacy, licensing, policy development, professional development, publishing, recognition, and team members (Braddlee & VanScoy, 2019), (Smith & Lee, 2016), (Okamoto, 2013), (Mishra & Singh, 2017). In a Likert scale prepared by the researchers, the items have corresponding scales and descriptions: 7 = I regularly practiced this in our school; 6 = This is something I rarely do at our school; 5 = I know this, and I am optimistic/positive about practicing and learning this in school; 4 = I know this, but I don't want to do this in our school; 3 = I am fully aware but not yet practicing in our school; 2 = I have no knowledge; 1 = I am not familiar/aware at all, with the rate of seven (7) being the highest and one (1) being the lowest.

## Results

The level of KAP according to the “reuse” notion of OER. The overall mean of items under reuse is 5.75, which corresponds to ‘this is something I rarely do at our school’. The highest mean 5.84, which was “Adapting OER in our libraries fulfills the academic requirements of students,” and “Integrating OER promotes innovative pedagogical models.” The lowest mean is 5.60 of the reuse statements is on “Encouraging academic librarian partnerships around OER sharing and reuse.” All are described as “This is something I rarely do at our school.”

The respondents' levels of KAP according to the ‘revise’ notion of OER revealed that the overall is 5.31, which corresponds to ‘This is something I rarely do at our school’. The highest mean is 5.82 on the item "making OER more retrievable to the library users," and the lowest mean is 4.89 (I know this, and I am optimistic/positive about practicing and learning this in school) on "Editing a video, including making a clip."

For the levels of KAP according to the “remix notion” of OER the overall mean is 5.33, described as “this is something I rarely do at our school.” The highest mean was equal to 5.42 on item “Recognizing the value of OER remix for greater competence.” The statement “Applying peer validation methods to validate content” had the lowest mean which is 5.21 (I know this, and I am optimistic/positive about practicing and learning it in school).

When it comes to the levels of KAP according to the “redistribute” notion of OER. For all the items, something was rarely done, with an overall mean of 5.31. The highest mean is 5.82 on "delivering numerous types of information resources across different platforms," and the lowest mean is 4.72 on "producing open-source software." For the general aspects of KAP's the overall mean is 5.27, which is described as "I know this, and I am optimistic/positive about practicing and learning this in school." Among the 13 items, the highest mean of 5.89 is on the statement "Advocacy: Raising awareness of OER among faculty." The lowest mean of 4.81, described as "I know this, and I am optimistic/positive about practicing and learning this in school," belongs to the statement "Funding: Assisting with funding to support."

## General

Table 1 shows the overall KAP on OER. The mean of all means is 5.39, described as "This is something I rarely do at our school" and interpreted as "moderately practiced," which means that the respondents moderately performed and integrated at school and further demonstrated their knowledge and attitude towards OER. The highest overall mean of KAP in all elements of OER openness is 5.75 on reuse, described as "this is something I rarely do at our school" and interpreted as "moderately practiced." This implies that items under reuse were moderately performed and integrated by the respondents in their respective schools, which further indicates that the respondents demonstrated moderate levels of knowledge and attitude. Remix notion of OER openness has the second-highest overall KAP of 5.33, described as "this is something I rarely do at

our school" and interpreted as "moderately practiced." This means that the items under "remix" were moderately performed and integrated at school, and the respondents' knowledge and attitude were moderately demonstrated. Second with the lowest overall mean are "revise" and "redistribute," which are 5.31, described as "something I rarely do at our school" and interpreted as "moderately practiced." It implies that librarians performed and were integrated at school and further signifies that those respondents demonstrated their knowledge and attitude toward OER in a moderate manner. The lowest overall mean is 5.27 on "general aspects" of OER. The result, described as "I know this, and I am optimistic/positive about practicing and learning this in school," is interpreted as "knowledgeable with a favorable attitude," which implies that for items under general aspects respondents have the basic knowledge of OER but do not have the experience or skills, but are favorable to implement and positive to gain experience and skills. This further signifies an opportunity to be incorporated into their library's strategic plan.

Table 1. *Overall KAP on OER*

<b>Notions and Aspects of OER</b>	<b>Overall Means</b>	<b>Description</b>
Reuse	5.75	This is something I rarely do at our school.
Revise	5.31	This is something I rarely do at our school.
Remix	5.33	This is something I rarely do at our school.
Redistribution	5.31	This is something I rarely do at our school.
General Aspects	5.27	I know this, and I am optimistic/positive about practicing and learning this in school.
<b>Means of all Means</b>	<b>5.39</b>	<b>This is something I rarely do at our school. (Practices)</b>

The KAP toward OER is something that is not fully manifest at a higher level, which indicates a "moderate degree of practice" and shows a moderate level of performance and integration. This study confirms findings that academic librarians are moderately aware of OERs. It suggests that "a

lack of familiarity and exposure to OERs may result in poor handling and storage, organization, and marketing of OERs, resulting in low client appreciation and librarians' limited knowledge of OERs, giving clients a moderate impression" (Calilung, 2021). Likewise, this study confirms that most librarians are still in the early stages of learning about OER (Orzech & Abramovich, 2020). However, librarians are ready, willing, and able to embrace OER (Orzech & Abramovich, 2020). Similarly, the KAP on the 4Rs is perceived as being moderately performed and integrated at school. It implies that the community of practice could be an effective way for academic librarians to become effective OER advocates. They need to know about the "still uncommon task of remixing OER to ensure better student engagement and success" (Fazzino, 2019). For "general aspects" of OER, it yields a positive KAP, suggesting that librarians are optimistic and positive about practicing and learning with OER. Thus, they have knowledge and a favorable attitude. This study confirms the findings that the librarians are still in the early stages of learning about OER; however, it does not necessarily mean that they are not comfortable offering OER assistance to others (Orzech & Abramovich, 2020).

As illustrated in Table 2, the chi-square test examines the associations between KAP-OER and sex as well as KAP-OER and educational attainment. There is no significant correlation between KAP-OER and the respondents' sex orientation since the  $p - value = 0.993$ , which is greater than the level of significance. Meanwhile, for KAP-OER and educational attainment, the resulting  $\chi^2 - value = 24.937$  with a  $p - value = 0.127$  has no significant relationship since the  $p$  value is greater than the significance level.

Table 2. *Test of Relationship between KAP-OER and Sex, Educational Attainment*

Variables	$\chi^2$ value	$p$ -value	degrees of freedom	Remarks
Sex	.764	.993	6	Not significant
Highest Education al Attainme nt	24.93 7	.127	18	Not significant

For KAP-OER and years of service, Spearman rho is used to test if there is a significant relationship. Table 3 shows the resulting  $r - value = 0.128$  with  $p - value = 0.342$ . Now, 0.0342 is exceeds the level of significance 0.05. Hence, there is no significant relationship between KAP-OER and the years of service.

Table 3. *Test of Relationship between KAP-OER and Years of Service*

Variables	$r_s$ value	$p$ -value	degrees of freedom	Remarks
Years of Service	.128	.342	55	Not significant

The chi-square test was used to determine the significant relationship between KAP-OER and region and between KAP-OER and the type of school. Table 4 shows that the resulting  $\chi^2 - value = 80.102$  with a  $p - value = 0.600$  has no significant relationship. Likewise, for KAP-OER and type of school, there is no significant relationship since the  $p - value = 0.077$  exceeds the level of significance.

Table 4. *Test of Relationship between KAP-OER and Years of Service*

Variables	$\chi^2$ value	$p$ -value	degrees of freedom	Remarks
Region	80.102	.600	84	Not significant
Type of School	11.391	0.077	6	Not significant

Spearman rho is used to test if there is a relationship between KAP-OER and the total number of OER resources in the HEIs. The resources are classified into four types: print, non-print, subscribed databases, and open educational resources (OER). For KAP-OER and the total number of print sources as shown on Table 5, the resulting  $r - value = 0.310$  with a  $p - value = 0.019$  reveals a significant relationship. Likewise, the total number of non-print resources with the resulting  $r - value = 0.258$  and a  $p - value = 0.035$  has a significant relationship. Lastly, there is a significant relationship between KAP-OER and the total OER resources since  $p - value = 0.36$  is less than the level of significance. In contrast, the KAP-OER and total number of databases subscribed have no significant relationship since the resulting  $r - value = 0.143$  with a  $p - value = 0.294$  exceeds the level of significance. This proves that not all types of library resources has a significant relationship with KAP-OER.



Table 5. *Test of Relationship between KAP-OER and School Profiles (Library resources)*

<b>Variables</b>	<b><math>r_s</math> value</b>	<b><math>p</math>-value</b>	<b>degrees of freedom</b>	<b>Remarks</b>
Total no. of print resources	.310	.019	55	Significant
Total no. of non-print resources	.258	.035	55	Significant
Total no. of databases subscribed	.143	.294	55	Not significant
Total OER resources	.257	.036	55	Significant

One-way ANOVA analyzes the differences between KAP-OER and librarians' profiles. Table 6 shows that the Sex and KAP-OER with the  $F - value = 0.324$ , with  $p - value = 0.572$  showing no significant difference.

Table 6. *Test of Differences between KAP-OER and Librarian's Profiles*

<b>Variables</b>	<b>F</b>	<b><math>p</math>-value</b>	<b>Remarks</b>
Sex	.324	.572	Not significant
Highest educational attainment	1.200	.319	Not significant
Years of service	.794	.534	Not significant

Meanwhile, for KAP-OER and the highest educational level, there is no significant difference since the  $p - value = 0.319$ . Finally, for KAP-OER and the number of years of service, there is still no significant difference since the  $p - value = 0.534$  is greater than the level of significance  $\alpha = 0.05$ . Therefore, overall, there is no significant difference between KAP-OER and the profiles of the respondents.

The test of the relationship between sex and KAP-OER signifies that being male or female does not matter or affect the KAP. Specifically, the results show that sex has nothing to do with KAP-OER regarding aspects of 4Rs. Likewise, the highest educational attainment is not a factor in the KAP-OER, suggesting that educational attainment does not matter in the KAP-OER. The result can be justified by what Thornton (2021) said "librarians learned about OER outside of the library and information science degree programs they attended." Few graduate programs include courses that address these niche specialties in either their elective or required courses. The number of years spent in librarianship is also not a factor in the KAP-OER. The results also mean that the librarianship experience does not affect the librarian's KAP-OER. Furthermore, neither the distribution of respondents nor the nature of the school plays any role in the KAP-OER. The "number of databases subscribed to" by library resources reflects this. On the other hand, the overall quantity of printed and digital materials is important for academic librarians' KAP-OER. The KAP-OER was impacted in terms of library resources. However, being male or female, having a higher level of education, and having a long history of service were found to be irrelevant factors.

#### Conclusions and Prospects for Further Research

The findings taken from the result sought show that academic librarians' KAP concerning OER is disclosed at a moderate level of performance, integration, and demonstration based on the 4Rs of openness.

In the test of the relationship, the librarian's profile, sex, highest educational attainments, and years of service were not factors for the KAP-OER. Likewise, there is no meaningful relationship between the school profile and the KAP-OER in terms of region, type of school, and one item in terms of library resources. In contrast, there was a significant relationship between the library resources and the KAP-OER, such as the total number of print resources, non-print resources, and OERs. While the librarian's profile and the KAP-OER reveal no significant relationship difference.

This study concludes that the Philippine academic librarians are challenged in terms of 4Rs of OER and thus need to have necessary interventions. It is imperative to keep academic librarians updated, particularly on OER, through training or capacity building (Calilung, 2021). It confirms that much more needs to be done to improve academic librarians' attitudes and practices toward openness (Orzech & Abramovich, 2020). It is essential to eliminate constraints such as a lack of funding, institutional incentives, and assistance for OER initiatives (Mishra & Singh, 2017).

The librarians' demographic profiles, to some extent, have a relationship with their KAP-OER. Still, the degree of the association is not significant; therefore, the academic librarians' demographic profile cannot be considered a crucial factor for their KAP towards OER. In the same manner, the academic librarians' school profile, to some extent, may also have a relationship with their KAP-OER, but the degree of the association is not significant. Therefore, the academic librarians' school profile cannot be considered an essential variable for the KAP towards OER. Thus, the librarians' demographic and school profiles have nothing to do with their KAP-OER.

It recommends, first, providing the librarians with the necessary seminars and training regarding OER for them to be able to understand it to the full extent. The workshops and training must also equip them with 21st-century librarianship skills, specifically on the four elements of openness of OER: revise, reuse, remix and redistribute. Second, to promote OER through institutional collaboration, funding, institutional incentives, and support for OER activities. Increasing the number of library resources, especially the print and nonprint and OER resources. Third, HEIs should provide an acceptable institutional policy about OER and add the OER as CORE subject to the BLIS curriculum. This study suggests a few possibilities for future research, including: Revisiting the KAP-OER (within 3 to 5 years intervals and see how the KAP of the Philippine academic librarian differs from previous studies in the field); Research on KAP OER will focus on factors such as connections and contrasts since these variables' p-values might increment their level of relationship concerning academic librarians' KAP; and a KAP study focusing on administrators, librarians, teachers, and students.

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## **Artificial Intelligence behind Digitalized English Language Classes**

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### Introcuction

The use of Artificial Intelligence (AI) in English Language Teaching (ELT) classes has gained significant attention in recent years. This abstract explores the various applications and benefits of AI in ELT, highlighting its potential to enhance language learning experiences.

AI technology offers personalized and adaptive learning experiences by analyzing learners' strengths, weaknesses, and individual learning styles. Through natural language processing and machine learning algorithms, AI-powered platforms can provide tailored content and exercises that cater to each learners' specific needs. This individualized approach helps students progress at their own pace, ensuring a more efficient and effective learning process.

Furthermore, AI can facilitate real-time feedback and assessment. Intelligent virtual tutors can analyze learners spoken or written responses, providing instant feedback on grammar, vocabulary usage, pronunciation, and overall language proficiency. This immediate feedback not only saves time but also allows learners to correct their mistakes promptly, leading to faster improvement.

Another advantage of incorporating AI in ELT classes is the availability of vast amounts of authentic language data. AI algorithms can analyze large corpora of texts or audio recordings to identify patterns, common errors, or specific linguistic features that are challenging for learners. By leveraging this data-driven approach, teachers can design targeted lessons that address these difficulties more effectively.

Moreover, AI-powered chatbots or virtual assistants can simulate real-life conversations with learners. These interactive conversational agents engage students in meaningful dialogues while providing guidance and support throughout the conversation. Learners can practice their speaking skills in a safe environment without the fear of judgment or embarrassment.

Despite these benefits, it is important to acknowledge potential challenges associated with integrating AI into ELT classes. Privacy concerns related to data collection and storage must be addressed adequately to ensure learner confidentiality. Additionally, the role of human teachers should not be undermined; rather, they should be seen as facilitators who guide students through their language learning journey while utilizing AI tools as supplementary resources.

The integration of AI technology in ELT classes has the potential to revolutionize language learning experiences. By providing personalized content, real-time feedback, and authentic language data analysis, AI can enhance the effectiveness and efficiency of language instruction.

However, careful consideration must be given to privacy concerns and the role of human teachers to ensure a balanced and successful implementation of AI in ELT classrooms.

Technology plays a very important role in conveying messages in the form of words, images and sounds (Rahayu and Pujiyono, 2017). Technology was created to facilitate human work and activities. Artificial intelligence (AI) is a rapidly evolving technology. Artificial intelligence (AI) is a computational creativity technology, and the development of artificial intelligence (AI) technology has drawn people's attention (Cheng and Day, 201). To achieve computational creativity, various artificial intelligence techniques have been implemented. Rahman (2009, p. 3 3) states that artificial intelligence (AI) creates a tool that filters knowledge and other independent functions such as computing or student research. Artificial intelligence (AI) is developing intelligent and intelligent technologies. Devices that operate and respond to the human brain, such as computer systems (electronic platforms) and computerized machines (robots) (Karsenty, 2019). Artificial intelligence (AI) is also known as artificial intelligence (Mehrotra, 2019).

This is the intelligence predicted by machines because of the natural intelligence that humans display. In other words, AI involves adding human intelligence to machines to perform tasks. Mehrotra (2019) believes that artificial intelligence (AI) is a computer technology that explores the analysis and development of intelligent machines and applications. There is a science to machines that think and act like intelligent humans. The key to AI technology lies in wisdom (Wang, 2019). Whitby (2009) believes that artificial intelligence studies the intelligent behavior of humans, animals and machines and tries to find ways. In this article, we will explore the role of AI in digitalized English language classes and its impact on learners. Its impacts are:

**Adaptive Learning:**One of the key advantages of incorporating AI into digitalized English language classes is its adaptive learning capabilities. AI algorithms can analyze vast amounts of data from students' interactions with the platform to identify their strengths, weaknesses, and individual learning styles. This data-driven approach allows AI-powered systems to tailor lessons and exercises to meet each student's specific needs. By adapting content difficulty levels, pacing, and feedback based on individual progress, AI ensures that learners receive personalized instruction that optimizes their language acquisition journey.

**Natural Language Processing:**AI's natural language processing (NLP) abilities have significantly improved the quality of digitalized English language classes. NLP enables AI-powered systems to understand and interpret human language in real-time. Through speech recognition technology, students can practice their pronunciation and receive immediate feedback on their accuracy. Additionally, NLP algorithms can analyze written texts for grammar errors or suggest alternative phrasing options to enhance writing skills. This instant feedback fosters a more interactive and immersive learning environment that promotes active engagement with the English language.

**Virtual Tutors:**AI-powered virtual tutors are another valuable asset in digitalized English language classes. These virtual tutors act as intelligent conversational agents capable of engaging in meaningful dialogues with students. They provide guidance, answer questions, offer explanations

when needed, and even engage in role-playing scenarios to simulate real-life conversations. Virtual tutors leverage machine learning algorithms to continuously improve their responses based on user interactions and feedback from both teachers and students. This personalized support system empowers learners by providing them with individual attention while building confidence in their communication skills.

**Data Analytics for Progress Tracking:** AI's data analytics capabilities play a crucial role in tracking student progress throughout their English language learning journey. By collecting data on performance metrics such as vocabulary retention rates or grammar comprehension levels over time, AI-powered systems generate comprehensive reports for both teachers and students alike. These reports provide valuable insights into areas that require improvement or additional focus while highlighting achievements and milestones reached by each learner. Such data-driven feedback enables educators to make informed decisions about instructional strategies while motivating students through a clear understanding of their progress.

Teaching and learning English have come to be less difficult with the improvement of digital platforms. Artificial intelligence (AI) era now gives the possibility to improve English language skills. Language literacy and virtual digital literacy are a neat mixture to improve worldwide competence. AI bases its method at the textual content processing of a language. The more state-of-the-art the AI, the increasingly correct the language he mastered. Therefore, the usage of AI technology might improve overseas language teaching and learning to learn English language. (Yingsoon, 2021)

#### Conclusion:

Artificial Intelligence has undoubtedly transformed digitalized English language classes by offering adaptive learning experiences tailored to individual needs, leveraging natural language processing for enhanced communication skills development, providing virtual tutors for personalized guidance, and utilizing data analytics for progress tracking purposes.

As technology continues to advance rapidly, we can expect further advancements in AI-driven educational platforms that will continue to revolutionize how we learn languages like English. With increased accessibility.

Artificial Intelligence (AI) has made significant advancements in various fields, and one area where its impact is being felt is in digitalized English language classes. With the help of AI, language learning platforms are revolutionizing the way English is taught, making it more accessible, personalized, and effective than ever before.

As a computer systems theory, I can perform tasks that normally involve human intelligence. Speech understanding, linguistic awareness, decision making, and visual perception are aspects of human intelligence that AI can understand. Artificial intelligence is essential to create specialized systems and find solutions to complex problems such as natural language recognition or processing (Devi et al., 2020). Artificial intelligence as a language teacher. AI provides ongoing personalized coaching that provides learners with the substantive feedback and support activities they need to master, all

in a low-risk environment (learners are more likely to take risks and make mistakes). Alog's big promise is that it will reduce the time needed to develop capabilities. Traditional English language classes often face limitations such as limited resources, lack of individual attention, and rigid teaching methods. However, AI-powered platforms are overcoming these challenges by offering a range of interactive features that enhance the learning experience.

Technology has also advanced, making it easier for us to do certain tasks, such as teaching and learning English. One technology that is often talked about in the wider community is artificial intelligence technology. Technology has opened up many new possibilities for language learning (Fryer & Carpenter, 2006). Luo and Cheng (2020) emphasized that foreign language teaching depends on artificial intelligence technology. Artificial intelligence (AI) technology and other technologies can effectively solve challenges such as short teaching time, limited space, limited resources, and individual measurement methods. Thornton (2007, p. 17) 1) Almost by definition, any AI software/technology can be considered capable of performing some form of problem solving. This means that artificial intelligence (AI) is a broad scientific field that combines dynamic problem solving with the human ability to discover actions and purposes. (Cuba, 2019)

One of the key advantages of AI in digitalized English language classes is the ability to provide personalized learning paths. AI algorithms analyze learners' strengths, weaknesses, and learning preferences to create customized lesson plans. This ensures that learners receive targeted instruction on areas they struggle with while reinforcing their existing knowledge. By adapting to each learner's needs, AI-powered platforms enable students to progress at their own pace, maximizing their potential.

Furthermore, AI can provide instant feedback on learners' performance, allowing them to correct mistakes and improve their language skills in real-time. Through speech recognition technology, AI can accurately assess pronunciation, intonation, and fluency. This immediate feedback helps learners identify and rectify errors, thereby accelerating their language acquisition process.

Another significant benefit of AI in digitalized English language classes is the availability of vast resources. AI-powered platforms often integrate extensive databases of authentic materials such as articles, videos, and audio recordings. These resources expose learners to real-life language usage, enhancing their comprehension skills and cultural understanding. Moreover, AI algorithms can recommend appropriate learning materials based on learners' interests and proficiency levels, ensuring engaging and relevant content.

Additionally, AI-powered platforms incorporate interactive features that simulate real-life conversations and provide practical language practice. Virtual chatbots equipped with natural language processing capabilities engage in dialogues with learners, allowing them to practice their speaking and listening skills in a safe and supportive environment. These chatbots can understand and respond to learners' queries, providing immediate assistance and promoting conversational fluency.



AI also facilitates collaborative learning experiences. Learners can connect with peers from around the world, engaging in group discussions, debates, and collaborative projects. AI algorithms can facilitate these interactions, ensuring a diverse and inclusive learning environment where students can learn from each other's experiences and perspectives.

However, it is important to acknowledge that while AI has revolutionized digitalized English language classes, it cannot replace human teachers entirely. The role of educators remains crucial in guiding learners, providing emotional support, and offering a nuanced understanding of language learning. AI should be seen as a powerful tool that complements and enhances the teaching process rather than a substitute for human interaction.

In conclusion, AI has brought significant advancements to digitalized English language classes. Through personalized learning paths, instant feedback, vast resources, interactive features, and collaborative opportunities, AI-powered platforms offer an immersive and effective language learning experience. While AI cannot replace human teachers, its integration in language learning platforms has undoubtedly transformed the way English is taught, making it more accessible and engaging for learners worldwide.

The intention of AI is to create clever machines that suppose and act like human beings, with the ability to simulate intelligence and convey choices through a method in a comparable way to human reasoning (Salvaris et al., 2018). AI works with the aid of using combining the presence of several data, repetitive processing, and smart algorithms. This permits the software program to learn automatically from the styles or capabilities that exist with inside the data. AI is a completely large discipline of study. The scope of theories, methods, technologies, and sub-fields that exist in AI is varied including device learning, neural networks, cognitive computing, AI vision, and scientific language processing. When human beings speak with others with the aid of using the use of a language, they'll employ, nearly results easily or extraordinarily complicated and nonetheless little understood method (Nilsson, 201). Thus, the AI gadget is able to generating and decoding fragments of the English language has been very hard to create by the individuals.

Keywords: AI, Digital Feedback, Feedback Literacy

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## **Unlocking the Future of Learning: Innovative Strategies for Managing Online Education in a Post-Pandemic World**

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### **Abstract:**

The emergence of online education has transformed the global educational landscape, offering unprecedented opportunities and challenges. The COVID-19 pandemic accelerated the adoption of digital learning platforms, prompting educators and institutions to rapidly adapt. As we stand at the threshold of a post-pandemic era, it is crucial to reevaluate our approaches to managing online education.

### **Introduction**

Online education has undergone a remarkable transformation in recent years. The digital revolution, combined with unforeseen circumstances like the COVID-19 pandemic, has catapulted the realm of online learning to the forefront of the global educational landscape. This paper explores the evolving nature of online education and delves into innovative strategies for effectively managing this educational paradigm in a post-pandemic world.

#### **Evolution of Online Learning: From Emergency Remote Teaching to Purposeful Online Education**

The COVID-19 pandemic triggered a sudden shift in education, forcing institutions and educators to adapt rapidly. Initially, this shift represented emergency remote teaching rather than well-planned online education. However, it ignited discussions on the future of digital learning. Institutions quickly realized the potential of online education and embarked on a journey to transform it into a purposeful and sustainable learning model.

### **Challenges and Opportunities in the Virtual Classroom**

Managing online education comes with an array of challenges and opportunities. The challenges include issues related to digital equity, technical limitations, and student engagement. Conversely, opportunities abound in the form of flexible learning, personalized instruction, and global access to educational resources. This paper explores these aspects and emphasizes the need to address challenges while harnessing the full potential of online education.

### **The Role of Technology in Shaping the Future**

Technology lies at the heart of online education's transformation. Artificial intelligence (AI), data analytics, and machine learning are now pivotal in enhancing the online learning experience. These technologies have the capacity to offer personalized learning pathways, real-time feedback, and

data-driven decision-making, all of which contribute to improved student engagement and learning outcomes.

#### Digital Literacy and the Future of Learning

In the post-pandemic world, digital literacy is more critical than ever. Both students and educators must be equipped with the skills required to navigate online learning effectively. This paper discusses the importance of digital literacy and the role it plays in empowering individuals to participate meaningfully in online education.

#### Pedagogical Shifts for Effective Online Learning

A significant emphasis is placed on pedagogical shifts in managing online education. The student-centered approach, synchronous and asynchronous learning, and the integration of multimedia resources are key components of effective online instruction. These strategies are essential for engaging and motivating students, promoting active learning, and fostering critical thinking in the online classroom.

#### Assessment in Online Education: Quantitative and Qualitative Methods

Evaluation and assessment methods have evolved in online education. The paper explores the challenges of assessment in the virtual environment and discusses both quantitative and qualitative methods for evaluating student performance. It underlines the importance of aligning assessment practices with the desired learning outcomes.

#### Socio-Cultural Implications of Online Education

The socio-cultural implications of online education are far-reaching. This paper addresses issues of equity, access, and inclusivity, focusing on the impact of virtual learning on diverse student populations. It underscores the need to create an inclusive and accessible online learning environment, providing all students with an equal opportunity to excel.

#### Supporting Educators in the Online Environment

The successful management of online education relies on the development and support of educators. This paper delves into strategies for training and empowering faculty and instructors to navigate the digital landscape. Faculty development programs, technological resources, and ongoing support are vital components of ensuring educators are well-prepared for online teaching.

#### Conclusion: A Holistic Approach to Managing Online Education

In conclusion, managing online education effectively demands a holistic approach that considers the multifaceted nature of the online learning ecosystem. Collaboration among educators, administrators, technologists, and policymakers is essential to crafting a vision for online education

that is inclusive, dynamic, and responsive to the evolving needs of learners. The post-pandemic world presents a unique opportunity to reimagine and reshape the future of learning through innovative strategies and purposeful online education.

Keywords: Online Education, Post-Pandemic Learning, Digital Literacy, Pedagogy, Faculty Development, Education Technology, Assessment, Student-Centered Learning, Inclusivity.

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## **The Process of Digitalization in Educational Activities in Ukraine: Experience of Universities of Kharkiv Region**

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### **Abstract**

The impact of digitization on education and the principles of conducting the educational process is determined. It is noted that the digitization process is the main direction of development, which is actually mandatory in modern realities for the existence of the university. The publications and experience of universities of the Kharkiv region in the field of digitization were studied. Different level goals and indicators of the effectiveness of the digitization process are substantiated. Using the method of hierarchical decomposition, the relationship between the goals and objectives of the implementation of the digitalization process in the educational process of the university was determined. It helps to establish communication between the administration, teachers, students, and pupils and helps to make better use of the available resources. The role of digitization in conducting the educational process during the war is defined.

**Keywords:** digitalization, educational activities, University, sustainable development

### **Introduction**

In recent years, our world has been developing at an incredible pace. Particularly noteworthy in this regard is technological progress, which has made a significant leap. Digital technologies are now being introduced into all areas of human activity, thereby improving them and making them easier. The process of introducing technologies into various social relations is called digitalization. The digitalization process is gaining momentum in educational activities, which is directly related to the issues of improving the public education sector in Ukraine, in terms of its adaptation to European standards. Given Ukraine's future prospects of becoming a member of the European Union, the government, local governments, and educational institutions are actively promoting the introduction of digitalization in education.

That is why this study aims to define the process of digitalization in education. It is also important to identify the main changes in this process.

## Literature Review

The process of digitalization has been considered in the works of both Ukrainian and international scholars. As an example, Zhosan G. [1] identified the main directions of digitalization development in general and analyzed Ukraine's place in the world in terms of digitalization development. Malakhov A. and Khmelna O. in their study [2] proposed a digitalized model for managing the quality of educational services and analyzed its effectiveness. Raximov S. and Pirimqulov R. [3] described the main problems that can occur in the process of using artificial intelligence and machine learning in educational activities. The study by Nguye T. [4] presents results that show the readiness of Vietnamese students for digital transformation and their use of the Internet of Things in higher education. An interesting study is the scientific work of Acharya Y. [5], which describes how students with disabilities in Nepal can overcome their problems in the digitalization era. Kröll M. [6] studied entrepreneurial education, which allows experienced professionals to develop their knowledge as mentors to provide professional guidance to young people seeking employment in the field of digitalization. Also, the field of digitalization in educational activities is studied in the work [7]. Thus, a large number of scientific works are devoted to the process of digitalization, its implementation and the changes that occur in this process, but the peculiarities of digitalization in Ukrainian education are not fully revealed. This makes the study particularly relevant.

## Purpose

To substantiate the changes caused by the process of digitalization in the educational activities of Ukraine on the example of universities of the Kharkiv Region.

## Method

The research methodology is based on a review of literary sources that represent the experience of implementing digitalization in the educational process of Ukrainian universities and the study of the experience of one of the universities in the Kharkiv region. Based on this, different level goals and performance indicators of the digitization process were determined. Using the method of hierarchical decomposition, the relationship between the goals and objectives of the implementation of the digitalization process in the educational process of the university was determined.

## Result

Today, digitalization in education is not just a trend, it is one of the main vectors of our country's development. The introduction of digitalization caused a number of changes in educational activities, both positive and negative. The experience of Estonia can be cited as a positive example. For example, in Estonia, an information system (eKool) was introduced in 2008, it contained all the data related to learning and interaction between students, parents, teachers, and the administration of educational institutions [8]. In this system, teachers entered grades, indicated attendance, assessed student behavior, and communicated with students. eKool has both a computer version and a mobile

application. The advantages of this system are reduced paper use, speed, interactivity, transparency, and mobility (9). The example of Estonia clearly shows positive changes in the digitalization process.

It is worth noting that the process of digitalization has also covered the educational activities of Ukraine. For the first time, the education sector faced the need for a digitalization process during the COVID-19 pandemic and the period of complete lockdown, when school teachers and university professors had to continue their studies in educational institutions despite significant problems with attendance. It was the first time that

- online classes were held;
- Internet platforms were created;
- distance learning courses were developed;
- digital repositories were launched, which contain electronic resources, lecture notes, methodological guidelines, textbooks and manuals, abstracts, dissertations, articles, etc;
- corporate systems have been developed that allow students to see their schedule, classrooms, teachers and grades, and communicate with classmates and teachers in their personal accounts and mobile applications.

However, the positive changes also include negative ones related to the instability of Internet coverage in all territories of Ukraine, the lack of personal computers for some pupils/students, the lack of adequate funding for digitalization in educational institutions, etc.

Currently, the process of digitalization continues to be actively implemented in the educational activities of Ukrainian institutions, cooperation is being established with foreign information and educational institutions, organizations, and foundations, startup projects related to digitalization in education are being developed, and investors are being sought.

Ukraine has developed the Concept of Digital Transformation of Education and Science of Ukraine, which is a comprehensive strategic vision of the digital transformation of education and science in accordance with the implementation of the principles of the state policy of digital development by executive authorities. The purpose of the Concept is to use digital technologies to transform processes in the education and science system in order to simplify, automate and make them more convenient for users [10]. The final goal will be achieved through the implementation of the outlined areas and strategic goals:

- direction 1: Effective use of digital technologies in the educational process (strategic objective 1: Digital educational environment is accessible and modern; strategic objective 2. Education workers have digital competencies; strategic objective 3. Education content meets modern requirements);
- direction 2: Optimization of management, regulation and monitoring processes (strategic objective 4. Services and processes in the field of education and science are transparent, convenient and efficient; strategic objective 5. Data in the field of education and science are accessible and reliable) [8]. Thus, the process of digitalization in Ukraine is mandatory for



implementation at all levels of educational activity from primary education to higher education and research.

One of the higher education institutions actively implementing the digitalization process is the universities of the Kharkiv Region (University). The university trains highly qualified specialists for life-supporting enterprises capable of ensuring territorial development at the national, regional and local levels [11]. The main Sustainable Development Goals supported by the university are Goal 4, which provides for quality education, Goal 8, which provides for decent work and economic growth, and Goal 9, which provides for innovation and infrastructure [12]. It was the consideration of these goals that prompted the university to develop its Development Strategy until 2025. This strategy envisages the development of several priority areas of development. One of the directions of the university's development is digital transformation, which involves the introduction of digitalization into educational activities. The goal of this process is to create a modern integrated information and telecommunication infrastructure that integrates all digital resources of the University, provides conditions for continuous improvement of the quality of education and research, and makes it competitive through the use of modern digital technologies [13]. The university's educational activities are supposed to achieve this goal by [13 -14]:

- improving the quality and transparency of educational activities by providing the educational and methodological base with modern digital technologies, developing the information and educational environment of the University, and widely introducing computer technologies in blended and distance learning;
- active use of digital technologies in all areas of the University's activities;
- development of the institutional repository, constant updating of the system of electronic journals and conferences, promotion of scientific profiles of the University staff;
- improving the efficiency of University management through the gradual introduction of electronic document management using modern cloud technologies and the introduction of a business intelligence system that will provide managers at all levels with reliable information about the state of affairs in all areas of the University;
- qualitative representation of the University in the world information space by developing university educational electronic resources, increasing the indicators of international webometric ratings, transparency rating;
- improving the system of e-portfolios of teachers and continuous modernization of the University's rating system;
- migration to cloud technologies, which will ensure the mobility and relevance of educational resources and use of own mobile devices;
- development of the corporate computer network to a level sufficient for the effective functioning of software and technology tools and providing all higher education students and employees with

a single personalized access (distributed by levels) to internal and external information resources of the University;

- improvement of existing e-systems (web services, collaboration services, e-learning);
- introduction of virtual laboratories and laboratories with remote access to ensure effective organization of distance learning for students of technical specialties;
- introduction of artificial intelligence and machine learning technologies in the educational programs of computer specialties, etc.

Table 1 shows the main operational goals and objectives for their achievement.

Table 1 - Interrelation of goals and objectives of implementing the digitalization process in the university educational process

Strategic goal	Operational goal	Task
Digital transformation	Development of digital competence of participants in the educational process	Development of internal standards for the digital competence of a teacher, bachelor's degree, and master's degree.
		Implementation of distance learning in certain educational programs.
		Accumulation, systematization, and electronic storage of scientific, educational, and methodical works of scientific and pedagogical staff of the University in a digital repository.
	Digitization of educational activities	Development by teachers of the content of electronic training courses of the e-learning system using video lectures, collaborative work services, visualization, etc.
		Improving the mobile platform of the e-learning system.
		Use of Office 365 services by students and teachers
		Development of the open educational space of the University (webinars, video conferences, online broadcasts, etc.).
		Creation and use of virtual laboratories and laboratories with remote access
		Implementation of Google Suite for Education for educational activities

		Creation and use of educational and scientific laboratories of artificial intelligence and machine learning
	Digitization of research activities	Creation of author profiles of full-time teachers in the scientometric database Scopus and Web of Science.
	Digitization of organizational and management activities	Connecting the University to the System of electronic interaction of executive authorities.
		Deployment of business analytics visualization systems.
	Digital Marketing	Improvement of indicators of the rating system of teachers and structural divisions of the University
		Modernization of University websites
		Modernization of the University portal
	Digitization of library activities	Attracting new categories of users.
		Participation in projects providing free access to information resources.
		Popularization of information resources of the scientific library among university scientists online.
		Creation of a practice base for students of specialized faculties in the library.

Source: developed by the authors based on [13]

According to [12], the key indicators of the effectiveness of the digitalization process at the universities of the Kharkiv Region include:

- improving the quality and transparency of educational activities due to the provision of the educational and methodological base with modern digital technologies, the development of the information and educational environment of the University, the widespread introduction of computer technologies in blended and distance learning
- active use of digital technologies in all areas of the University's activities;
- development of the institutional repository, constant updating of the system of electronic journals and conferences, promotion of scientific profiles of the University staff;
- improving the efficiency of University management through the gradual introduction of electronic document management using modern cloud technologies and the introduction of a business

intelligence system that will provide managers at all levels with reliable information about the state of affairs in all areas of the University;

- high-quality representation of the University in the world information space through the development of university educational electronic resources, increasing the indicators of international webometric ratings, transparency rating;
- improving the system of e-portfolios of teachers and continuous modernization of the University's rating system;
- migration to cloud technologies, which will ensure the mobility and relevance of educational resources and the use of own mobile devices;
- development of the corporate computer network to a level sufficient for the effective functioning of software and technological means and providing all higher education students and employees with a single personalized access (distributed by levels) to internal and external information resources of the University;
- improvement of existing e-systems (web services, collaboration services, e-learning);
- introduction of virtual laboratories and laboratories with remote access to ensure effective organization of distance learning for students of technical specialties;
- implementation of artificial intelligence and machine learning technologies in the educational and scientific activities of the University.

The above indicators will help to identify positive and negative changes in the educational activities of the Kharkiv National University of Urban Economy named after O.M. Beketov. The university management will be able to control what results have been achieved and what still needs to be worked on. Also, the management will be able to develop timely measures to overcome the problems of implementing the digitalization process and reach a new level of education, considering European standards.

## Conclusion

Digitalization has dramatically changed education and is fundamentally altering the principles and organization of the entire educational process. The digitalization process is the main direction of development, which is actually mandatory. It helps to establish communication between the administration, teachers, students, and pupils and contributes to better use of available resources. However, deepening the skills of the stakeholders involved in the educational process through webinars, training, and master classes remains promising in the future.

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**Self-Management in Śrīmadbhagavadgītā with special reference to Sāṅkhyayoga**

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**Extended Abstract**

Śrīmadbhagavadgītā is an infinite ocean of supreme wisdom for the welfare of mankind in every sphere of life. It is an oldest Hindu scripture, is a part of the epic Mahabharata, the essence of all vedic knowledge. It advises the philosophy of self-management. It shows the path of progress through self- contented, self-stimulated, self-motivated, self-illuminated, and self-development without depending on others. It consists of 700 verses in 18 chapters. It highlights the importance of self-realization and the quest of knowledge as a means to reach spiritual illumination. It has three major themes- knowledge, action and love. Whatever the practical problem arise in our day-to-day life we can see that its best solution lies in the teachings of Gītā. It not only provides supreme knowledge for the promotion of self but it also furnishes the all-round development of an individual in each and every corner. The character of the self has been explained in it in detail than in other chapters. Thus, it is named as Sāṅkhyayoga (Chapter-II) or the Yoga of Knowledge. Management is the control or organization of something. Self-management means 'self-control' or 'self-regulation'. In other words, we can say that it is the capacity to control one's emotions, thoughts, feelings, attitudes, and behaviour well in various adverse situations. When Arjuna merged in distressing thoughts and taking refuge in the Lord, sought for the way to overcome his intense grief, and declared that neither sovereignty over the earth nor leadership over gods would drive away that grief, the Lord first shows him what is real and what is unreal, and trying to prove that it was Arjuna's duty to engage in fight from the point of view of knowledge. Lord says that destruction of bodies does not lead to the destruction of the soul.

In verse no. fourteen, Chapter – II of Gītā says that the feeling of heat and cold, pleasure and pain are the result of the contacts between the senses and their objects are transitory and fleeting. There in verse no. sixteen it has been told that the unreal has no existence, and the real never ceases to be, the reality of both has been perceived by the seers of truth. A man who has the knowledge that the soul to be capable of killing and who thinks it was killed, they both are ignorant because the soul neither kills, nor is killed (Ch-II/19). Thus, the wise man to whom pain and pleasure are alike, and who is not tormented by these contacts, obtain immortality. As the soul is not subject to any form of modification, so the soul is never born nor dies. It is unborn, eternal, everlasting and ancient. The material body is transient, destructible, but the soul is not. The six modifications are birth, becoming, growth, transformation, decay, and destruction. The soul is above modification. So the soul neither kills anybody, nor is killed by anybody. For in casting off an old body and entering into a new one, it is the ignorant alone who suffers pain, not the wise. A child weeps when its mother removes old clothes, soiled with dirt, from its body, and compels it to wear new ones. The mother remains

indifferent to the weeping of the child and in the child's own interest makes it submit to the change of clothes. Even so God, for the good of the Jīva, and caring little for its tears, changes its body when it is worn-out. In this case, the wearing-out of a body should be mean to expiry of the duration of its life. In reality the soul, being immobile and non-active, does not migrate from one body to another as it is ever fixed and steady. But just as when a pot is carried from one place to another, the ether or space within the pot also appears to be carried, even so when the subtle body leaves a gross body and enters another, it appears that the soul also has moved from one body to another. Therefore, the acts of leaving one body and entering into another are attributed to the soul in order to explain the phenomenon of death to the ordinary people. Arjun's grief proceeded out of the apprehension that he would be required to kill his elders and other relations by striking them with lethal weapons, or by hurling destructive weapons against them; thus in order to remove his grief, the Lord establishes the immortality and formlessness of the soul by pointing out the inability of all the four elements of earth, water, fire, and air to destroy it in the verse no.23-

nainaṃ chindanti śāstrāṇi nainaṃ dahati pāvakaḥ |

na cainaṃ kledayantyāpo na śoṣayati mārutaḥ ||

The body is perishable and possessed of a form but the soul is everlasting and formless. Thus the soul can never be destroyed by the element of earth in the form of any weapon or by the elements of water, fire and air. It is eternal, omnipresent, immovable, constant and everlasting. It neither vibrates, nor moves from one place to another. It is all pervasive means there is no place which is not filled by it. As the soul is unmanifest, it is unthinkable. By knowing this reality one should not grieve for this. Due to ignorance and the desire for the possession of wealth, power, honour, fame and prestige etc., in this life man is far away from the attainment of celestial worlds hereafter. If we think, we can see that all these objects are altogether insignificant and transient and have no stability. But without obtaining an insight into the truth and reality of God, it is exceedingly difficult to be free from this desire and perform action without any desire. Entertaining a desire, attachment, hope or craving for actions approved of by the scriptures and performed with the body, mind and intellect, as well as their fruit is not eligible for attaining supreme peace. Thus, the Lord advised Arjuna to perform his duties wholly renouncing attachment to, and desire for his actions. Based on qualitative method, this paper tries to ponder about the truths or facts cited by the Lord for self-enhancing, enriching from moral insight. By knowing these one should be well-balanced and mentally sound from internally. Then, one is not affected by these side effects of worldly life by getting knowledge what should be done and what should not be. This truth is most beneficial for the welfare of mankind.

Keywords: Self, Soul, Body, Fruit, Action, Truth, Self-Management

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## **Emotional Intelligence as Intangible Class Content for Effective Communication in Managing University Classes: A Bibliometric Analysis**

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### **Extended Abstract**

Emotional Intelligence, the term coined by two researchers Peter Salavoy and John Mayer in 1990 and popularized by psychologist Daniel Goleman in his book Emotional Intelligence in 1995, has fascinated the world ever since. The Harvard Business Review of 2003 determined that 80% of competencies distinguishing the top performers from the rest were owing to their high emotional intelligence. A lot of research has been done in the area since the last decade of the twentieth century conferring Emotional Intelligence (EI) a superior position to its equally important counterpart, the Intelligence Quotient (IQ). The present study aims to map the growing research in the field of Emotional Intelligence through a review of published articles in the Scopus database. In all, 860 articles were retrieved and refined to take 680 final articles.

The data extracted was analyzed on the basis of bibliographic coupling of the countries, bibliographic coupling of the authors, co-occurrence of the author keywords, and bibliographic coupling of the journals and was visualized with the help of VOSviewer.

Based on the contribution made by the countries, Spain topped the list with 137 contributions whereas the United States of America has the highest total link strength of 1892.

The overly visualization of the bibliographic coupling of the authors shows that the most substantial authors were Extremera N. (with 20 publications), Merida-Lopez S. (with 13 publications), and Brackett M. A. (with 10 publications), while emotional intelligence, burnout, self-efficacy, academic achievement have been the most frequently studied concepts. The most influential journal has been Frontiers in Psychology and Teaching and Teacher Education in this field. Frontiers in Psychology", Sustainability (Switzerland), and "International Journal of Environmental Research and Public Health" have the most recent publications in this literature.

All human beings are unique so are their communication styles depending on the variety and the kind of emotions and feelings they express. Of course, emotions cannot be controlled completely but yes, they can be tamed to trigger the right response. As university graduates have a tendency to mirror those around them, this task can be done by a higher education teacher with an evolved level of emotional intelligence. By harnessing intangible emotional intelligence, the teacher can easily cultivate and mold the university graduates and form a strong bond or connection between them which is quite enduring as well as everlasting. However, a teacher's facility to interact with students on an emotional level is restricted due to the time constraints obligatory by syllabi. Despite the constraints, the changed dynamics of student teacher relationship giving way to a more cordial and open communication from the restrictive Guru-Shishya Parampara owing to the modern, competitive

and hence stressful environment, has necessitated an empathy driven approach which contributes to the emotional well-being and holistic growth of the students. Such is the need felt in the field of academics that with a positive outlook, little effort, and sensitivity to students' emotional needs it can happen efficiently.

Keywords: Emotional Intelligence, Bibliographic analysis, Emotional wellbeing, self-efficacy.

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## **Integrating Virtual Collaborative Learning for developing Intercultural Competence in Business English Classroom**

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### Extended Abstract

Since business communication globally cannot be imagined without English, therefore Business English (BE) has become an integral part of teaching English. BE serves as a Lingua Franca for global business, therefore a good mastery of the so-called Business English as Lingua Franca (BELF) is crucial for effective business communication. With this in mind practitioners and researchers of English of Specific Purposes, in our case Business English are in constant need to have access to up to date resources and materials to be integrated into their teaching practice and update their curriculum in accordance with latest developments for better communicating for business globally.

Bearing this in mind, the paper shall aim to demonstrate importance of Virtual Collaborative Learning (VCL) as one of the effective strategies for developing intercultural communication competence in the Business English classroom which is key for effective communication for doing international business. VCL exposes students to diverse viewpoints and experiences, enriching their understanding of cultural diversity and promoting critical thinking. Collaboration can transcend geographical boundaries, providing students with opportunities to work with peers from different countries and cultures, fostering a global perspective.

Integrating virtual collaborative learning into business English classroom with a focus on intercultural competence, can better prepare students for the complexities of the global business environment. This approach not only enhances their language skills but also equips them with the cultural awareness and communication abilities needed to succeed in international business contexts.

The combined questionnaire was used to study the opinion of BE instructors in Georgia upon Integrating VCL for developing intercultural competence for effective business communication. The results of the study will be used to measure effectiveness of Virtual Collaborative Learning for developing ICC of BE Learners and to consider assigning it as an integral part of the existing BE curriculum.

Online cross-border collaboration has grown in popularity in today's globalized and socially dispersed society, where working remotely has become the new normal. A recent poll of workers from 90 countries found that 89% of white-collar professionals work on projects in global virtual teams (GVTs), where team members are dispersed throughout the world and rely on online communication technologies [Taras and others, 2021].

Consequently, it should not be shocking that businesses all over the world that are involved in cross-cultural activities are actively looking for personnel with global cultural competency. Furthermore,

cultural differences are the main reason why 70% of multinational endeavours fail, according to reports from the multinational Labor Union (Banerjee, 2015).

One of the best methods for enhancing cross-cultural communication in Business English classes has been shown to be Virtual Collaborative Learning (VCL). It is necessary to first talk about Collaborative Learning (CL) before delving into Virtual Collaborative Learning (VCL). Although Edwin Mason originally used the word in his 1970 book *Collaborative Learning*, it wasn't until the mid-1980s that the concept truly gained traction and was widely used (Yang, 2023).

The fundamentals of CL education are simple: "it is a situation in which two or more people learn or attempt to learn something together" (Dillenbourg, 1999, p. 1), despite the fact that different scholars have different definitions. To be more precise, CL is an all-encompassing phrase that is generally acknowledged to be based on the following principles: Following the completion of a goal, 1) two or more learners collaborate to complete it; 2) learners support one another in sharing knowledge and negotiating meaning; 3) all group members participate in the work; 4) skills like communication, problem-solving, and conflict management are developed; and 5) the pair or group reflects on the work process and the final product (Laal, 2013).

As the name implies, virtual collaborative learning (CDL) it removes the need for physical location by utilizing the internet and enabling learners to collaborate virtually via PCs, laptops, tablets, and other compatible electronic devices. After that, additional students can connect to these electronic devices using widely used apps like Zoom, Microsoft Teams, Skype, and others. There are two main benefits of VCL. First, it enables real-time, back-and-forth contact between students who are learning at home (Stacy, 1999). Second, and most importantly for our study, technology makes it possible for students from remote regions and diverse cultural backgrounds to interact with one another in ways that would otherwise be too time- and money-consuming (Clauss, Lenk, & Schoop, 2019).

According to the Society for Human Resource Management, culture has a big influence on output. Because of this, it's critical to understand that workers from different backgrounds have varied motivations and react in different ways to different management and communication styles. In SHRM (2015)

The researchers concluded that teaching foreign languages should be combined with instruction in the nation's culture. Chinese researcher Qiong Yue discusses the significance of culture in people's social lives and demonstrates how promoting cross-cultural competence in English education fosters an unbiased cultural perspective, strengthens students' ability to empathize, tolerate, and negotiate effectively, and further improves their ability to accurately and fluently convey local cultural nuances (Qiong Y., 2022).

In order to accomplish the objectives, Violeta Negrea proposes an inventive pedagogical strategy for Cross-cultural Business English, which uses an active pedagogy and a content-based environment to foster students' ability to adjust and respond appropriately to the otherness of a new cultural and organizational environment. She emphasizes that one of the most successful pedagogical strategies for fostering cross-cultural competency in business English classrooms is

collaborative learning. Integrating efficient international awareness-raising techniques is essential in the modern world, where cross-cultural contact is crucial. The study depicts advantages of Virtual Collaborative Learning (VCL), which is one of the best methods for developing students' Cultural Intelligence in Business English classes.

According to the results of the analysis, VCL assisted students in learning about cultural differences and how they could affect a person's capacity to communicate and share experiences with others. Fundamentals of cross-cultural communication should be taught in every classroom as part of the Business English curriculum, since this would improve students' employability in the workplace and enrich their educational experience. The significance of this problem is obviously immense; the trick is figuring out how to solve it most efficiently.

Keywords: VCL; BE; ICC; Effective; Business Communication

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## **Education in South America: Challenges, Progress, and Opportunities**

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### **Abstract**

Education in South America stands at a critical juncture, marked by a complex interplay of challenges, notable progress, and abundant opportunities. This region, characterized by its rich cultural diversity, geographical vastness, and a wide range of socio-economic conditions, exhibits a unique educational landscape that demands comprehensive attention. In this abstract, we delve into the multifaceted issues surrounding education in South America, offering insights into the challenges that hinder progress and the promising pathways toward a more equitable and inclusive education system. We also explore key factors that shape the educational landscape, including policy initiatives, socioeconomic disparities, indigenous populations, and gender equity. This abstract is underscored by the recognition that quality education is not only a right but also an essential instrument for social and economic development in South America.

**Keywords:** Education, South America, Challenges, Progress, Opportunities, Quality Education, Access, Inclusion, Policy, Socioeconomic Factors, Indigenous Populations, Gender Equity, Educational Reform, Higher Education, Regional Disparities

### **I. Introduction**

Education is a cornerstone of societal progress and human development, and South America is no exception. The region, comprised of 13 diverse countries, is home to over 400 million people, each with unique cultural backgrounds, languages, and traditions. The complex educational landscape in South America poses a series of challenges that need to be addressed to ensure that education becomes a vehicle for social mobility, economic growth, and the promotion of cultural diversity.

### **II. Challenges in South American Education**

Access to education remains a significant challenge in many South American countries. Despite some progress, barriers such as poverty, remote geographical locations, and limited infrastructure continue to impede children and young adults from entering and completing formal education. Unequal access to quality education can perpetuate cycles of poverty and exclusion. Socioeconomic disparities play a pivotal role in shaping the educational landscape. In South America, there are marked differences in access to quality education based on one's economic background. This disparity exacerbates inequalities and hinders the region's overall development. South America is home to a wide array of indigenous groups, each with its own unique culture and language. Educational systems have often struggled to accommodate the specific needs and perspectives of

these communities. The preservation of indigenous knowledge and traditions while providing access to quality education is a complex task facing the region. Gender disparities in education continue to exist, with girls often facing discrimination and limited access to schooling, particularly in rural and indigenous communities. Promoting gender equity in education is essential for South America's overall development and the empowerment of women and girls.

### III. Progress and Opportunities

Several South American countries have made notable progress by implementing comprehensive educational policies. Initiatives aimed at increasing access, improving quality, and reducing disparities have shown promise.

The expansion of higher education institutions in South America, notably in countries like Brazil and Argentina, has significantly transformed the region's educational landscape. Both countries have developed robust higher education systems, renowned for their academic excellence and attracting students not just from within South America but also globally. Brazil, with its vast territory, has made substantial investments in higher education, leading to a proliferation of prestigious universities such as the University of São Paulo and the University of Campinas. Government initiatives aim to increase accessibility to higher education, both for domestic and international students. Argentina, on the other hand, has a strong tradition of public universities, including the renowned University of Buenos Aires. The country's academic programs, combined with policies promoting international student exchange, make it a magnet for learners from across the continent and beyond. The growth in South American higher education institutions offers a broader range of educational choices to students. This expansion has not only improved access but also fostered international collaboration and research, contributing to a more dynamic global knowledge exchange. This, in turn, enhances the region's competitiveness and its capacity to address both regional and global challenges.

While regional disparities in educational access and quality remain an issue, South American nations have also started working collaboratively to address these imbalances. Regional initiatives, such as the Union of South American Nations (UNASUR) and the Organization of Ibero-American States for Education, Science, and Culture, are seeking to foster cooperation and knowledge exchange among member countries.

### IV. Conclusion

Education in South America is a complex, multifaceted issue that demands comprehensive attention and action. Despite challenges related to access, socioeconomic disparities, indigenous populations, and gender equity, there is notable progress and promising opportunities. Policymakers, educators, and stakeholders in the region must continue their efforts to make education more inclusive, equitable, and of high quality. This abstract sheds light on the importance of addressing these issues, recognizing that quality education is not just a fundamental right but also a crucial factor for social and economic development in South America. By identifying challenges and opportunities, South



America can foster a brighter future for its people and contribute to global progress in the field of education.

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## **Evaluating Computer Programming Competence of Selected Grade 9 Students of Philippine Science High School (PSHS): A Case Study**

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### Introduction

The Philippine education system is strongly geared toward technological advancement in this era of the Industrial Revolution (IR 4.0). This study aims to evaluate the computer programming competence of selected grade 9 students of Philippine Science High School (PSHS), Cagayan Valley Campus, and identify their learning experiences and challenges for learning strategy. This study used a qualitative method using exploratory study. A semi-structured interview was used to determine the programming learning experience and challenges of the students.

### Conceptual framework

The conceptual framework of the study analyzes the important relationships among the different aspects of the study based on the formulated research problem. The study presents the current level of students' programming competence based from the Computer Science Curriculum. It also includes the students' learning experiences and challenges which can affect their competence. These factors are the basis for creating a proposed enriched learning strategies and approaches relevant to the context.

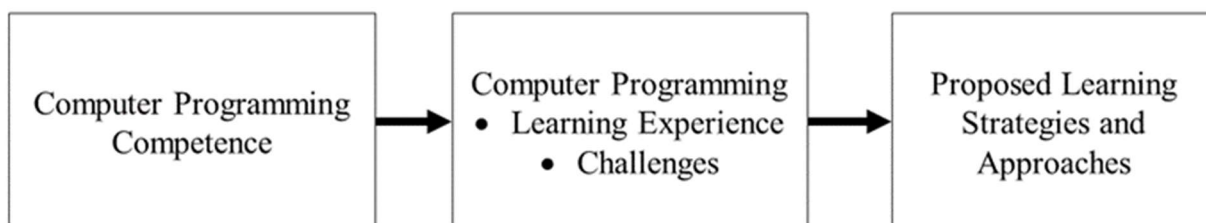


Figure 1 Conceptual Framework

### Methodology

This study uses exploratory case study analysis which determines the students' level of programming competence in computer science. A semi-structured interview was used to identify learning experiences and the challenges of students in learning the subject. The participants of the study are selected Grade 9 students of Philippine Science High School – Cagayan Valley Campus, Bayombong, Nueva Vizcaya. According to Creswell & Creswell (2018) some researchers estimate that between 10 and 50 participants are sufficient depending on your type of research and research question. The sampling technique used in this study was non-probability purposive sampling with 29

participants. Thematic analysis was used to analyze the data by studying the themes within the gathered dataset to identify meaning for coding.

## Results

### Level of computer programming competence of students

#### Programming Basics

The programming basics is the key foundation of learning any programming language. It is the practical skill of designing and creating computer programs that is intended to solve real world problems. It includes declaring correct data type, constant, and variables including the implementation of input, output, operations, and precedence rules.

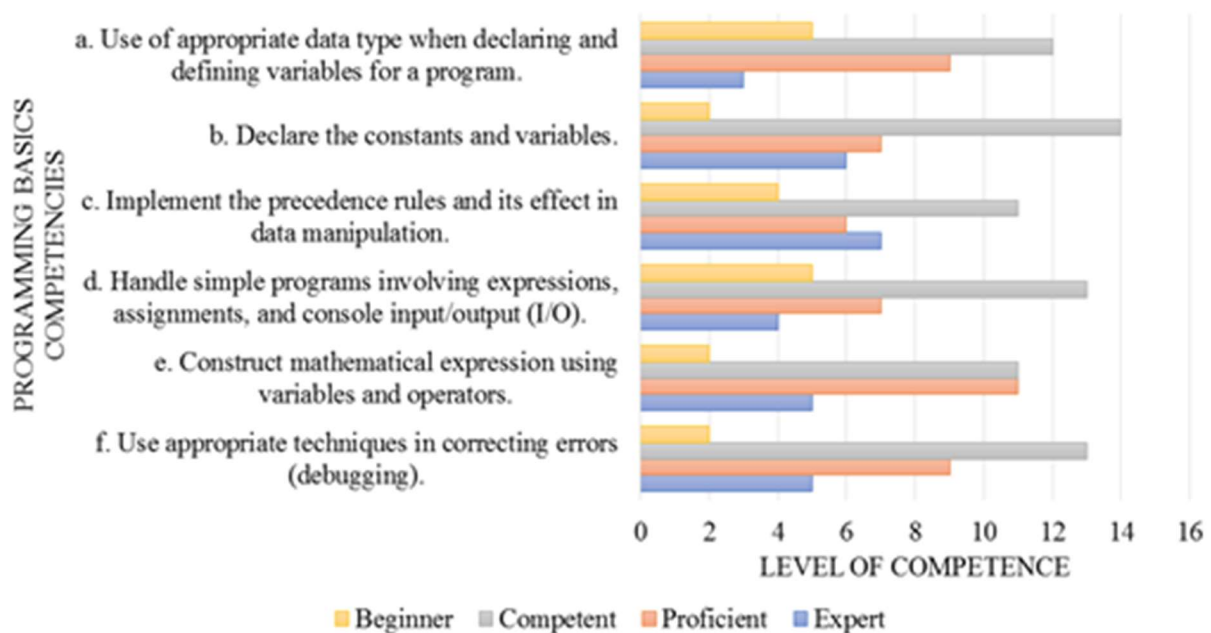


Figure 2 Level of programming competence for Programming Basics

The results show that the majority of the participants have competent basic programming skills which means that they are capable of using and implementing variable declaration, precedence rule, input or output, math expressions and debugging. Some of the participants have proficient competence which implies that they are skillful in doing basic programming. According to Chandra (2022) it is important that students have a good skill in declaring variables to store different data types and perform any operation or task in a program. When it comes to debugging Yen et al. (2012) presented that programming beginners have less developed logical thinking skills it is then important that debugging skills must be reinforced with good programming practice in particular to logic debugging.

### Logical Control Structures

Logical Control Structures is defined as a flow of control in codes using algorithm and logic. It helps to analyze and choose which direction of a program flow based on the given argument and conditions. There are three basic types of logic which is known as sequence (follows a sequential flow which depends on the series of instructions), selection (involves a number of conditions or parameters) and iteration (employs a loop which involves a repeat statement).

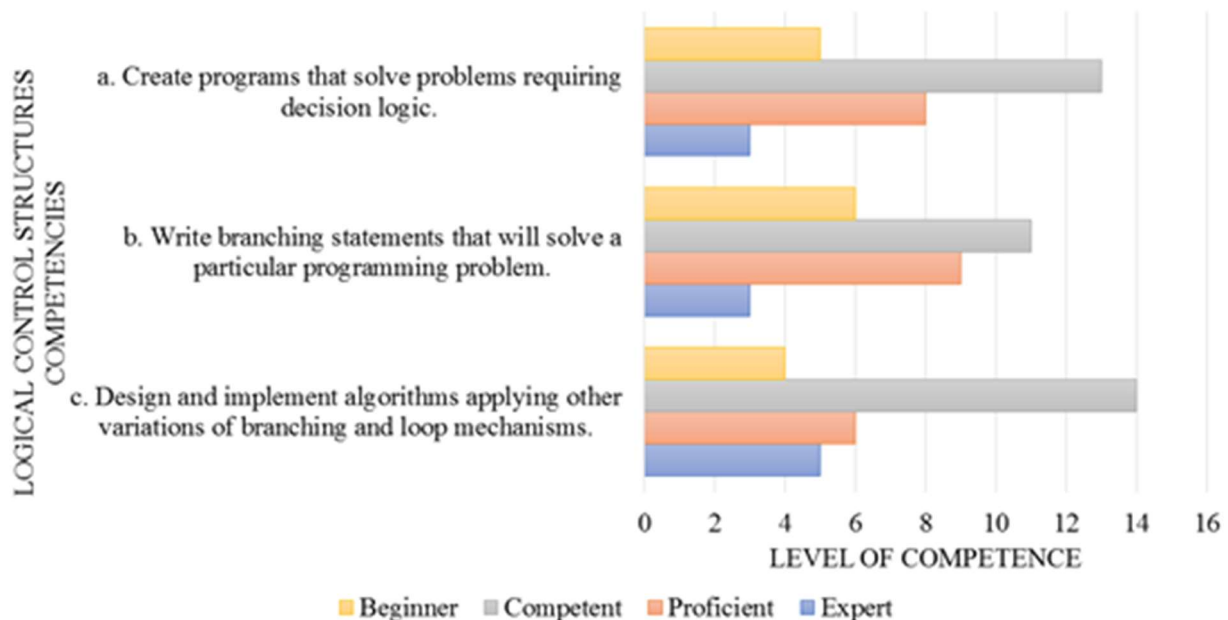


Figure 3: Level of programming competence for Logical Control Structures

For logical control structure, most of the participants have competent to proficient skill in creating logic, branching statements, and algorithms for creating loop statements. One factor that may contribute to the capable skills of the students in logical control structure is the number of weeks (usually two to three weeks) given for the lesson discussion, simulation and practice. In a study Collier and Downing (2019) their findings suggest that students may mistake a sequential if for an else-if statement, which may cause them to misinterpret a conditional control structure. This may also be a factor why students assessed themselves for having competent skills in logic. In the 2018 study of Bouchard on Learning how to code for loops through play, he encourages educators to adapt and use games to make loop coding more enjoyable for students and improve computer science teacher's pedagogy on active learning.

### Array

In programming, an array is a set of data that is stored in a memory location. It is a helpful programming concept for locating and identifying stored elements and value. In the PSHS Computer Science curriculum it is a competency that enables students to declare, initialize, reference, and traverse array elements for practical use.

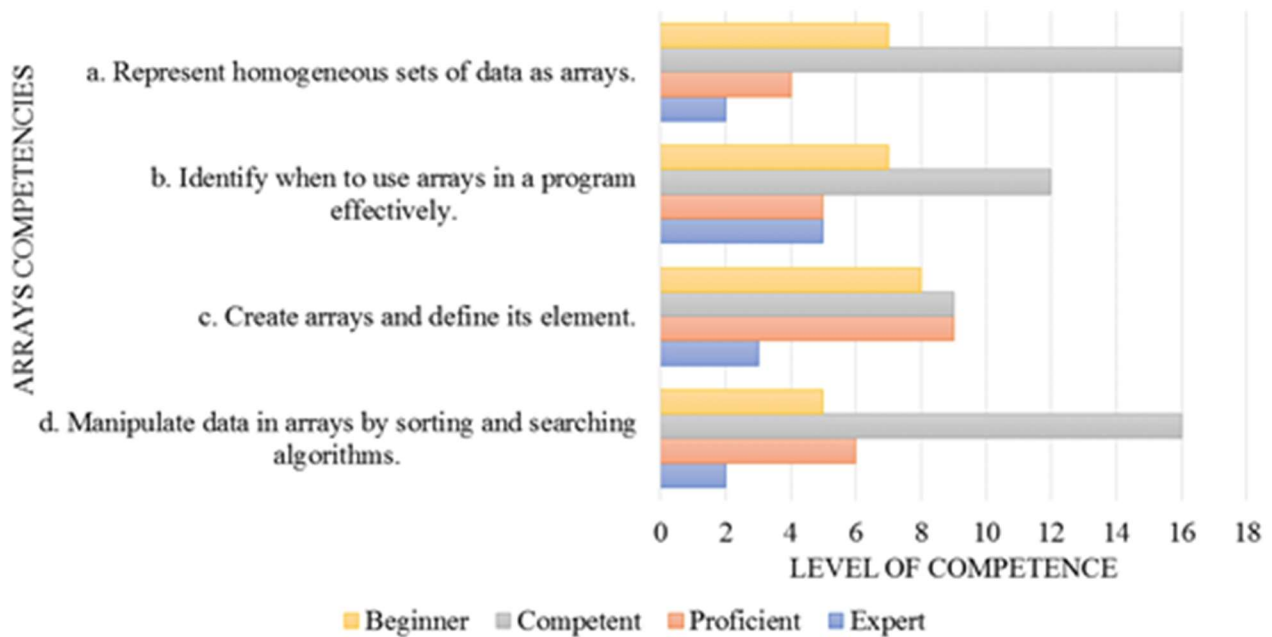


Figure 4: Level of programming competence for Arrays

A large number of students have competent skills in programming Array. While, several students have beginner skills in representing data arrays, identifying correct arrays for the program, defining and creating arrays, and manipulating arrays using sort and search algorithms. This result may be attributed to the online class modality during the school year 2021-2022 wherein their foundation skills in array should be honed during their C++ programming in grade 8. But unfortunately, some students were not able to fully grasp the concept of array. Based on Priest and Harper (2015) it is important that students need to master the use of array because it can help answer real world problems with a large collection of similar variables to a more simplified code. This is supported by Pearce (2017) where the study said that the use of array makes code easier and a variety of crucial algorithms for sorting, traversing and searching is used.

### Functions

Functions are block of code that can be used multiple times. It enables programmers to chunk or decompose a problem into smaller manageable code in order to perform a particular task. Function is an important aspect programming because it makes the code easier to read and reduce the lines of program for faster code run.

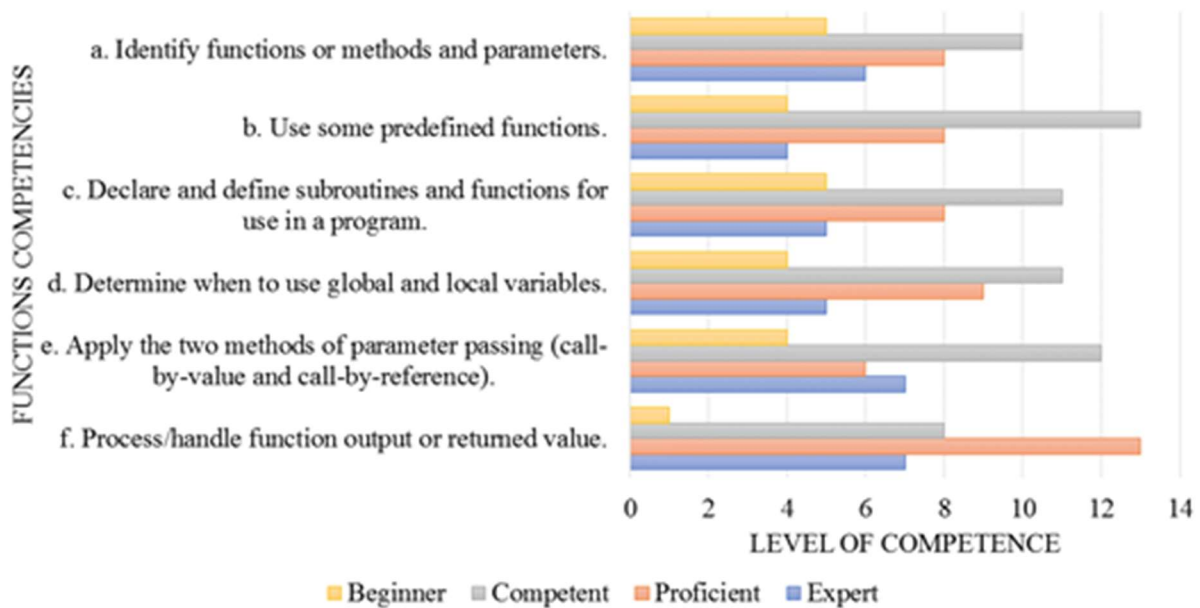


Figure 5: Level of programming competence for Functions

Results have shown that most of the students have competent skill in using functions. Some have proficient skills in identifying functions, methods and parameters, use predefined functions, and process/handle function output with or without returned value. Based on the observation of the researcher on the student's performance on implementing functions in JavaScript coding, most of the students were able to solve a problem using function in the class. Functions are very important for programming according to Abdugafforovna (2023), it allows the process of creating code much easier. To improve the quality of work and productivity in coding, it's important to spend a little time understanding the program and thoroughly examine functions. With functions or modules, it allows students to reuse code instead of rewriting it, keep variable namespace clean, and test small parts of a program in isolation from the rest which can be useful in programming languages such as C, Java, Python, etc. (Germain, n.d.).

#### Learning experiences of students in computer programming course

Figure 6 Learning experiences of students in computer programming

Learning experience according to Kolb (1984) is defined as a learning process where knowledge results from the combination of grasping and transforming an experience. In this study, learning experiences is the narrative of students while taking the course. During the semi-structured interview students shared their learning experience while taking the computer programming course.

#### Learning is fun and exciting

Based on the gathered data on the learning experience of students in computer programming, most of the students said that coding is fun. Some of the students said that the subject is fun because they have the freedom to create their own code and the programming is interesting:

"I learned that coding is also a fun experience to learn because we can make a website that we prefer." (S3)

"My learning in computer science is very fun and exciting." (S4)

"It's a very thrilling and fun subject for me really." (S4)

"It is a very fun subject but also stressful. Since CS3 is about website programming, I was interested in it and I really paid attention to the classes." (S15)

Teaching patience. Because of the challenging nature of learning how to code it helps the students to be patient. Sosangyo (2022) mentioned that coders can increase the quality of their work and make fewer mistakes, if they have patience and can keep their focus. Patience allows coders to take their time and completely comprehend the problem.

Improving creativity. Coding also allowed the participants to be creative they mentioned that:

"Programming has taught me another way to be creative such as making interactive websites with pleasing aesthetics." (S20)

"Computer programming is a very fun subject where I learn to be creative and think outside the box and be more communicative." (S23)

Promoting collaborative coding. In a study by De Jesus and Silveira (2021) on collaborative learning framework, it is important that computer science teachers must use activities that effectively develop Computational Thinking related skills such as student collaborative work with appropriate teacher support. This study is supported by the result of the research that collaboration helps them improve their skills they said that:

"When it comes to our assessments, it allowed us to collaborate with our co-scholars and practice skills that we could use in fields that we would eventually pick." (S9)

"My learning experiences in computer programming are experiential and collaborative. I prefer learning alongside with other learners because it helps like you could ask questions with one another and seek for help." (S22)

Developing critical thinking in solving problems. Critical thinking is one of the main aims of programming where it can be improved through authentic and real-world approach. Critical thinking is about resisting the urge to solve problems on autopilot. It is thinking problems thoroughly, systematically and at an inductive method rather than just applying the solution that comes to mind. As narrated by the participants:

"I learned to think critically & solve problems by analyzing it thoroughly." (S17)

"It taught me how to think in a step-by-step process where it improved my critical thinking." (S20)

Using different programming languages. The use of appropriate programming language allows students express computational tasks in certain ways, one student mentioned:

"Different programming languages with coding games can hone my problem-solving skills, improve my knowledge of programming concepts, and enjoy the learning process too." (S3)

The said learning experience of the students in programming allows the researcher to have a better understanding of computer science curriculum. It has highlighted the thoughts, skills, and values of the students in learning programming.

#### Students challenges in computer programming course

Programming has been one of the challenging subjects for computer science students in STEM. The student must have strong critical, analytical, logical, and reasoning skills to program effectively. Based on the result four major challenges were identified namely (1) improper coding syntax (2) incorrect solution to problem (3) difficulty in debugging and (4) learning challenges.

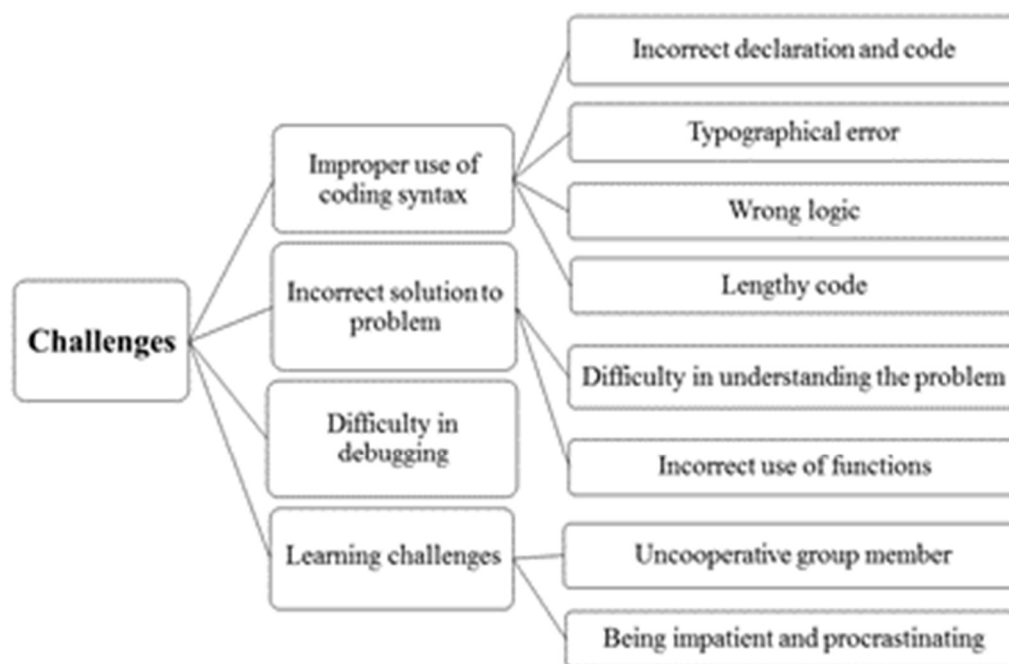


Figure 6: Challenges of students in learning computer programming

Improper use of coding syntax. Acevedo (2021) defined syntax error as entering an incorrect line of code which prevents the code from running. Based on the results of the study the common syntax errors include incorrect declaration of variables and code; typographical errors such as misspelled code and missing punctuations; incorrect logic for control statements; and lengthy codes which hinders faster runtime. In a study by Alzahrani and Vahid (2021) on common logic errors for programming learners, frequent error that students quickly see and correct is not necessarily a problem; in fact, some research would say that such spotting and correcting constitute an essential component of the learning process, some of the participants mentioned the struggle of fixing a syntax error:

"Difficult to remember the syntax of a Programming Language." (S2)

"I have a difficulty memorizing things but I don't necessarily have bad syntax or anything like that." (S16)



"You'll need to remember or familiarize the functions of different syntax, especially in JavaScript wherein you'll have to really understand and comprehend the connection of each of those characters." (S24)

Incorrect solution to problem. Results show that students have difficulty in understanding the problem and incorrect use of functions. According to Kwon (2017) students have trouble creating code solution plans that computer could execute properly. To become proficient at designing code solution plans to program function students need instructional support from teachers. Some of the participants narrated the challenges they encounter on solving a coding problem:

"I have encountered many challenges, but one is when I give up when I don't know how to solve the problem." (S7)

"... lacking when it comes to solving the problems, it's truly the challenge because it's like you have to really start over again in order to code. It's like, you can't make a solution/code unless you really know each function and their uses." (S14)

"Sometimes, it is difficult to find a solution to a problem as well as comprehending the problem. It's also difficult to plan out what you want the code to do and implement what I have learned. I sometimes feel lost." (S20)

Difficulty in debugging. Debugging as defined by Microsoft (2023) refers to the process of iteratively running a code in a debugging tool usually a compiler to identify the precise place where a programming error occurred. Based on the study by Bottcher et al. (2016) they found out that the key non-technical qualities that are fundamental base competencies in programming, such the capacity to work systematically, appear to correspond with the debugging abilities of students. This suggests that in order to enhance students' debugging abilities, it is important to cover both the technical and necessary base capabilities of students. Dong (2022) suggested that with more varied instruction, students can consider which debugging techniques can help them solve their current problem more quickly. This method of thinking can improve the mastery of debugging abilities and steadily develop their debugging strategy models, assisting them in moving more quickly into more complex debugging stages. Other factors that contribute to having difficulty in debugging was narrated by some participants:

"First of all is debugging. Once you're done, and there is one bothersome error, you're done for and you made your effort done." (S2)

"...debugging and finding the errors is the hardest step of all. It consumes a lot of time just to find one single error, especially typographical errors." (S5)

"... I'm impatient with my codes and debugging, but it can be fixed with time." (S26)

Learning Challenges. Results show that student learning challenges were also a factor in understanding computer programming. Different aspects were mentioned which is having an uncooperative group member, being impatient and procrastinating. When grouping students, it is a must that teachers provide specific intervention to maximize student interaction and learning (Brame & Biel, 2015). To avoid being impatient and procrastinating in programming James (2017) suggested

the following techniques: challenge yourself – students must take on real world problems to solve; divide and conquer - break project into smaller modules; Iterate - reduce lines of code, to make them more readable resulting to good performance; getting unstuck - google the error or the solution; and code review. Narrated challenges of the participants:

"As for collaboration, there are some times that my group mates are kind of hard to work with since they are hard to communicate with and some of the ideas, we have clash with each other." (S9)

"... there are people who make it more difficult, like in a group work activity and someone doesn't cooperate in the group." (S28)

"My patience sometimes limits me and I get mad if my code can't work, and sometimes I don't want to work on my assignments due to procrastination and due to the fact that I'm impatient." (S26)

To address the challenges of students the following learning strategies which is backed up by scientific research can be used: (1) remember that there is no nerd gene - the ability to program is a taught skill that can be developed with practice, (2) use peer instruction – to provide one-to-one mentorship of students, (3) use live coding - instead of using slides, (4) use authentic tasks - identify task that students want to engage in, and (5) don't just code - rather than writing code from scratch, students can be given lines of code they need to solve a problem. This way they can improve their syntax ability, check if their solutions, debug if necessary and be interested to learn better (Brown and Wilson, 2018).

#### Discussion and conclusion

The PSHS Computer Science Curriculum aims to develop students to become competent in problem-solving through computational thinking. The results have shown that the majority of the Grade 9 students have competent level of competency in computer programming based on the curriculum. This implies that there is a need for competency improvement since the level is lower than proficient and expert. The students' learning experiences in computer programming includes the subject as fun and exciting, teaches patience, improves creativity and critical thinking, and helps students to use different programming languages. However, there is a need to improve on the students' coding syntax, finding the right solution to a problem, debugging, and learning challenges. And in order to address the challenges of the students, there is a need to strengthen and innovate the teachers' teaching methods or strategies in delivering programming lessons. Based on the nature of exploratory study, as a possible introduction for further research the future researchers may diversify and expand the number of participants to different grade levels in junior high school and include schools that offer computer science. The results of the study are useful in guiding computer science teachers to further improve their teaching strategy implemented in the class.

**Keywords:** computer programming, JHS computer learning experiences, computer learning strategies

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## **Enhancing Digital Intelligence among Students: The Case of Rajamangala University of Technology, Thailand**

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### **Abstract**

**Objective:** This article aims to study the characteristics of digital intelligence and development guidelines for students at the Rajamangala University of Technology in the digital era of 21st-century education. It is a qualitative research study involving a literature review, the analysis of related concepts and research works, and interviews with six students of the Rajamangala University of Technology group. The study found that digital intelligence for technological students requires for four key attributes: (1) knowledge, (2) the ability to apply technology for economic and livelihood benefits, (3) fostering a creative and lifelong learning environment, and (4) promoting social diversity. **Conclusions and Recommendations:** Regarding the development guidelines for students, it is suggested that the Rajamangala University of Technology should establish a foundation for student development by incorporating general education courses that cover all four attributes. Additionally, extracurricular activities should be organised to enhance civic intelligence according to students' interests. These guidelines can also be applied to the development of students in other educational institutions in Thailand.

**Keywords:** Development, Guidelines, Intelligence, Citizenship, Students

### **Introduction**

The concept of digital intelligence, which is frequently discussed, particularly in the educational sciences, is seldom encountered. Digital intelligence has been used in business administration in the digital era. Additionally, it sought to provoke a discourse on whether digital intelligence is concurrently to remain competitive and whether these two phenomena ought to be regarded as equivalent. According to the findings, successful outcomes for organisations are attainable if digital intelligence is evaluated concurrently and with equal weight (Yeke, 2023).

Humanity has entered the era of digital intelligence convergence with the advent and implementation of technologies, including 5G and big data artificial intelligence. This convergence has facilitated the transition of education and learning into a novel era characterised by the prominence of graphical data. Graphical data is intelligent, scalable, narrative, intuitive, panoramic, and interactive in education; it imparts practical, experiential elements to student learning, instructor instruction, learning assessment, and teaching administration. This paper examines the utilisation of digital

intelligence in education and instruction through the research model of knowledge mapping and its multi-technology fusion model. It also explores the implementation of intelligent education through the perception and analysis of pictorial data, which enables data-driven and data-empowered experiences and services to enhance learning and instruction in education (Chen et al., 2022).

Online collaboration and communication is the primary competency considered crucial, while cybersecurity is considered inconsequential. A novel perspective on the digital intelligence exhibited by project executives is essential. It contributes to the ongoing discourse concerning the necessary digital competencies and skills of the future. In addition, it provides organisations with guidelines for planning and structuring training and fortifying their current project leaders. There must be a coordinated effort to improve the skills of project directors. It should not be left to chance (Marnewick & Marnewick, 2021).

Due to the highly subjective nature of traditional comparative education methods and the significant influence of individual subjectivity in the application process, the research findings are, to some extent, subjective. Concurrently, substantial controversies exist within academic circles regarding the practical implementation of comparative education. The conventional approach to comparative education is inherently subjective, and the practical performance of these methods is influenced significantly by individual subjectivity; consequently, the research findings are comparatively subjective. Simultaneously, substantial debates exist regarding the academic implementation of comparative education. To resolve disputes regarding the application of comparative education and surmount the subjectivity of conventional comparative education methods. Computer technology can be utilised to conduct applied research on contemporary comparative education in the age of intelligent digitalisation. Digital processing is used to examine the three-dimensional space of educational methods within the context of educational methodology. Additionally, it integrates image and graphic analysis to conduct intelligent text recognition and semantic analysis. Combining machine learning techniques for semantic comprehension with an automated system for comparing educational approaches integrates practical requirements of comparative education to develop the system's operational framework. It employs experimental research to assess the system's performance. It is evident from the research findings that the model developed in this article has a more significant impact (Zhang, 2022).

Global education reform is already in progress, and further monumental efficiency-improving solutions may be implemented shortly. Ensuring that future generations are provided with education of the utmost quality is paramount. An increasing number of scholars, policymakers, and experts believe that learning and teaching methods can be substantially enhanced by applying emerging technologies in the coming years. With the increasing acceptance of this methodology within the scientific community, fresh investigations and scholarly articles are being published concerning it. The current state of the traditional education system is incapable of or can only struggle to deliver the level of instruction necessary for the ongoing and efficient development of individual abilities. A new educational paradigm, Education 4.0 aims to tackle the challenges and prospects of the fourth

industrial revolution. It enables students to set their tempo and learning model. Education 4.0 is founded upon the principle of experiential learning, wherein participants are motivated to acquire knowledge and make discoveries in a personalised, experimental fashion. Despite the growing interest in the potential of Education 4.0, its implementation and level of support are still in their nascent stages. While certain regions have made limited-scale efforts to adopt the concept, it is primarily in the testing phase (Udvaros & Forman, 2023).

## Results

The study found that digital intelligence for technological students requires for four key attributes: (1) knowledge, (2) the ability to apply technology for economic and livelihood benefits, (3) fostering a creative and lifelong learning environment, and (4) promoting social diversity.

## Conclusions and Recommendations

Regarding the development guidelines for students, it is suggested that the Rajamangala University of Technology should establish a foundation for student development by incorporating general education courses that cover all four attributes. Additionally, extracurricular activities should be organised to enhance civic intelligence according to students' interests. These guidelines can also be applied to the development of students in other educational institutions in Thailand.

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**Psychological, pedagogical and medical problems in teaching children with disorders of psychophysical development in Ukraine**

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## Extended Abstract

The article discusses the problem of providing comprehensive psychological and pedagogical assistance to children with disorders of psychophysical development. The need for integration of medical, psychological and pedagogical knowledge in the education of children with limited psychophysical capabilities is substantiated. The directions, stages and content of providing comprehensive psychological-pedagogical assistance to children with developmental disorders are revealed. An important condition for ensuring the high efficiency of correctional and developmental work is a complex assessment of impaired psychophysical development of children/adults, consisting of the unity of medical-psychological components. In the process of comprehensive assistance to children with disorders of psychophysical development, an integrative approach to the organization of correctional work with the organic use of psychological and medical methods in diagnosing and overcoming developmental disorders becomes relevant. The directions, stages and content of providing comprehensive psychological-pedagogical assistance to children with developmental disorders are revealed.

**Keywords:** integrative approach, disorders of psychophysical development, comprehensive assistance

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**Attitude of Post Graduate Students towards Blended Learning**

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**Extended Abstract**

The advancement of human civilization follows that of nature. In response to societal and human requirements, the educational system has occasionally undergone reconstruction and rearrangement. Humans are always trying to invent new things whenever they need something for their existence. We may observe evolution in many facets of our lives as a result. In particular, the technology side is evolving on a daily basis and we don't know where it will stop. Now technology is an inseparable part of our education system so whichever is invented, we grab those things and try to cope up with them. That is why the term e-learning or online learning is germinated. Although the term Blended learning emerged last two decades before but very recently, it surfaced on the majority of people's mind when catastrophic COVID-19 has trembled the whole World. At that time to continue everything, only the online system was the key medium. Especially the education system, various online learning germinated very rapidly. But after the pandemic, humans are bound to think some alteration of traditional learning. Then the concept of Blended learning is prominently shaking some researchers' mind and they think that this method will be the best alteration for traditional learning. Actually, Blended learning is such kind of process where learners get the opportunities of both online and facet face interactions. According to the needs of the moment, National Education Policy 2020 in India is also pressing light on the use of Blended learning in higher education and we also need to consider how the teaching-learning process will develop in the future. In this study, the researchers tried to investigate the level of attitude of Post Graduate students towards blended learning and also tried to find out the difference in the attitude of Post Graduate students towards blended learning with reference to their gender, locality, semester, religion and internet access (user and non-user), stream and caste. The descriptive survey method was used in the present study. All the Post Graduate students of West Bengal comprised the population of the study.

A total of 300 Post Graduate students of West Bengal were taken as representative sample of the whole population. Simple random sampling was followed for selecting the sample. An attitude scale was used for knowing the attitude of Post Graduate students towards blended learning with help of Google Form. The study explored moderate level of attitude of Post Graduate students towards blended learning in West Bengal. It is also exposed that there is no significant difference in the



attitude of Post Graduate students towards Blended Learning with respect to gender, location, semester, and religion. The study also revealed that there is a significant difference in the attitude of Post Graduate students towards Blended Learning with respect to types of user, stream, and caste. Accordance to the results, the researchers tried to make a road-map of Blended learning for future higher education policy in the backdrop of West Bengal.

Keywords: Technology, Blended Learning, COVID-19, Higher Education, NEP 2020

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## **Sustainability**

### **Acknowledgement of our Sustainability Network**

Sustainability is one of the key issues nowadays. While many actors support sustainability to a great extent, other do a kind of green washing. At the CoSiM Conferences, we want to support research internationally to find true support for our earth.

Special thanks go to the ZWIRN Center of Ostfalia University and the study program "Sustainability and Risk Management". Thank you Prof. Achim Michalke and Prof. Stefan Zeranski for adding me as a lecturer to your program. The link to our study program you find here: <https://www.ostfalia.de/cms/en/zwirn/sustainability-risk-management-m.sc/>

Special thanks go to OStD Stefan Nowatschin, Head of the Vocational School Uelzen (Berufsbildende Schulen 1). He was not only awarded many times for his successful strategy and educational training in sustainability. He also started the local Sustainability Network in Uelzen (Nachhaltigkeitsrat Uelzen). For the second year, his students participated at our Conference in 2021 and 2022 under the lead of OStR Frank Nierath.

In 2021, we had the great honor to support the model project "Oeko Modellregion Heideregion Uelzen". Thank you to Dr. Christiane Kania-Feistkorn and Eva Neuls. The link to the Farmers association and the project you find here: <https://oeko-fuer-uelzen.de/>

With this year's Conference, we internationalized our research and support of Sustainability. Thank you so much for all your valuable contributions this year and hopefully in future.

The key topics are: Economic, Ecologic & Social Sustainability, Corporate Social Responsibility, Corporate Governance, Cradle-to cradle, Recycling of Raw Materials, Development of BRICS economies, CO2 emissions by BRICS States in the future, CMIP6 Model of the IPCC, Climate Change, Regeneration, Ecological Food Supply, Water, Air & Earth Protection, Social Inequality. Ecological Landscape Urbanism, Ecological and sustainable urban design, Design tools for sustainable urban design, Ecological processes in urban ecosystems, Application of sustainability and resilient principles, High performance and energy efficient buildings, Sustainable city design, planning and management, High performance infrastructure, Monitoring and assessment tools: building regulation and performance evaluation, Climate responsive architecture: solar architecture and renewable energies, Daylight in buildings and nature ventilation, Green building technologies and integration, User-building-interaction and post occupancy evaluation, and Innovative and eco-friendly materials for the building envelope. Please embrace the United Nations' 17 SDG.

## **What is worth knowing about a Sustainable University?: Results of a systematic Literature Review**

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### Extended Abstract

Historically, it was assumed that the functioning of higher education institutions (HEIs) could be limited to the tasks specified in their statutes. Nowadays, HEIs are expected to pursue three missions, the first of which is education (teaching process), the second is research activity, and the third is the development of mutual relations with entities of the socio-economic environment, which are to result in the dissemination, popularisation and commercialisation of research results. The concept of a third mission appeared in the academic literature at the end of the twentieth century and accompanied the idea of the entrepreneurial university (third generation university). An entrepreneurial university is supposed to be an institution that strives for a strong international competitive position in the teaching and research market, obtains benefits from the commercialisation of its research activities, which recognises the need to build close relations with the business and regulatory spheres. Thus, the manifestation of the third mission is, among other things, the engagement of universities in popularising and implementation of the concept of sustainable development (SD).

The concept of SD has been developed in response to serious concerns over the potential of the Earth's global ecosystem to sustain the impact of anthropo-pressure. It has been aimed at the preventive elimination or at least reduction of the imbalance between economic growth and social development as well as socio-economic development and the natural environment. The concept of SD was introduced to the globally used terminology by the United Nations (UN) agencies. This term was used extensively for the first time at the UN Conference on the Human Environment in 1972. It stemmed from the original concept of sustainable management of natural resources. It was defined as a strategy aiming at development based on the rational utilization of local resources and knowledge gained by farmers to satisfy the needs of remote rural areas in Third World countries. It must be emphasised that SD is mainly considered within the framework of three approaches: the socio-philosophical concept (assuming the need for changes in the system of human values), a modern direction of economic development (assuming new economic organization and management methods), and a newly developed discipline of science.

SD is an interdisciplinary, multifaceted and multidimensional approach. It occupies a special place in economic sciences (and especially in ecological economics / environmental economics), natural sciences, legal sciences, or sociology. In the management literature, on the other hand, SD is combined with issues such as business ethics, stakeholder theory or corporate social responsibility

(CSR). The transfer of the idea of sustainability to the microeconomic level was made possible by implementing the concept of the sustainable enterprise into the practice of economic life. This is an entity that aims to create value not only for its shareholders and stakeholders in the short-term but also for society, the environment, and future generations in the long-term. A sustainable enterprise is characterized by ethical governance practices, integrity, and responsible leadership. The governing body ensures that the organization aligns with sustainability goals and is held accountable for its actions. In other words, a sustainable enterprise not only aims to be financially successful but also to make a positive impact on society and the environment, contributing to a more sustainable and equitable world.

In recent years, the idea of sustainability has begun to penetrate not only business entities, but also those in the public sector. The idea of the sustainable university (SU) is increasingly used in the literature. However, the concept is not fully formed, it is in the early stages of its development. A SU is a university that integrates sustainable practices and values in all aspects of its activities (education, science, cooperation with stakeholders in the socio-economic environment), aiming to create a positive impact on the local, global community and the environment. From the search carried out, it emerged that the previous publications have focused on the theoretical aspects of sustainability in university performance and on the presentation of solutions applied at the level of individual universities and their organisational units. Thus, in order to fill the knowledge gap, a decision was taken to find answers to six research questions (RQ):

- RQ1: In which types of publications (articles, post-conference material) has the concept of SU appeared most frequently?
- RQ2: Which publications in the field of SU have been cited most frequently so far?
- RQ3: In which fields of study have publications in which the concept of SU has appeared been classified?
- RQ4: Researchers from which countries have made the greatest contribution to the development of the concept of the SU?
- RQ5: What words or phrases most frequently co-occurred with the concept of SU?
- RQ6: How should a sustainable university be defined and what is its scope?

That is why, the main aim of this study was to present a systematic literature review (SLR) of the SU. The data search was conducted on 15 September 2023, and the selected peer-reviewed databases were Scopus and Web of Science. These repositories were selected as the primary sources of information to assure both scientific robustness and inclusivity. The research was started with the inclusion criteria by using the term “sustainable university” in the topic (title, abstract, or keywords). The “topic” category was chosen above the “text” category to limit the search results to publications that focused solely on investigating the SU rather than other areas of sustainability. Moreover, the search for articles was conducted regardless of the time limitations, but it was limited to conference and journal papers. The chosen articles were required to be written entirely in English to prevent any

misunderstandings. The exclusion process resulted in a total of 276 journal papers and conference papers from the Scopus and Web of Science databases (obviously, duplicates were disposed of). The concept of the SU is very important, up-to-date, and requires further analysis and consideration. It is interesting to find in the next studies answers to questions such as: What are the achievements of universities in terms of teaching activities for sustainability? What are the achievements of HEIs in terms of cooperation with the social and economic environment for SD? What is the ranking of HEIs in terms of their degree of „sustainability”? What factors determine the degree of „sustainability” of HEIs?

Keywords: university, sustainability, sustainable university, systematic literature review

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## **Sustainability at the Workplace**

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### **Abstract**

Sustainability in the workplace is a crucial business philosophy that emphasizes environmentally - conscious practices and responsible resource management. Sustainability has evolved from being a trend to a central and crucial aspect in the hospitality industry. Academic research plays a vital role in shaping our understanding of sustainability's impact on various aspects of the hospitality industry, including employee motivation and satisfaction. Sustainability initiatives can lead to a more pleasant and productive work environment. Embracing sustainability can enhance a company's reputation and attractiveness to customers, investors, and potential employees. Sustainability in the workplace can help to create a more innovative and creative culture. The Research design of this paper is Descriptive type. Data type is secondary. Sustainability is good for the environment, good for business, and good for employees. It is one of the most important issues facing our world today, and businesses have a responsibility to do their part to reduce their environmental impact. The participation of employees in the creation of sustainable initiatives needs to be improved. To create a better commitment to the work and execution of sustainable strategies, it is important that the employees also have the possibility to shape these initiatives with their opinions and suggestions. Employers need to keep track of the sustainable movements in their industry to guarantee maximum efficiency and obtain the most outstanding results for eco-friendliness, employee motivation, cost reductions and marketing benefits.

### **Introduction**

Sustainability has evolved from being a trend to a central and crucial aspect in the hospitality industry over the past two decades. This shift in perspective is supported by the works of Sakshi et al. (2020) and Shahzadi et al. (2014), who have noted the growing importance of sustainability in the industry. The fact that sustainable strategies and practices are now prevalent in most full-service hotels worldwide reflects the industry's recognition of the significance of sustainability in meeting customer expectations and contributing to long-term success. Academic research plays a vital role in shaping our understanding of sustainability's impact on various aspects of the hospitality industry, including employee motivation and satisfaction. Tschelisnig's (2022) bachelor's dissertation, titled "Motivation and sustainability — What importance does sustainability have for the motivation and satisfaction of employees at the workplace?" demonstrates the increasing interest in exploring the connection between sustainability initiatives and employee well-being. This kind of research is crucial for

identifying the benefits and challenges of incorporating sustainability practices into the workplace and understanding how they influence employees' motivation and satisfaction.

#### Aims of Sustainable Workplaces

Sustainability in the workplace is a crucial business philosophy that emphasizes environmentally-conscious practices and responsible resource management. It involves considering the environmental, social, and economic impacts of an organization's operations. Sustainable workplaces aim to minimize their negative impact on the environment. This includes reducing greenhouse gas emissions, conserving natural resources, and protecting ecosystems. Practices such as energy-efficient lighting, responsible waste disposal, and green transportation options all contribute to this goal. Sustainable workplaces prioritize waste reduction by minimizing the amount of waste generated and implementing recycling and composting programs. This not only reduces the environmental burden of landfills but also can lead to cost savings through reduced waste disposal fees.

Recycling is a core component of sustainability in the workplace. It involves collecting and processing materials like paper, plastics, glass, and metals to be reused in manufacturing processes. This conserves resources, reduces energy consumption, and decreases the need for raw materials. A sustainable workplace often promotes the well-being of its employees. This can include offering ergonomic workstations, providing access to natural light and clean air, and encouraging physical activity through initiatives like standing desks or fitness programs. Healthy employees tend to be more productive and engaged.

Sustainability initiatives can lead to a more pleasant and productive work environment. Natural lighting, indoor plants, and well-designed spaces can improve employee morale and creativity. Additionally, sustainable practices can reduce distractions and interruptions, enhancing overall productivity. Sustainable practices can result in significant cost savings over time. Energy-efficient appliances, lighting, and HVAC systems reduce utility bills. Waste reduction and recycling can lower disposal costs. Moreover, a healthier and more productive workforce can reduce healthcare and turnover costs.

Embracing sustainability can enhance a company's reputation and attractiveness to customers, investors, and potential employees. It shows a commitment to responsible business practices and social responsibility. By adopting sustainable practices, organizations can ensure compliance with environmental regulations and health and safety standards. This reduces the risk of legal issues and associated costs. Sustainability can drive innovation within an organization, leading to the development of new products, services, and processes that can give a competitive advantage in the marketplace. Sustainable innovations can also open up new markets and customer segments.

A sustainable workplace not only benefits the environment but also has a positive impact on employees' health, well-being, and productivity. It can reduce costs, enhance an organization's image, and position it for long-term success in a world where sustainability is becoming increasingly

important to stakeholders. By taking these steps, organizations can create a more sustainable workplace that benefits everyone involved.

Sustainability in the workplace can help to create a more innovative and creative culture. When employees are encouraged to think outside the box and find new ways to reduce their environmental impact, it can lead to new ideas for products, services, and processes. Overall, sustainability in the workplace is a win-win for everyone involved. It is good for the environment, good for business, and good for employees.

### Research Methodology

The Research design of this paper is Descriptive type. Data type is secondary.

### Literature Review

According to Casey and Sieber (2016) and the research by Gabriel Tschelisnig and Rodney Westerlaken highlights the growing connection between sustainability, employee motivation, and meaningful work in the context of the hospitality industry. Academic studies, like the one by Wolf (2012), emphasize the urgent need to address the unsustainable exploitation of the planet. This recognition underscores the importance of integrating sustainability practices into the workplace to help mitigate environmental damage. Wissmann (2013), is undergoing significant changes. Employees are increasingly questioning the meaning of their work and seeking employers who address their concerns. Job satisfaction is declining, highlighting the need for organizations to create more fulfilling work environments. Raineri et al. (2012) emphasize that meaningful and satisfying work can begin with an environmental and social vision. Having a clear vision for sustainability can guide organizations in developing initiatives that resonate with employees and enhance their job satisfaction. Gabriel Tschelisnig and Rodney Westerlaken's research, focused on the hospitality industry, indicates that sustainability initiatives have a positive impact on employee motivation and satisfaction. Employees view sustainability as a tool for motivation, and they are willing to actively participate in such efforts. One study measured occupant satisfaction, indoor air quality, employee wellness, and productivity of employees in a newly constructed government office compared to a previous non-green office and also with nation-wide benchmarks (Paevere & Brown, 2008). Another study conducted surveys in over 181 buildings and compared responses of employees in "green" versus "non-green" buildings. The survey reports on differences in satisfaction and perceived productivity between sustainable buildings and non-sustainable buildings; 80% of which are government offices (Abbaszadeh et. al., 2006).

The third study conducted a pre-and post-survey of employees that relocated to a sustainably refurbished floor within their very same office building. This study provided quantitative productivity data, sick leave data, and occupant satisfaction (Sustainability Victoria & the Kador Group, 2007). The final study selected for this composite looks at a LEED Platinum building's employee satisfaction. This study represents a population that is more inclined to appreciate sustainability as



the organization that inhabits the office space is an environmental conservation agency (Heerwagen & Zagreus, 2005). Common among these studies is data on overall occupant satisfaction, lighting, acoustics, thermal comfort, air quality, and productivity. Two of the studies reported satisfaction for these variables on a 7 point scale (-3 to +3) and the other two studies reported percentage increases or One study in particular looked at productivity data quantitatively and also tracked changes in sick leave and sick symptoms. Synthesizing this data will provide a representative view of the studies that have documented the impacts of sustainability in the workplace.

#### Ways to Promote Sustainability in Workplace

According to Natasha Moss crop, Senior Sustainability Manager at Kerry, that authenticity, getting started, and relatability are three key success factors for businesses who are starting on their sustainability journey. Authenticity is important because it shows that the business is genuinely committed to sustainability, rather than just greenwashing. This means being transparent about the business's current environmental impact, setting ambitious goals, and taking meaningful action to achieve them.

Getting started is important because sustainability is a complex and long-term journey. It is important to make progress, even if it is incremental. Businesses can start by identifying their biggest environmental impacts and developing plans to reduce them. They can also start to make changes to their operations, such as switching to renewable energy or reducing waste.

Relatability is important because it helps to engage employees and other stakeholders in the sustainability journey. Businesses need to make sure that people can see how sustainability is relevant to their job and to the overall business. They can do this by setting clear goals and targets, and by regularly communicating about the progress that is being made.

#### Benefits of promoting sustainability in the workplace

At its most basic, a sustainable workplace reduces or eliminates negative environmental impact. But there are many other benefits to consider, including increased job satisfaction and better employee retention rates.

Sustainability is good for the environment, good for business, and good for employees. It is one of the most important issues facing our world today, and businesses have a responsibility to do their part to reduce their environmental impact. Sustainable businesses can save money on energy costs. They can also reduce their emissions footprint, which is crucial in protecting the environment.

**Sustainability Can Lead to Higher Productivity** One of the top benefits of sustainable workplaces is that they can lead to higher productivity. In addition, sustainable workplaces are those that responsibly use resources. They avoid using resources that can damage the environment or cause health problems.

**Sustainability Can Result in Reduced Costs**

Sustainable practices are a great way to reduce costs. For example, a sustainable company may reduce its energy consumption by installing solar panels or wind turbines. As a result, it can lower its overall expenses, and it may even be able to sell excess electricity back to the grid.

**Sustainability Can Result in More Satisfied Employees.** Sustainability can be a great way to improve the workplace

environment and create a more sustainable future. In addition, a sustainable workplace can result in more satisfied employees because they will be able to see the benefits of their work directly.

## Conclusion

The study indicated that sustainability is an important topic for employees and that it creates a feeling of meaningfulness when such initiatives are implemented at their workplace. The participation of employees in the creation of sustainable initiatives needs to be improved. To create a better commitment to the work and execution of sustainable strategies, it is important that the employees also have the possibility to shape these initiatives with their opinions and suggestions. Employers need to keep track of the sustainable movements in their industry to guarantee maximum efficiency and obtain the most outstanding results for eco-friendliness, employee motivation, cost reductions and marketing benefits.

The study underscores the significance of sustainability as an important topic for employees. It not only addresses environmental concerns but also contributes to a sense of meaningfulness in the workplace. To enhance commitment and effectiveness in executing sustainable strategies, it is crucial for employees to have the opportunity to shape these initiatives. Encouraging their participation by seeking their opinions and suggestions can lead to more engaged and motivated employees. Employers should stay informed about sustainable trends and developments in their industry. This ongoing awareness is essential to ensure maximum efficiency in sustainability efforts and to achieve the best possible results in terms of eco-friendliness, employee motivation, cost reduction, and marketing benefits. The interplay between sustainability, employee motivation, and meaningful work is becoming increasingly important in workplaces across various sectors. Organizations that acknowledge the significance of these factors and incorporate sustainability into their workplace practices can not only attract and retain motivated and engaged employees but also make a positive contribution to environmental and social well-being.

In summary, the interplay between sustainability, employee motivation, and meaningful work is gaining prominence in the workplace and other sectors. Organizations that recognize the importance of these factors and integrate sustainability into their workplace practices are likely to attract and retain motivated and engaged employees while contributing to environmental and social well-being.

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## **Family Firms and Green Knowledge for Innovation**

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### **Extended Abstract**

Firms' ability to intercept, manage and fruitfully exploit external sources of knowledge is a crucial ingredient for innovation (Berchicci, 2013; Grimpe & Kaiser, 2010; Lane, Koka & Pathak, 2006; Van den Bosch, Volberda, & De Boer, 1999; Volberda, Foss & Lyles, 2010). Such absorptive capacity (Cohen & Levinthal, 1990) is particularly salient in the wake of major societal and technological trends, for example, those associated with environmental sustainability issues that are capturing much of policy makers' and businesses' attention today. Although businesses play a major role in generating innovation spillovers from external sources of green knowledge (i.e., from ideas and modes of operation that help put in place sustainable practices to improve and monitor environmental impacts), existing research examining the drivers of firms' absorptive capacity in the context of green knowledge is, unfortunately, still scarce.

We argue that a determining factor shaping a firm's ability to leverage external green knowledge for innovation is the firm's form of governance, namely the family involvement in the business. Specifically, family involvement in ownership and management creates a unique organizational setting characterized by strong social relationships with the surrounding environment, which favors knowledge spillovers across the boundaries of the firm (Basco, 2015; Chirico and Salvato 2008; Zahra, Neubaum, and Larrañeta 2007). Moreover, because family firms pursue aims focused on ensuring firm continuity across generations and retention of family control over time (Naldi, Cennamo, Corbetta & Gomez-Mejia, 2013), these businesses are strongly committed to renewing and reshaping social interactions both within and outside the family domain as a way to access external green knowledge (Salvato & Melin, 2008).

In our analysis of the relationship between family firms' innovation performance and external green knowledge, we introduce territorial embeddedness (Baù et al., 2019; Martinez-Sanchis et al., 2021; Uzzi, 1997) as a key factor shaping family firms' superior, yet heterogeneous, ability to leverage external green knowledge for innovation. Prior research has proposed that territorial embeddedness has a strong effect on the behavior of family members, who are often highly influenced by social values and norms prevailing in the community (Amato et al., 2022; Scott, 2001). Strong territorial embeddedness will provide an opportunity for repeated and frequent social contacts with the stakeholders in the family firm's social network. Research suggests that family firms are more sensitive to and place greater value on the evaluation of their firm by others around them (Miller & le Breton-Miller, 2005). We therefore suggest that family members' concern for reputation in their

community implies that family firms with strong territorial embeddedness will be more likely to leverage green knowledge from the local context (Audretsch & Feldman, 2004; Malmberg & Maskell, 2006), thereby enhancing their innovation performance (Iurkov & Benito, 2018; Siedschlag & Yan, 2021).

We test our hypotheses with a representative sample of Spanish manufacturing firms in the period 2009-2016. Our sample of manufacturing firms is particularly relevant for the purposes of our investigation because those in steel, petrochemicals, and paper products, for instance, have been major sources of air and water pollution (Carroll, Brown, & Buchholtz, 2018). Our findings show that family firms are more likely to record better innovation performance than non-family firms from a given stock of external green knowledge. In addition, our evidence shows that family firms' ability to leverage external green knowledge is positively moderated by their territorial embeddedness. In particular, we find that a narrow geographic scope —i.e., when the main source of sales is the family firms' immediate area— positively moderates the relationship between external knowledge and family firms' innovation performance. Moreover, our results confirm that the concentration of family firms' production facilities in spatially bounded areas positively moderates the link between external sources of green knowledge and innovation performance. Overall, these findings provide strong support to the territorial embeddedness perspective as an explanation of family firms' differential and heterogeneous performance in innovation. Territorial embeddedness, therefore, becomes a key driver to explain why and when family firms are better able than non-family firms to leverage external sources of green knowledge and attain superior innovation performance (Baù, Chirico, Pittino, Backman & Klaesson, 2019; Bird & Wennberg, 2014).

The study contributes to the literature in the following ways. First, we contribute to the current debate on sustainability and corporate socially responsible actions (e.g., Combs, Jaskiewicz, Ravi, & Walls, 2023; Miroshnychenko & De Massis, 2022; Miroshnychenko, De Massis, Barontini, & Testa, 2022) needed to tackle the grand societal challenges of the 21st century. In this sense, we highlight the advantages arising for family firms from the relationships among local actors based on the sharing of green knowledge in the community. To the best of our knowledge, the link between external green knowledge and family firms' innovation performance has so far been underexplored, despite its current relevance for policy and business strategy. While existing literature has mostly concentrated on explaining why family firms differ from non-family firms in terms of their environmental strategies (e.g., Block & Wagner, 2014; Craig & Dibrell, 2006; Dekker & Hasso, 2016; Doluca, Wagner, & Block, 2018; Sharma & Sharma, 2011) and environmental outcomes (i.e., performance) (e.g., Berrone et al., 2010; Dangelico, Nastasi, & Pisa, 2019; Haddoud, Onjewu, & Nowinski, 2021; Miroshnychenko & De Massis, 2022), we advance this research stream by revealing the role of absorptive capacity and territorial embeddedness as important mechanisms in explaining why family firms may have a unique advantage in benefiting more from external green knowledge than non-family firms.

Second, we enrich the growing literature addressing the interplay between local systems and family businesses (Backman & Palmberg, 2015; Baù et al., 2019) by connecting this literature with ongoing

research on family firms' innovation, and specifically on family firms' ability to leverage external sources of (green) knowledge (e.g., Brinkerink, 2018; Daspit et al., 2019; Kotlar et al., 2020). We offer novel evidence placing territorial embeddedness as an important element in explaining why family firms sometimes attain greater innovation outputs than non-family firms, given the same inputs (e.g., Block, 2012; Duran et al., 2016), as well as illuminating the conditions under which this is most likely to happen. Therefore, we add to the research stream in the family business literature that has underlined the context as a dimension explaining family firms' heterogeneity (e.g., Basco, Stough & Suwala, 2021). Although research has provided evidence supporting differences in family firms' performance and behavior across socio-spatial contexts such as rural and urban areas (Backman & Palmberg, 2015; Baù et al., 2019), municipalities (Amato, Basco, Gómez-Ansón, & Lattanzi, 2020), and regional settings (Adjei, Eriksson, & Lindgren, 2016), the benefits of family firms' territorial embeddedness in terms of innovation performance have so far been underexplored.

**Keywords:** green knowledge, family firms, innovation performance, territorial embeddedness.

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## **Unveiling the Path to Sustainable Tourism Destinations through Digital Transformation**

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### **Abstract**

This study explores the evolving landscape at the intersection of sustainable tourism destinations and digital transformation. In recent years, the tourism industry has been undergoing significant changes due to digital advancements, reflecting a broader global shift toward sustainability. This study employs bibliometric techniques to scrutinize the literature, unveiling key patterns, influential journals, and emerging trends. The analysis encompasses a comprehensive collection of scholarly articles, enabling the identification of pivotal themes and concepts within the sustainable tourism and digital transformation domains. Through a systematic review of the literature, this study highlights the interdisciplinary nature of this field, bridging environmental sustainability, technology adoption, and tourism management. Key findings reveal a growing scholarly interest in the subject, with a surge in research publications in recent years. A closer examination of the literature reveals a substantial focus on digital technologies' role in enhancing sustainability in tourist destinations. Researchers are increasingly investigating topics such as smart tourism, eco-friendly practices, and innovative digital solutions for sustainable tourism destinations. Moreover, the paper sheds light on the influential journals and proceedings driving the discourse in this domain, as well as the most prevalent keywords and concepts. This study offers valuable insights for future research directions and serves as a roadmap for researchers, policymakers, and industry stakeholders seeking to understand the evolving landscape of sustainable tourism destinations through digital transformation. It provides a comprehensive overview of the current state of knowledge and highlights avenues for further exploration, ultimately contributing to the advancement of sustainable tourism practices in a digitally transformed world.

**Keywords:** Sustainable tourism destinations, digital transformation, science mapping, research gap, future directions

### **Introduction**

In an era marked by unprecedented global mobility and a growing appreciation for the natural and cultural riches of our world, the tourism industry stands at a pivotal crossroads. The increasing demand for travel experiences, coupled with a heightened awareness of environmental and social concerns, has necessitated a fundamental reevaluation of how we approach tourism (Hall, 2008). In this context, the paper embarks on a journey to explore the intricate interplay between sustainable

tourism and the powerful catalyst of digital transformation. As the global community grapples with the urgency of addressing climate change, biodiversity preservation, and the equitable distribution of tourism's benefits (Jamal & Dredge, 2014), the fusion of sustainability and digital innovation offers a compelling pathway to reshape the future of tourism destinations (El Archi, Benbba, Kabil, et al., 2023; El Archi, Benbba, Nizamatinova, et al., 2023). This bibliometric analysis delves into the evolving landscape of sustainable tourism, guided by the digital revolution, to illuminate trends, gaps, and promising directions that can contribute to a more sustainable, responsible, and enriching tourism experience for all.

### Literature Review

Sustainable tourism has emerged as a crucial paradigm in the tourism industry, emphasizing the need to minimize adverse impacts on the environment, respect local cultures, and generate tangible socio-economic benefits for host communities (Dwyer, 2018; Esfehiani & Albrecht, 2018). Scholars such as (Harris et al., 2012; Hunter, 1997) were pioneers in discussing the concept of sustainable tourism, laying the foundation for subsequent research. The sustainable tourism concept addresses a range of challenges. Environmental degradation, resource depletion, overcrowding, and unequal distribution of benefits are just a few of the pressing concerns (Hall, 2019). Researchers have identified the importance of achieving a balance between economic, environmental, and socio-cultural dimensions to ensure the long-term viability of tourism destinations. Digital transformation, characterized by the integration of information and communication technologies (ICTs), has been a transformative force in various industries, including tourism. Technologies like mobile apps, data analytics, and social media have revolutionized how tourists plan, experience, and share their journeys. This digital evolution has provided destinations with new opportunities to enhance their competitiveness and sustainability (Buhalis & Law, 2008; Gretzel, 2011). Recent research has explored the synergy between sustainable tourism and digital transformation. The adoption of digital technologies can contribute to achieving sustainability goals in various ways. These include reducing the carbon footprint of travel through virtual reality experiences, enabling real-time monitoring of environmental impacts, enhancing visitor engagement with educational apps, and promoting eco-friendly practices through online communities (El Archi, Benbba, Zhu, et al., 2023; El Archi & Benbba, 2023).

### Methodology

While there's a growing body of literature on sustainable tourism and digital transformation, this paper employs a bibliometric analysis to systematically map and analyze the existing knowledge landscape. By quantifying trends, keywords, and thematic clusters, the study aims to provide a comprehensive overview of the current state of research in this field. Furthermore, it seeks to identify gaps and opportunities for future research, facilitating a deeper understanding of how digital transformation can drive sustainable practices in tourism destinations.

This literature review demonstrates the multifaceted relationship between sustainable tourism and digital transformation and underscores the relevance and timeliness of the study's bibliometric analysis to uncover hidden patterns and insights within this evolving research domain.

In the research process, it is crucial to begin by carefully selecting appropriate databases and bibliometric tools. This entails the identification and choice of relevant academic databases and bibliometric software, such as Scopus and R programming, which are instrumental in data analysis and retrieval. Subsequently, a well-thought-out search strategy should be developed, incorporating a comprehensive mix of keywords and controlled vocabulary terms. This search strategy is designed to encompass various aspects of the study, including sustainable tourism, digital transformation, and any related concepts. By meticulously crafting this strategy, researchers can ensure that their exploration of the literature is thorough and methodical, ultimately enhancing the quality and comprehensiveness of their findings.

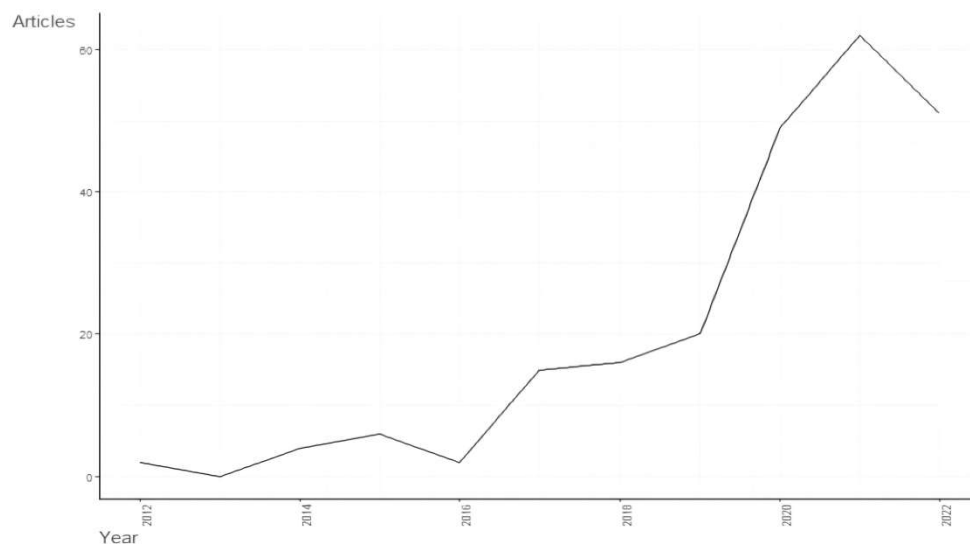
To effectively streamline the research process, it is imperative to establish both inclusion and exclusion criteria. Inclusion criteria should be meticulously defined to outline the specific parameters for selecting pertinent papers. These criteria typically encompass aspects like the publication date range, language, document types (such as articles, reviews, or conference papers), and their direct relevance to the research topic. On the other hand, exclusion criteria must be equally explicit, serving the purpose of sieving out any papers that do not align with the research objectives. This careful delineation of inclusion and exclusion criteria ensures a targeted and focused approach to the literature review, enabling researchers to sift through a vast body of work more efficiently and discerningly (Connelly, 2020; Meline, 2006).

## Results and Discussion

The data presented in Figure 1 depict the yearly publication count of articles pertaining to this subject from 2012 through 2022. The examination demonstrates a noticeable upward trajectory in publication numbers, notably marked by a substantial upturn commencing in 2018.

The journal that stands out with the highest number of articles on this subject is "Sustainability (Switzerland)". Additionally, several other journals have also made a notable contribution to this topic. Notable examples include "Tourism Management," "Journal of Sustainable Tourism," and "Current Issues in Tourism," each featuring four publications. This compilation underscores the multifaceted exploration of the topic across a diverse array of sources, spanning various fields of study.

Figure 1. Annual scientific production



This diversity suggests that the subject is being examined from multiple vantage points, emphasizing the interdisciplinary nature of research in this domain (see Figure 2).

Figure 2. Most relevant journals



The word cloud visually represents the most recurrent terms identified in the bibliometric analysis concerning the intersection of sustainable tourism destinations and digital technologies. In this representation, the size of each term corresponds to its frequency within the analyzed literature. By examining the paper's keywords, it becomes evident that the most prominent terms in the word cloud are "smart tourism" and "sustainable tourism," underscoring their extensive study within the context of digitalization and sustainability in tourism destinations. Other noteworthy terms include "social media," "smart city," "sustainability," and "big data," indicating the significant interest in these

subjects within this research domain. Additionally, the word cloud underscores the pertinence of COVID-19 in the analyzed literature, with "COVID-19" emerging as a frequently encountered term.

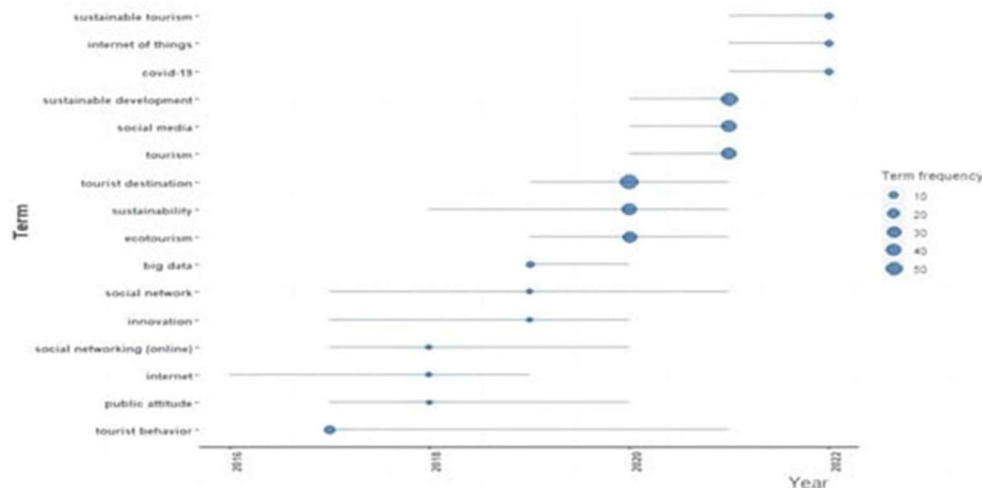
Figure 3. Word cloud



A significant area of focus revolves around "tourist destinations," a topic that has garnered considerable attention in publications over the past three years. This indicates a sustained interest in exploring diverse facets of tourist destinations, including elements like destination image, marketing, and management. Equally noteworthy is the subject of "sustainability," reflecting a burgeoning interest in delving into the intricate connection between sustainability and tourism. This encompasses examinations of sustainable tourism development and ecotourism. Moreover, "sustainable development" has emerged as a focal point in various publications, signifying a mounting emphasis on investigating how digitalization can lend support to sustainable development in tourist destinations. Additionally, "social media" and "tourism" have surfaced as popular topics, with numerous publications devoted to each, underscoring the continuous exploration of the influence of social media on the tourism sector and how digitalization is reshaping the tourism industry (see Figure 4).

The bibliometric analysis conducted in this study reveals several prominent trends within the research landscape of sustainable tourism and digital transformation. Notably, there is a discernible increase in the publication of papers on this topic over the past decade, indicating a growing interest in the intersection of these two fields. This surge in research output underscores the urgency and relevance of addressing sustainability concerns in the tourism industry in the digital age (Schönherr et al., 2023; Zienarski & Małgorzata, 2019).

Figure 4. Emerging topics



Through keyword co-occurrence analysis, it becomes evident that several key themes are prevalent in the literature. These include "sustainable tourism," "digital technology," "destination management," "ecotourism," "sustainability indicators," and "social media." Researchers have been particularly focused on understanding how digital technologies can enhance sustainable practices in tourism destinations, from reducing the environmental footprint to fostering community engagement (Kalbaska et al., 2017; Pencarelli, 2020).

The findings from this bibliometric analysis offer valuable insights for both researchers and practitioners in the field of sustainable tourism. Researchers can use this information to identify research gaps and opportunities, facilitating the development of more focused and impactful studies. Practitioners, including destination managers, can benefit from the identified trends and best practices in utilizing digital technologies for sustainable tourism development.

This analysis points to several potential avenues for future research. These may include investigating the effectiveness of specific digital tools (e.g., mobile apps, virtual reality) in promoting sustainable tourism practices, analyzing the impact of social media in shaping destination image and visitor behavior, and exploring the role of data analytics in optimizing resource management in tourism destinations. Additionally, research that delves into the socio-cultural dimensions of digital transformation in tourism, such as community empowerment and cultural preservation, warrants further attention.

## Conclusion

In an era where the tourism industry stands at a pivotal crossroads, this bibliometric analysis has shed light on the evolving landscape of research at the intersection of sustainable tourism and digital transformation. As the world grapples with the urgency of addressing pressing issues such as climate change, environmental degradation, and equitable socio-economic development, the fusion of sustainability and digital innovation in tourism offers a promising path forward.

The analysis has shown a significant increase in research output on sustainable tourism and digital transformation over the last decade. This surge in scholarly interest underscores the relevance and timeliness of the topic and reflects the growing recognition of the imperative to address sustainability concerns in the tourism industry.

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**Model of using information technologies to support agriculture 4.0**

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### Introduction

Digital data is becoming a new type of production factor that affects the development and competitiveness of enterprises, sectors and countries (OECD, 2019). In the agricultural sector, the digital transformation is leading to the development of a smart farming system. Such farming is described in the literature as data-driven farming, smart farming, digital farming, precision farming. In this paper, these terms will be used interchangeably. In smart agriculture, production and farm management decisions are made on the basis of knowledge and information flowing from advanced data analysis. A significant part of the analysis conducted is based on large data sets (big data), for which new technologies are used. and digital solutions such as the Internet of Things, cloud technology, machine learning algorithms and artificial intelligence. The results of research on land, plants, weather, animals and machinery, among others, can guide agricultural producers on the direction to take and the steps to take to increase productivity, reduce resource consumption and improve the profitability of operations. As a result, information and digital technologies have the potential to improve productivity in the sector while reducing the negative environmental impact of agricultural production (Trendov, Varas and Zeng, 2019; Fraser, and Campbell, 2019).

The purpose of the study is to present the importance of information systems in agriculture and to develop a model for the application of information technology to support smart (IT model for smart agriculture). Popularization of knowledge on this topic is important for the implementation of modern digital technologies and innovation in the agricultural sector.

### Research Methodology

The primary research method was a critical appraisal of the literature (Webster and Watson, 2002), aimed at identifying the most important information systems used in smart agriculture. The methodology included; source material search, selection, analysis and synthesis. It was used to develop a model for the application of information technology to support smart agriculture.

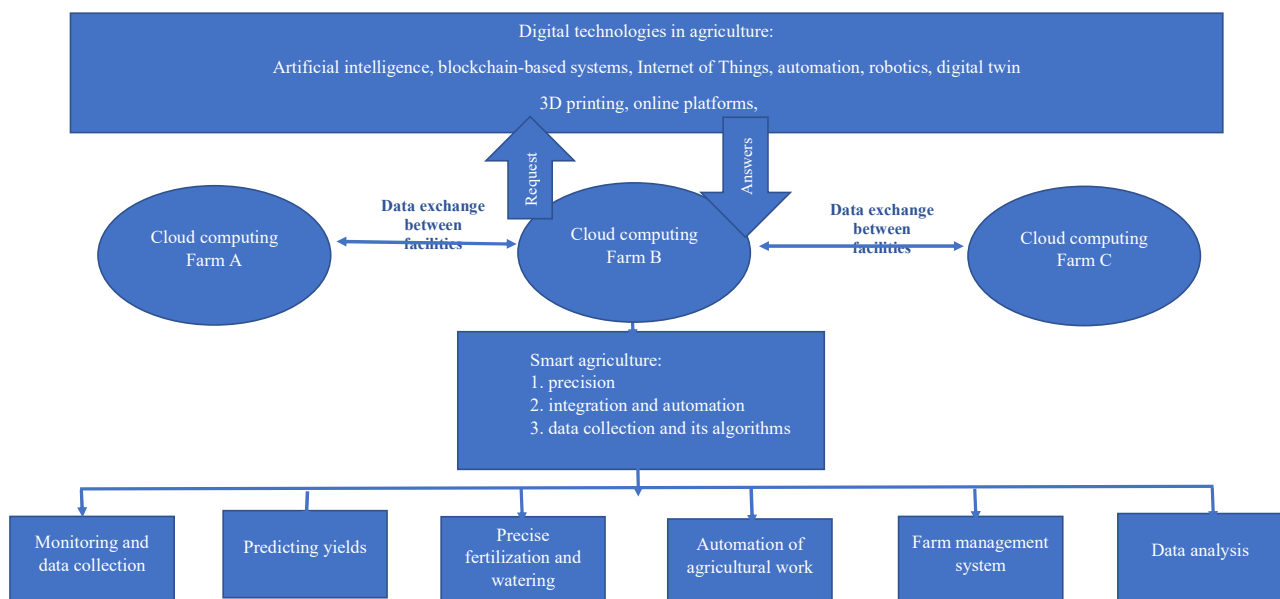
The subject of critical evaluation was articles from such databases as: Ebsco, ProQuest, Scopus, Google Scholar. More than 100 different papers were collected for initial evaluation, which were then screened based on selected keywords, abstracts and titles. Finally, more than 70 articles were classified for in-depth analysis. The synthesis of the collected research material made it possible to identify the research gap and propose a comprehensive model for applying information technology to support smart agriculture.



### Model for the application of information technology in Agriculture 4.0

The concept of modern agriculture includes many elements, which are, for example, precision agriculture, digital agriculture, or smart agriculture, also known as agriculture 4.0 (Klerkx, Jakku, and Labarthe, 2019). Smart agriculture, uses information technology and tools to optimize agricultural production, increase productivity, minimize losses and protect the environment (Rotz et al., 2019). In this part will present a model for applying information technology to support smart agriculture. It includes a variety of technologies and tools that are used to optimize agricultural production, increase productivity, minimize losses and introduce sustainable practices. Figure 1 shows the main elements

Figure No. 1: A model for applying information technology to support Agriculture 4.0



Source: own work

1. Monitoring and data collection: information technologies such as sensors, satellite imagery using GIS (Geographic Information System) technology, and UAV (Unmanned Aerial Vehicles) systems make it possible to monitor farm fields at the micro and macro levels and collect data on soil conditions, moisture, plant health, weather and other factors affecting agricultural production. This allows farmers to analyze soil conditions, moisture, soil pH, plant health, disease distribution, or predict weather changes, for example. This allows for more accurate and targeted actions by farmers, such as fertilizing, watering or pest control (Sadowski, 2019). With the help of IoT devices, animal health can be monitored, these devices enable early detection and treatment of diseases and prevention of future diseases (Kerber, 2019; El Bilali, 2019).

2. Yield prediction: the use of data analytics and machine learning makes it possible to develop yield prediction models. Based on historical data, such as weather conditions, soil type, and cultivation methods used, future yields can be predicted. This enables better planning and management of supplies, which contributes to optimizing logistics processes (Pham and Stack, 2018).

3. Precise fertilization and watering: information technologies enable precise fertilization and watering based on data on soil condition, plant needs and weather conditions. Automatic irrigation and fertilization systems, controlled by soil sensors and management systems, deliver optimal amounts of water and nutrients to specific areas of the field. This avoids overuse of water and fertilizer, leading to greater efficiency and resource savings (Bronson and Knezevic, 2016).

4. Automation of agricultural work: the concepts of integration and automation are strongly associated with the concept of Internet of Things (IoT) technology. According to this concept, the collection of data, its analysis and technological operations are combined in a single system, in which the entire process is automated (El Bilali, 2019). Agricultural robots, equipped with various types of sensors and vision systems, can perform tasks such as sowing, planting, harvesting and protecting crops from pests. This allows farmers to save time and labor, as well as minimize errors and guarantee good quality work (Trendov, Varas and Zeng, 2019).

5. Information management systems: information technology supports effective farm management and decision-making. For centuries, farmers made decisions using the "expert method," i.e. based on intuition and traditions passed down from their ancestors. It is only with the development of telecommunications networks and the advent of low-cost, networked IoT sensors, sensors, beacons, microcontrollers (MCUs), NFC, RFID that precise, cost-effective production management over vast areas is possible (Carbonell, 2016). Information systems integrate data from different areas of agricultural production, such as inventory management, crop planning, costs, logistics and sales, so farmers can monitor and optimize the entire production process.

6. Big data and data analytics: smart agriculture generates big data. The plethora of data that is collected in digital agriculture systems facilitates the emergence of so-called 'big data' in agriculture - datasets characterized by high volume, variety and variability. The use of Big Data and data analysis tools allows for effective processing and use of data. Data analysis can provide valuable information and conclusions about trends, patterns or process optimization (Jasiulewicz, Pietrzak and Wyrzykowska, 2020). For example, based on weather and crop history data, cropping schedules can be adjusted for optimal environmental conditions (Carbonell, 2016; Sadowski, 2019)

Smart agriculture (4.0) is characterized by automatic data processing and complete integrity, and the ability to transmit data continuously over the network. The advantage of smart agriculture is the ability to respond quickly to changes in external conditions. This is made possible by rapid data analysis and inference based on information collected not just on one farm, but on many, as well as data collected from the agricultural environment (e.g., an increase in demand for milk at processing plants). In contrast, the output information from the analytical system is tailored and targeted to a specific individual farm (Curry, 2016).

Smart agriculture (4.0) introduces information exchange as a fundamental element of the agricultural production organization system. The term 4.0, in analogy to Industry 4.0, means the integration of internal and external information transmission networks during agricultural production. This means that information in digital form appears at all stages of agricultural production in all types of farms.

Communication with external partners such as suppliers and end users is also carried out electronically in an automated manner. The use of web portals facilitates the movement of large amounts of data and creates an internal network of the farm with external partners (Curry, 2016 ; Sadowski, 2019).

The use of information technology in smart agriculture contributes to increasing production efficiency, minimizing costs and optimizing management. It also provides an opportunity for a more sustainable and ecological approach to agriculture, reducing excessive use of water, fertilizer and pesticides and minimizing environmental impact (Bronson and Knezevic, 2016).

Keywords: information technology, IT systems, agriculture 4.0, IT model for agriculture 4.0,

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**Food waste in Polish households and sustainable consumption**

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**Purpose**

Food losses and waste occur throughout the agri-food chain, from primary production to consumption, with food losses occurring mainly at the initial stages of the chain, and waste in the distribution link, catering and households. The general goal was to present the results of a quantitative study aimed at examining consumer behavior in the aspect of food waste, assessing consumers' perception of this phenomenon and assessing the possibility of reducing waste by introducing sustainable consumption behavior.

**Theoretical framework**

The sustainable consumption model assumes consuming goods and services in such a way as to minimize the consumption of natural resources, especially non-renewable ones, as well as to limit the amount of waste generated during consumption (Wasilik, 2014). Many authors refer to the definition of sustainable consumption adopted at the Norwegian symposium devoted to this issue - Oslo Roundtable 1994. According to this definition, a sustainable level of consumption is "when we consume material goods and services sufficiently to meet basic needs and achieve a higher quality of life, minimizing the consumption of natural resources and environmentally harmful materials produced at all stages of production, while not limiting the rights of subsequent generations to such consumption" (Łuczka, 2016, p. 137).

An extremely important issue in the context of sustainable consumption is the rational use of food. Food waste is a harmful phenomenon in economic, social and environmental terms. One of the 17 Sustainable Development Goals indicated in Transforming our world: the 2030 Agenda for Sustainable Development 2015 is to ensure patterns of sustainable consumption and production. As part of this goal, it is planned to halve the global amount of food wasted per capita in retail sales and consumption by 2030, and reduce food losses in the production and distribution process, including losses during harvest. Irrational use of food, apart from quantitative losses, means a threat to the natural environment, causes excessive consumption of natural resources and water and affects global warming (Kołożyn-Krajewska, 2016). This is also an ethical issue because, on the one hand, we are talking about food losses and waste, and on the other hand, we are struggling with the problem of hunger in the world.

Consumers play a key role in the phenomenon of food waste. Based on the literature review, we can see that the scale of food waste has long been studied in many countries, including: in the USA

(Ventat 2011; Thyberg et al., 2015), Germany (Schmidt 2016), Spain (Gracia and Gomez 2020), the Czech Republic (Macková, Hazuchová and Stávková, 2019) and China (Zhang et al., 2020).

In the literature on the subject, there are many approaches to interpreting the phenomenon of food losses and waste, and the lack of a uniform definition is the reason for different calculations of the amounts of losses and waste in individual countries. According to the FUSIONS report "Food waste data set for EU-28", EU countries generated approximately 87.6 million tons of wasted food in 2012, of which households were responsible for approximately 53% (Timmermans, 2015). Scientists working within the Food Waste Rationalization and Reduction Program attempted to estimate the scale of food losses and waste in Poland based on the results of the conducted research. The estimated amount of losses for all links in the food chain is 4.84 million tons per year. Research results indicate the largest, as much as 60%, share of households in food waste, while food production and processing are jointly responsible for 30% (Łaba et al., 2020).

The article attempts to assess the perception of food waste by young consumers and the possibilities of reducing it by introducing sustainable consumption behaviors. In addition, the causes of food waste were identified, as well as the awareness of households' involvement in this phenomenon. An important aspect was also the identification of socio-demographic factors and factors related to knowledge about food waste that influence the assessment of the food waste phenomenon.

## Methodology

The survey was conducted among 1,078 respondents aged 18-35. The selection of the sample was random - the respondents expressed their willingness and consent to participate in the study by completing the questionnaire. The study was conducted using the CAWI (Computer Assisted Web Interview) method, using an electronic survey questionnaire and a direct survey technique.

In order to verify what socio-demographic factors and those related to knowledge about food waste influenced the assessment of the perception of food waste as an important socio-economic and environmental problem and the assessment of the impact of sustainable food consumption behaviors on reducing the scale of food waste in households, the regression analysis was performed.

## Results

As many as 97.8% of respondents admitted to wasting food in their household. 6.8% of people threw away food several times a week, 49.5% several times a month, while 22.4% admitted to throwing food away on average once a month, and 20.5% less than once a month. Food in households was usually thrown away due to missing the expiration date (83.7%), and then, but much less often, due to too large portions of meals prepared (43.3%), too many purchased products (27.7%) and improper storage of products (18.2%)

The most frequently wasted food in the study group was bread (51.8%), followed by fruit, cold meats, vegetables and yogurts (approximately 35% of people each).

However, a large proportion of people surveyed used measures to prevent throwing away too much food. This was mainly freezing food before it expires (64.7%), making a list of products needed to buy (53.3%) and planning meals for several days (40.4%).

Nearly one third of respondents (31.1%) believed that most of food was wasted in households. The largest group were respondents who believed that most food was wasted during retail and wholesale sales (37.8%), and 22.4% of respondents believed that food services (restaurants, catering) were responsible for the most wasted food. Only 1.9% of people believed that most food was wasted during agriculture.

Over 90% of respondents had heard about the possibilities of donating food to soup kitchens or food collections organized by e.g. Food Banks, and 44.8% of people had ever participated in such actions. In order to verify what socio-demographic factors and those related to knowledge and behavior in the aspect of food waste influenced the attitude towards the phenomenon of food waste, a regression analysis was performed. The first of the analyzed models turned out to be statistically significant  $F(4,516) = 12.44$ ;  $p < .001$ ;  $R^2 = .08$ , and gender turned out to be statistically significant predictors of the assessment that consumer behavior in the field of sustainable consumption can contribute to reducing the scale of waste,  $t = -4.68$ ;  $p < .001$ ;  $\beta = -.20$ , age  $t = -3.08$ ;  $p < .01$ ;  $\beta = -.13$ , careful planning of purchases  $t = 2.49$ ;  $p < .05$ ;  $\beta = .11$ , donating food to soup kitchens or food banks  $t = -2.31$ ;  $p < .05$ ;  $\beta = -.10$  and distinguishing the concepts "best before" and "use by"  $t = 2.35$ ;  $p < .05$ ;  $\beta = .09$ . It was shown that the assessment of the possibility of reducing the scale of food waste by implementing sustainable consumption behaviors was expressed by women, people aged up to 25 years and people who carefully planned their purchases, and distinguished the meaning of the terms "use by" and best before", but they never donated food to soup kitchens or food banks.

The next model examined predictors of consumers' assessment of waste as an important and multidimensional problem facing the modern world. This model also fit the data well  $F(5,515) = 9.41$ ;  $p < .001$ ;  $R^2 = .08$ . Statistically significant predictors of this assessment in the study group were gender  $t = -2.07$ ;  $p < .05$ ;  $\beta = -.09$ , age  $t = -3.31$ ;  $p < .01$ ;  $\beta = -.14$ , education  $t = 2.92$ ;  $p < .01$ ;  $\beta = .12$ , awareness of the highest share of households in food waste in the supply chain  $t = 3.14$ ;  $p < .01$ ;  $\beta = .13$  and knowledge of food collections organized by food banks or other organizations  $t = 2.60$ ;  $p < .05$ ;  $\beta = .11$ .

Women, people aged up to 25, with higher education, who were aware that most food is wasted in households and had knowledge about collections organized by food banks.

## Conclusion

The conducted research, although due to the non-representative nature of the research sample, is of an illustrative nature, also shows that nearly 98% of respondents admit to throwing away food, and the most common reason is missing the expiration date. The probable reason that food is thrown away due to missing the date on the packaging is the lack of understanding by consumers of the differences in the phrases "best before" and "use by". It is important to understand that foods labeled

"best before" can be consumed after their expiration date without negative health consequences. However, products with the "use by" label must be consumed by the indicated date. According to the authors, a social campaign that would make consumers aware of the differences in these markings would probably be an important step in the fight against reducing food waste. The research results also indicate that the surveyed consumers are aware that food waste is a multidimensional problem of economic, social and environmental importance, and that implementing sustainable consumption behaviors will contribute to reducing food waste.

Keywords: food waste, food losses, sustainable consumption

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**Reflections on digital Sustainability: epistemological Considerations, ethical Issues and complexity Challenges**Lino Trinchini <sup>1)</sup> and Rodolfo Baggio <sup>2)</sup>

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## Extended Abstract

We face today significant global challenges. The quest for a more balanced social and economic development, the changes in the climate conditions and the push towards a digital transformation of our lives and businesses forces us to better addressing the implications these issues have for current and future generations. The recent financial, sanitary and geopolitical crises have introduced new complexities and uncertainties into the pursuit of the 2030 Sustainable Development Goals (SDGs). All these events have raised questions about the role of science, technology and innovation in fostering sustainability and achieving long-term societal, environmental and economic well-being. Moreover they pose challenges to the long-term goals of sustainable energy practices and climate change mitigation.

The COVID-19 pandemic has acted as a catalyst for an increased widespread adoption and integration of Information and Communication Technologies (ICTs) into various aspects of our lives. Remote work, online education, virtual healthcare, and digital communications have become integral components of daily routines, as virtualized patterns of interactions and tasks (Zhu et al, 2021). This digital acceleration has fundamentally transformed our understanding of sustainability and how we relate with the external environment, in terms of its socio-political, economic and environmental factors.

A further element contributing to this accelerated change is the ongoing fast evolution of artificial intelligence tools and techniques that make available unprecedented capabilities. If correctly used they allow analyzing the wealth of digital traces left behind by millions of users of the advanced technological platforms thus providing much better resources for improving decision making and, ultimately, our potential for a better interaction with the world. This with all the ethical implications for the use of AI for sustainable achievements and “the sustainability of developing and using AI systems” (Moallemi et al, 2021; Van Wynsberghe, 2021 p. 213). The role of Artificial Intelligence (AI) and Machine Learning (ML) has also become prominent in computational simulation tools when analyzing and predicting the behavior of complex ecosystems, as, for example, in the case of climate change impacts modelling (Maeda et al, 2021).

The increasing attention to digital sustainability emerges from two meaningful socio-technological trends, the push for a global environmental sustainable development and the blurring boundaries between human activities and the digital realm. These discourses are not new, but they saw an expansion in recent times as a result of the ubiquity of digital technologies and the increased



frequency of extreme climate-related events. Alongside the environmental concerns, however, social and economic issues need to be simultaneously considered for a digital sustainable development. Across all three domains, the development and use of digital ICTs can have both positive and negative impact. In short, “the concept of digital sustainability underlines the consideration of digital technologies’ potential negative effects on the environment, society, individuals and the economy.” (Sparviero & Ragnedda, 2021 p. 223).

In the environmental domain, smart ICTs can improve the efficiency of energy, transportation, manufacturing and water systems, but, in so doing, they contribute to increased energy consumption, e-waste, and carbon emissions. In the economic domain, the debates on sustainable development have been historically influenced by the market-based ideas of growth and instrumental approaches to ICTs in the production and consumption dynamics. The current digital economy rests upon this narrow view of technologies, with its concentration of wealth and technological moligopoly (i.e., monopoly and oligopoly combined), and lacks a holistic sustainable approach essential for systemic transformation and the decoupling of digital resources use from negative impacts (Hindman, 2018; Petit, 2020). In the socio-cultural domain, the pervasive use of data, algorithms, and social media brings about ethical concerns over privacy, bias, surveillance and psychological well-being. In this hyperconnected reality, within which the distinction between online and offline is fading, ICTs are not neutral or value-free tools but important proactive agents of the socio-cultural changes.

Digital sustainability can be defined as “the convergence of digital and sustainability imperatives that involves a trans-disciplinary approach of deploying digital technologies in tackling sustainability issues” (Pan and Zhang, 2020 p. 4). Even if this definition provides an ecological account of digital sustainability, including its transdisciplinary nature, different meanings and interpretations are still reflected in scholarly conversations within management and business circles (Sharma et al, 2021). The paper's primary objective is not to define but to advance awareness and knowledge of digital sustainability by delving into the disruptive impact brought about by the pandemic. It seeks to explore the ethical and epistemological issues surrounding the rapid integration of digital ICTs and their implications for sustainable development. Drawing upon complexity science, the paper aims to establish a coherent framework that can better help understanding the complexities of our rapidly changing world.

Central to this exploration is the recognition that ICTs are not just tools but instrumental technologies that significantly shape our perception of reality (Floridi, 2015; Zuboff, 2019). The paper stresses the importance of avoiding technological determinism, where technology is seen as the sole driver of change, and instead, advocates for a nuanced appreciation of the interplay between science, technology, and society. Technology should not be considered solely as a utilitarian tool but as a means of interpreting reality (Verbeek, 2013) and its prominence over knowledge needs to be questioned to rebalance science, technology, and ethics relations (Russo, 2018).

Furthermore, the paper seeks to highlight the distributed morality of multi-agent ecosystems (Floridi, 2013), acknowledging that ethical considerations should be extended beyond human actors to

encompass the broader network of interactions involving technologies, nature, and society. Assuming and/or attributing responsibility and accountability to actions and decisions in dynamic, networked ecosystems is challenging, particularly in the context of artificial/autonomous entities interacting with human, non-human, and hybrid agents (Simon, 2015). Emphasizing this aspect of epistemic responsibility can help in informing ethical decision-making and policy formulation in the realm of digital sustainability.

In conclusion, the paper aims to contribute to the ongoing debate on digital sustainability by shedding light on the profound transformations caused by ICTs, while also advocating for a comprehensive and complex perspective that addresses the multifaceted challenges and opportunities in achieving a sustainable future.

**Keywords:** Digital sustainability, determinism, ethics, epistemology, complexity science

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## **Firm Characteristics and environmental Compliance: a Literature review based on Assessment**

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### **Abstract**

Effective monitoring and enforcement are essential for environmental regulation to be successful. The enforcement decision of the regulator and the compliance behavior of firms may be related to each other. Firm characteristics such as profitability, size of business, ownership of the company, type of industry, etc may also influence enforcement and compliance decisions. The objective of this research paper is to review the relationship between firm characteristics, enforcement and compliance decisions in different countries. The paper will propose scope for future research to study the relationship between firm characteristics, enforcement and compliance decisions of firms.

### **Keywords**

Environment, Enforcement, Compliance, Firm characteristics, Sustainability.

### **Introduction**

In modern years, the environment has become a paradigm. Environment influences not only humans but other organisms also. The variations in environmental assumptions of an individual vary from one's immediate physical surroundings to socio-economic and political conditions. In the last few decades, pollution of the environment has become a major area of concern. Increasingly serious worldwide environmental pollution has made the ecological environment a global problem(He et al., 2016). Increased exploitation of natural resources and environmental contamination are the results of rapid urbanization, industry, and agricultural development (Arshad et al., 2020). For the well-being of people and economic development, environmental protection has become a major area of concern around the globe. Even if there are environmental regulations in existence to address environmental problems, it is still up for debate as to whether or not they are being applied effectively(Sekhokoane et al., 2017).

Concerned by the worsening of environmental problems, various national civil society organizations have increased their pressure on politicians and administrators, which, together with the increase in consumer awareness, led certain businesses to start producing environmentally friendly products to prevent environmental pollution and minimize or eliminate hazardous waste(Arı & Yılmaz, 2017). As one of the world's most populous nations and a rapidly developing economy, India faces significant environmental challenges, including air and water pollution, deforestation, biodiversity loss, and climate change. To address these challenges, India has established environmental laws,

regulations, and enforcement mechanisms to ensure compliance and hold accountable those who violate environmental norms.

Environmental enforcement and compliance mechanism of India:

- Central Pollution Control Board (CPCB): The CPCB is the apex pollution control body at the national level. It coordinated and enforce environmental regulations and standards, conducts environmental monitoring, and issues guidelines for pollution control.
- State Pollution Control Boards (SPCBs): Each state in India has its own SPCB responsible for implementing environmental laws and regulations within its territory. SPCBs issue permits, conduct inspections, and take enforcement actions against polluting industries and entities.
- Environmental Impact Assessment (EIA): for projects with potential environmental impacts, an EIA is conducted before obtaining clearance. This process assesses the project's potential impacts and proposes mitigation measures.
- Green Tribunals: India has set up National Green Tribunal (NGT) and state-level Green Tribunals to handle cases related to environmental laws. These specialized courts hear cases involving environmental violations and provide speedy justice.
- Penalties and Fines: Non-compliance with environmental regulations can lead to penalties, fines, or legal action against the responsible parties, Including closure of polluting industries and revocation of clearance.

Despite the existence of robust environmental laws and enforcement mechanisms, India faces several challenges in ensuring effective environmental compliance. Such as overlapping jurisdictions and complex regulatory processes, Lack of public awareness about environmental issues and their rights, corruption, unnoticed violations due to limited monitoring capabilities and lack of adequate manpower, technical expertise, financial resources to monitor and enforce compliance effectively. Continuous efforts are required to strengthen enforcement mechanisms, increase public participation, raise awareness, and promote a culture of environmental responsibility among industries, communities, and individuals. The following table shows the inspection made by CPCB under Pollution Inventorization, Assessment & Surveillance on River Ganga project during 2020-2021.

Effective monitoring and enforcement are essential for environmental regulation to be successful(Gupta et al., 2019). The enforcement decision of the regulator and the compliance behavior of firms may be related to each other. The more stringent the enforcement activities of the regulator, the more the chances of firms to comply with environmental laws(Gmeiner & Gmeiner, 2022; Guo et al., 2019; Shimshack & Ward, 2008). In firms that are more compliant with environmental laws, lesser will be less enforcement pressure by regulators(Gray & Deily, 1996).

S. NO.	Activities	No. Of Inspections/ Monitoring	Frequency of monitoring
1.	Compliance verification of Grossly Polluting Industries (GPIs) (by CPCB)	26	Yearly
2.	Compliance verification of Grossly Polluting Industries (GPIs) (through Third party technical institutes)	2357	Yearly
3.	Adequacy Assessment of Common Effluent Treatment Plants (CETPs) & Common Chrome Recovery Unit (CCRU)	20	Quarterly
4.	Performance evaluation of Sewage Treatment Plants (STPs)	256	Quarterly
5.	Periodic Pollution assessment of major drains falling into the river Ganga	401	Half yearly

Table 1: Inspections / Monitoring under PIAS Project during 2020-21

Source: CPCB annual report 2020-2021

However, firm characteristics such as profitability, size of business, ownership of the company, type of industry, etc may also influence enforcement and compliance decisions (Gangadharan, 2006; Gray & Deily, 1996; Gupta et al., 2019). For example, economies of scale in compliance may make large, multi-plant businesses more likely to abide by rules; alternatively, firms may place differing values on their reputation in the community, resulting in variances in compliance behavior. The objective of this research paper is to review the relationship between firm characteristics, enforcement and compliance decisions in different countries.

#### Literature- Review

The review of literature from a range of sources, including Science Direct, Scopus, Web of Science, the Directory of open access journals, etc., to gain a thorough grasp of the variables that are involved and how they relate to one another. The literature was reviewed using terms, revenue, expenditure, compliance, enforcement, inspections, environmental awareness, pro-environmental awareness, perceived policy effectiveness, behavioral intention, and attitude. When reviewing the literature, relationships, gaps, and themes were found, and the order of the research was changed as a result. Studies that were not relevant to present study was removed from the literature review list. The sections below presents final review of related literature.

### Literature review of the relationship between compliance and enforcement

Numerous researchers have investigated the relationship between compliance and enforcement of environmental regulations. For example, Gray & Deily (1996) studied the relationship between regulators' enforcement practices of controlling pollution and the compliance behavior of industries in the United States. The study found that more enforcement leads to more compliance by industries and more compliance leads to lesser enforcement of pollution control laws by regulators. Past enforcement activities of the regulator influence the current environmental compliance rate of industries (Guo et al., 2019). He et al. (2016) deduced that the primary force influencing businesses to embrace corporate environmental behavior is government regulation. When the penalties for violations are low then instead of actively investing in environmental protection, the majority of businesses would prefer to pay penalties for environmental damage. However, as government regulation becomes stringent over time, businesses conclude that it is preferable to invest in environmental protection to reduce pollution emissions rather than to pay fines for punishment (Chang et al., 2021).

Literature on Inspections and violations has indicated that an increase in inspections reduces the violations by industries (Gmeiner & Gmeiner, 2022). Hanna & Oliva (2010) deduced that after an inspection, plants considerably reduce their air emissions. Increased enforcement by regulators helps to reduce emissions by the plants (Guo et al., 2019; Shimshack & Ward, 2008). Escobar & Chávez (2013) concluded that past inspections have an impact on the compliance behavior of firms and the severity of violations has an impact on the size of fines.

Some scholars have examined the impact of fines on the compliance behavior of firms. Lim (2016) found that penalties and inspections can help to reduce the NOx emissions by the plants. . Shimshack & Ward (2005) reported that the impact of the inspection was lesser than the impact of fines on the compliance behavior of firms. Hanna & Oliva (2010) discovered that plants in industries with lower fines tended to cut emissions following an inspection, but those in industries with higher penalties did not reduce emissions because their abatement cost was high as compared to penalties. The compliance rate of firms decreases with the increase in the frequency of inspections (Dechenaux & Samuel, 2014).

In contrast, Shevchenko (2021) found that improvements in the compliance behavior of public firms were not made easier by receipt of a fine for an environmental offense or by imposing a bigger fine by the U.S. government. Enterprises that violate environmental regulations irrespective of the increase in penalty levels are likely to repeat offenses in the future (Staffsord, 2002). Bansal (2005) reported that Canadian companies in the forestry, mining, and oil and gas industries showed no correlation between fines and environmental performance for the sample period 1986-1995. Inspection has minimal impact on increasing compliance and is restricted by political factors (Helland, 1998). Plants that experience more enforcement activities are more likely to be out of compliance and targeting inspection toward plants that are out of compliance results in a negative correlation between enforcement and compliance (Gray & Shadbegian, 2005).

In India, there is little work done on the relationship between compliance and enforcement of environmental regulations. Duflo et al. (2018) used the field experiment and structural model to study the enforcement of emission standards in Gujrat, India. They conducted a field experiment in collaboration with Gujrat Pollution Control Board, India. The study found that discretion in targeting inspection helps the regulator in effective environmental enforcement. When the regulator assigns inspections the abatement by the plants becomes three times more than random inspection by the regulator. Kathuria & Sterner (2006) deduced that penalty notices do seem to have a deterrent effect in terms of changing the behavior of the chemical units in Ankleshwar, India.

Using a much older sample period from 1997-98 and years before it, Gupta et al. (2019) investigated the relationship between the enforcement of environmental regulation and the compliance behavior of industries in Punjab, India. They studied whether the enforcement decisions of regulators influence the compliance behavior of industries or whether the compliance behavior of industries influences the enforcement decisions of regulators. The results indicated that plant compliance behavior is more influenced by the regulatory action of the Punjab Pollution Control Board than by plant characteristics. However, the enforcement action of the regulator was influenced by both compliance behavior and plant and firm-level characteristics. Pragal et al. (1997) discover that Inspections have a limited effect on emission levels, which can be attributed to the low likelihood of enforcement as well as the light penalties for noncompliance, calling attention to flaws in the functioning of India's official regulatory framework.

#### Relationship of firm characteristics with compliance and enforcement

Literature on the relationship of firm characteristics with enforcement and compliance shows that various firm and plant-level characteristics affect compliance and enforcement decisions. Gray & Deily (1996) investigated whether firm characteristics affect compliance and enforcement decisions. Compliance with larger and more profitable plants was lesser as compared to smaller plants. Firms specialized in steel-making, firms with high gross profit rates, and larger firms faced less enforcement. Gupta et al. (2019) explored the relationship of firm characteristics with the enforcement and compliance of industries in Punjab, India. The results indicated that plant compliance behavior is more influenced by the regulatory action of the Punjab Pollution Control Board than by plant characteristics. However, the enforcement action of the regulator was influenced by plant and firm-level characteristics. Organizational characteristics influence the enforcement actions of the regulator (Rousseau & Blondiau, 2014).

Most of the research work regarding enforcement and compliance decisions is made in developed countries. Such as Tian & Lin (2019) investigated the effect of financing constraints on the environmental performance of small and medium-sized enterprises for the years 2011 to 2013. They found that the financing choice of industries in China is limited and industries have misaligned incentives for investing in pollution abatement due to high financing and investment costs which

adversely affects their financial performance. Liu & Anbumozhi, (2009) found that government pressure and organizational size affect the compliance behavior of industries in China.

Many researchers have investigated the relationship of the particular type of industry with enforcement and compliance decisions. Gangadharan (2006) reported that non-metallic industries comply more with environmental regulations as compared to metal industries. He & Wang (2019) deduced that government pressure has a positive impact on the environmental behavior of the paper industry in China. Stafford (2014) found that the number of federal cases initiated against natural gas and hazardous liquid pipeline operator has a positive impact on their environmental performance in the U.S. Tian & Lin (2019), presenting heavy industries comply more with environmental laws as compared to light industries.

Some scholars explored the relationship between financial status and the compliance behavior of industries. He et al. (2016) found that organizations with higher profitability adopt active environmental behavior than organizations with lower profitability. The enterprises may act irresponsibly toward the environment because of the insufficiency of funds(Wu et al., 2021). Luethge & Han (2012) found no relationship between firm profitability and the environmental performance of organizations in China. Financially constrained businesses prioritize business investments above environmental ones because the latter have little to no impact on their ability to make money(Akbar et al., 2021).

Numerous researchers explored that size has a positive effect on firm compliance behavior. For instance, Luethge & Han (2012) found a positive relationship between firm size and the environmental behavior of organizations in China. Organizations with larger sizes adopt active environmental behavior than small-sized enterprises(He et al., 2016). According to Zhu et al. (2008), medium-sized enterprises often adopt environmental behavior at a similar rate to larger enterprises. Moon & Bae, (2011) deduced that a firm's environmental compliance decision is more likely to be influenced by organizational attributes, such as the possible return on investment and the size of the firm.

In contrast to these studies, Deily & Gray (2006) found less enforcement by environmental protection agencies at more profitable and larger firms. However, larger plants and those likely to close were less likely to comply with environmental regulations in the USA. Gray & Shadbegian, (2005) used a sample of 116 pulp and paper mills in the USA for the period 1979-1990 and found that old plants, large plants, and pulp mills less comply with environmental regulations and are less sensitive to inspections.

## Conclusion

The above literature reviewed shows that various researchers have examines the relationship between enforcement and compliance decisions. Increase in enforcement by regulators lead to reduction in violation by industries. In contrast some researchers has found that increase in fines does not always leads to improve the compliance behavior of firms.



The study has found that plant compliance rate is more influenced by regulatory pressure than by plant characteristics. However, larger size and profitable firms adopt more environment friendly behavior than small and non-profitable firms. Paper industry, heavy industries and other type of industries have found positive relationship with enforcement performance in some countries. The review also found conflicting results related to firm characteristics and enforcement and compliance decision of firms.

Balance is needed in regulatory actions and compliance behavior of firms as it is found that more stringent enforcement can lead to lesser compliance by firms. Less work is done in this field related to enforcement and compliance decision in developing countries. Future researchers may focus on conducting the empirical study in developing countries. Researchers have also only focused on specific characteristics of organizations eg, size, financial status. Future research may focus on other organizational characteristics such as age of company, ownership, different sectors/type etc. most of the researchers have investigated the compliance behavior of industries. Very few researcher have investigated the relationship between firm characteristics and enforcement decisions of regulators.

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## **Intercultural Integration and Diversity**

The intercultural integration and diversity as well as the empowerment of women is a key topic in teaching and research of Prof. Markus Launer. Therefore, he established the Institut für gemeinnützige Dienstleistungen gGmbH, a charitable, non-profit company.

The key topics are: Anti-Discrimination, Inclusion, Ethics, Integration of Refugees, International Migration, Refugees within a Country, Multi Culture, Inter Cultural Relations, Inter Cultural Communications, Transnationalism, Empowerment, Civil Society, Participation, Managing Diversity, Gender Pay Gap, and Equal Opportunities.

**Ethical Standards and Practices across the Malaysian Financial Services Industry**

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**Introduction**

The global financial services landscape continues to innovate at a pace. Questions of ethics have become leading concerns for regulators and industry alike in the wake of the collapse of conventional banks such as Silicon Valley Bank in the US; the closure of Signature Bank also in the US, a bank that frequently did business with cryptocurrency firms, was closed in 2023, with regulators citing systemic risks<sup>1</sup>. The rise and popularity of e-wallets in Southeast Asia has also attracted regulatory oversight. According to a report by Fintech News Malaysia, there are currently a total of 53 e-wallets in Malaysia, with 47 entities from the non-banking sector occupying 19% of the countries fintech space in 2022<sup>2</sup>.

Meanwhile, the public's trust in the industry has been shaken by widespread evidence of questionable business practices and breaches of professional ethics leading to the 2008 crisis and the collapse of several banks in the US. It is not being helped by recurring incidents of misconduct involving prominent industry names internationally<sup>3</sup>. The general perception is more needs to be done to restore confidence in the banking and financial services sector<sup>4</sup>.

Two ongoing developments add to the urgency of restoring faith in the industry's ability to act responsibly in keeping with government policy priorities and consumer expectations. One is the shift in the balance of economic power from the West to the East, with developing and emerging economies in Asia now assuming a greater share of future global growth. For a trading nation like Malaysia, this implies increased financial activity, more intense interaction with foreign markets and financial institutions, and greater exposure to global events and risks. The other is the accelerating trend towards digitalisation and FinTech. This covers a broad spectrum of financial products and services aided by digital technology, ranging from remote banking and cashless transactions to sophisticated tools that come with a different set of risks and rewards that are yet to be fully understood. These developments call for a higher level of confidence and trust in the industry.

**Research Study**

A survey of the Malaysian financial services industry practitioners was conducted to gauge the ethical health of the sector and to provide a baseline which can be monitored over time<sup>5</sup>. The survey covered 530 practitioners in the Malaysian financial services industry selected at random. They were drawn from the conventional banking, Islamic banking, investment banking, conventional insurance,

Takaful and capital markets segments. The key findings of the survey on the prevailing ethical climate in the industry are presented here.

Perceptions of Ethical Behaviour: The majority (90%) maintain ethical values are embraced frequently, if not, always. The sentiment is consistent across all industry segments represented in the survey. A minority of professionals (10%) who feel ethics are either infrequently, or not practised at all by their organisations are most likely to be from the capital markets sector.

This seemingly reassuring picture may conceal the true ethical health of the industry. Firstly, four out of ten respondents acknowledge that embracing ethical values in the organisation is not the pervasive norm. Secondly, the 10% who expressed an adverse sentiment is high considering the potential effects on the rest. Third, as described later, understanding among practitioners as to what is ethical or not is itself subject to ambiguity.

Observations of past ethical failures in the financial services industry show that both structural and sociocultural factors in a corporate environment have a strong influence – consciously or unconsciously – on the ethical decision-making process of an individual. In a survey of 705 professionals in the financial services industry across Australia, New Zealand, the United Kingdom, Singapore, Hong Kong and Malaysia, respondents strongly acknowledged the influence of these factors on ethical decisions over and above personal standards and values<sup>6</sup>.

## Key Findings

Business objectives and targets tend to override questions of ethics with more than a third of the cases (Figure 1).

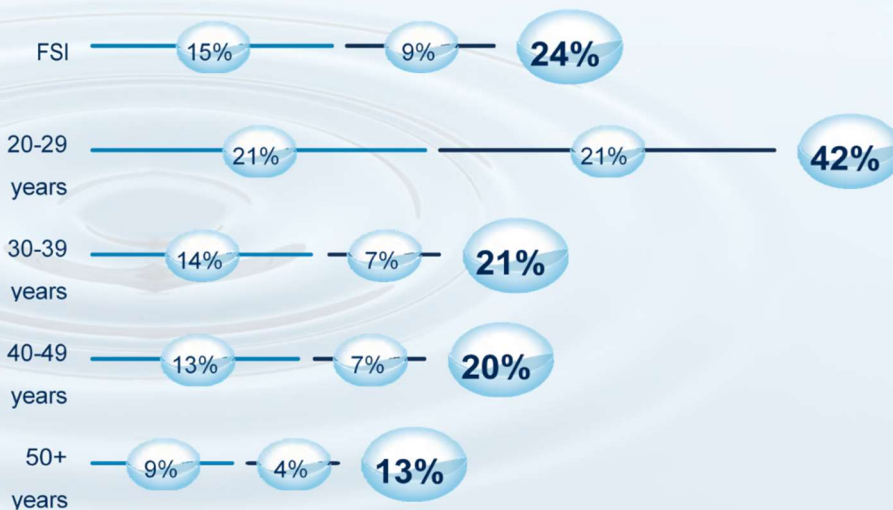
There appears to be a prevalent tacit acceptance of ‘the end justifies the means’ culture. This is most apparent in the insurance segment where some 56% confirm that rewards are linked to good business results irrespective of the ethical nature of the means employed. Lessons from global scandals suggest that corporate cultures that subscribe to such a philosophy are fertile breeding grounds for unethical behaviour and practices.

More alarmingly, this trait is more common among younger professionals aged 20-29 in our study, especially in the Islamic banking, capital markets and insurance segments. These individuals will progress and eventually assume senior industry positions in the future. For them to slip into a culture of slack ethics at an early stage in their careers should raise a red flag among senior industry leaders. See Figure 2.

**Figure 1. Proportion of respondents who agree with these statements****Figure 2. We act ethically unless someone is not aware**

(% who agree or are ambivalent)

- Agree
- Ambivalent



With corporate policies and codes of conduct ranking at the top as key influencers of ethical conduct among practitioners, results from the survey signal a need to strengthen these. Although many organisations and managers in the Malaysian industry are giving the right cues, there is a mismatch between what managers 'preach' and how they actually behave. The most glaring disconnect is with the rewards system. While managers typically emphasise the importance of ethics at work, they also reward employees for achieving desired business results even if the means used are less than

ethical. Business objectives and targets tend to override questions of ethics in more than a third of cases.

Ethics in the workplace, they also at the same time reward employees for achieving desired business results even if the means are less than ethical. These individuals will progress and eventually assume senior industry positions in the future. For them to slip into a culture of potentially unethical practices at an early stage in their careers should raise a red flag among industry leaders.

On a more positive note, the following unethical practices or conduct are unambiguously rejected as unacceptable by most practitioners:

- Receiving bribes
- Not being honest or transparent in dealings
- Sharing confidential or sensitive information with third parties
- Allowing personal interest to take priority over business and professional judgment
- Not treating colleagues and customers professionally, fairly and with respect.

Any optimism over these findings is, however, offset by certain practices which are considered 'grey areas' in which a sizable proportion of professionals hold an ambivalent or even a permissive stance. One glaring example is the contradiction between rejecting bribes while being receptive to gifts that may or may not come with an expectation of favours. In addition, some 13% of responders felt it was either acceptable or they were ambivalent about favouring family and friends when awarding business contracts and more worrying is that 30% of those questioned would favour family and friends when hiring. It seems nepotism still exists in the Malaysian workplace.

#### A Possible Roadmap

Many organisations in the industry do offer the necessary support to guide employees on issues of ethics. The mechanisms available include training sessions on ethics, a hotline or centre for employees to seek consultation on ethical matters at work, and whistleblowing policies and procedures for employees to report any unethical behaviour confidentially. Such mechanisms are somewhat less prominent in the insurance and capital markets segments (Table 1).



Table 1 Organisational Support to promote ethical conduct

	FSI(%)	Conventional Banks (%)	Islamic Banks (%)	Insurance (%)	Capital Markets (%)
Internal code of ethics	97	99	98	94	97
Whistleblowing policy & procedure	86	89	93	80	82
Training on ethics	82	85	88	79	77
Hotline or centre to advise on ethical matters at work	80	83	87	74	76

The survey results suggest most professionals (97%) would take advantage of whistleblowing mechanisms and other safeguards to report any behaviour or practice not in compliance with their organisations standards or policies on ethics. However, as many as 40% are concerned about the negative repercussions of reporting the unethical behaviour of colleagues and co- workers. This suggests the presence of organisational mechanisms is not enough. It has to be accompanied by employees' faith in the confidentiality of the implementation process. While the low level of faith could be based on real or perceived concerns, the onus is upon the organisations to demonstrate an uncompromising and consistent stand on their policies and deployed mechanisms.

### Summary

The results are a suggested baseline study from which the financial services sector in Malaysia can measure its performance on ethical standards and practices over time. In particular, ethical practices by age strongly suggests that those in their twenties should be given more ethical training and development. Organisations should establish clear policies on guidelines on gifts and how favours will and can be perceived. Ethics is 'about doing the right thing when no one is looking' and the results suggest that there is a lot more the sector can do to raise consumer trust and enhance the reputation of the sector at large.

Keywords: bank collapse, financial services, ethics, digital wallets, trust, leadership, financial services sector regulators, South-East Asia, Malaysia

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## **The Gender Differences in Information Sharing Measured with Passion**

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### **Purpose**

This study aims to measure information sharing levels among graduate students with different demographics using passion quotations.

### **Theoretical framework**

Based on Steven Reiss' (2004) motivation theory, a passion quotation was developed including 24 intrinsic motivation. The term "passion" means a person's intensive emotion at a moment, as the time factor can influence the team members' levels of motivation (Schmid and Adam, 2004). Several empirical studies have confirmed the effectiveness of using "passion" to understand individuals' different motivational patterns, such as harmonious passion and obsessive passion (Feng and Chen, 2020; Fuster et al., 2014; Vallerand, 2012). In the passion quotation, the 24 motives were subsequently categorized into six dimensions for measuring employees' passion levels when participating in group projects, following consultations with academic and industrial experts in the field of human resources. These six dimensions are: (1) Research oriented dimension includes six motives, i.e., inquisitive curiosity, analytical curiosity, exploration, ingenuity, intellectual independence, and pioneer independence. (2) Artistic oriented includes five motives, i.e., aesthetics, creativity, sensibility, prestige, and creative curiosity. (3) Social oriented includes three motives, i.e., synergistic interdependence, altruism, and contemplation. (4) Practical oriented includes four motives, i.e., systematic, execution, coordinating interdependence, and justness. (5) Transactional oriented includes two motives, i.e., administrative order and collector. (6) Leadership oriented includes four motives, i.e., power, expedience, methodical order, and practicality. In this study, these 24 motives were further categorized into five dimensions (referred to as STEAM – Science, Technology, Engineering, Arts, and Mathematics) to measure students' passion for learning after consulting with educators in higher education. These five dimensions are: (1) Science: Inquisitive curiosity, exploration, ingenuity, and intellectual independence. (2) Technology: Power, expedience, methodical order, synergistic interdependence, practicality, and altruism. (3) Engineer: Administrative order, systematic, execution, coordinating interdependence, and collector. (4) Arts: Aesthetics, creativity, sensibility, prestige, and creative curiosity. (5) Math: Justness, analytical curiosity, pioneer independence, and contemplation.

### **Methodology**

A group of 63 graduate students were first invited to participate in an online scenario-based survey containing 100 questions (ten for each scenario) to measure their passion for learning within a group

assignment. A 7-point Likert-type scale ranging from 'strongly agree(7)' to 'strongly disagree(1)' was employed for each question. The survey was developed and validated by a team of motivation scientists and psychologists at PQaire.com. Subsequently, the students were encouraged to freely share information and opinions on a designated discussion topic: 'You are the department head at Tesla, and the company has recently announced a collaboration with the French fashion brand, LV, and Apple. How can you facilitate cooperation among your employees? What resources should you provide to your employees? What potential challenges might you encounter? How would you address these challenges?'

Following this sharing session, an hour-long activity was implemented to further encourage individual students to express their opinions on learning within a group assignment. To conclude the entire activity, a brief online survey was distributed to gather information about their sharing attitudes (e.g., first/fast/favorably/ frequently), levels of study enjoyment in the field of information systems and technology (IST), and demographics (e.g., biological gender [female/male], study focus [general CS/AI], grade level [master/doctoral]). Except for the demographics, students' sharing attitude and levels of study enjoyment were also measured using a 7-point Likert-type scale ranging from 'Very Much (7)' to 'Not Very Much (1).' The responses from the scenario-based survey were analyzed using SPSS 21.0. The analysis began with descriptive assessments, followed by the presentation of frequency tables and contingency tables. A series of analyses of variances were then conducted to compare students' responses across different levels of sharing attitudes and demographic backgrounds.

## Results

This study finally obtained 54 valid responses from both types of surveys after excluding nine responses that lacked necessary demographic information for analysis. Tables 1 to 3 show the students' demographics, responses to the scenario-based survey, and their sharing attitudes toward learning within a group assignment. Tables 1 to 3 displayed the students' demographics, responses to the scenario-based survey, their attitudes towards sharing in group assignments, and their study status in the field of information systems and technology. As shown in Table 1, there were only two doctoral graduate students in this study; therefore, no further comparison was made. Tables 2 and 3 displayed not only the frequency but also the comparison results between two different genders and then two study focuses. Obviously, gender differences were significantly found in students' first and fast sharing attitude. The students' study focus (general CS vs. AI) showed no significant differences in any of their sharing attitude. It was also found that a few students had difficulties in completing IST courses. No differences were found between genders or study focus regarding their study status in the IST field.

## Contingency

Table 1 Students' Demographics

Items	Number	Percentage
Biological Gender		
Female	23	42.59%
Male	31	57.41%
Study Focus		
General CS	37	68.52%
AI	17	31.48
Grade Level		
Master	52	96.30%
Doctoral	2	3.70%

Table 2 Frequency of Students' Attitude towards Sharing in Group Assignment

Ranks	Number (%)				Comparisons ( <i>F</i> , <i>p</i> )
	First	Fast	Favorably	Frequently	By Gender
1	3 (5.6)	10 (18.5)	4 (7.4)	3 (5.6)	<b>First (5.239, 0.027)</b>
2	4 (7.4)	11 (20.4)	5 (9.3)	3 (5.6)	<b>Fast (8.007, 0.007)</b>
3	10 (18.5)	10 (18.5)	5 (9.3)	7 (13.0)	Favorably (1.666, 0.204)
4	14 (25.9)	11 (20.4)	15 (27.8)	16 (29.6)	Frequently (1.045, 0.312)
5	10 (18.5)	4 (7.4)	15 (27.8)	8 (14.8)	By Study Focus
6	7 (13.0)	5 (9.3)	7 (13.0)	9 (16.7)	First (0.219, 0.642)
7	6 (11.1)	3 (5.6)	3 (5.6)	8 (14.8)	Fast (0.723, 0.400)
Mean	4.28	3.28	4.20	4.52	Favorably (1.042, 0.313)
(STD)	(1.63)	(1.77)	(1.56)	(1.67)	Frequently (0.987, 0.326)

Table 3 Frequency of Students' Study Status in the Field of IST

Ranks	Number (%)	Comparisons ( <i>F</i> , <i>p</i> )
1	1 (1.9)	
2	2 (3.7)	
3	2 (3.7)	By Gender
4	5 (9.3)	(0.092, 0.763)
5	8 (14.8)	
6	19 (35.2)	By Study Focus
7	17 (31.5)	(0.447, 0.507)
Mean (STD)	5.63 (1.46)	

Based on the above analysis results, further exploration of students' attitudes toward their first and fast sharing in group assignments was deemed valuable. To simplify the subsequent analysis procedures, students whose responses were equal to or above 3 on the 7-point Likert type scale were considered to have a first and/or fast sharing attitude, and vice versa. Table 4 displayed the number of students who held the attitude of sharing first and fast ( $N = 17$ ). It was observed that more males ( $N = 15$ ) than females ( $N = 2$ ) fit into this group. Contrarily, in the group of students who neither held the attitude of sharing first nor fast ( $N = 11$ ), more females ( $N = 8$ ) than males ( $N = 3$ ) were found.

Table 4 Numbers of Students who Held the Attitude toward Sharing First and/or Fast

First / Fast	No	Yes
No	11 (female 8, male 3)	3 (female 2, male 1)
Yes	16 (female 9, male 7)	<b>17</b> (female 2, male 15)

Tables 5 and 6 display the descriptive analysis results of students' passion quotations regarding sharing within a group, categorized by six dimensions and STEAM dimensions, respectively. Interestingly, students exhibited higher passion levels in the social dimension, followed by research, transaction, leadership, practical, and artistic dimensions. Additionally, students showed higher passion levels in science, followed by mathematics, technology, arts, and engineering. However, no significant differences were found between genders or study focuses across all six dimensions or STEAM dimensions, except for the technology dimension, which showed a significant difference between the two gender groups.

To determine which intrinsic motive inspired students the most to be willing to share more within a group assignment, a detailed analysis was conducted. Again, the analysis was divided the students into four groups (first sharing – yes/no; fast sharing – yes/no) according to the contingency table (Table 4). As a result, one critical criterion, i.e., analytical curiosity, was found significantly viable to differentiate the students who held the attitude toward sharing first and fast from those who did not. Unexpectedly, two additional measurement criteria, i.e., acceptance and tranquility, were found significant differences between two types of students' sharing attitude (first-yes & fast-yes vs. first-no & fast-yes). An extra finding was reported to differentiate students who enjoy and often sharing their opinions with others compared with those do not, the only criterion, i.e., exploration was found significantly viable in this study.

Table 5 Students' Passion Quotation regarding Sharing within Group by Six Dimensions

Dimensions	Mean (STD)	Comparisons ( <i>F</i> , <i>p</i> )	
Research	48.12 (15.28)	<u>By Gender</u>	<u>By Study Focus</u>
Artistic	44.58 (18.58)	Research (0.866, 0.357)	(0.412, 0.524)
<b>Social</b>	<b>48.56 (20.97)</b>	Artistic (0.294, 0.591)	(0.252, 0.618)
Practical	44.80 (18.77)	Social (2.070, 0.157)	(0.021, 0.884)
Transactional	46.36 (22.21)	Practical (0.052, 0.821)	(1.066, 0.308)
Leadership	45.88 (19.88)	Transactional (0.734, 0.396)	(0.024, 0.878)
Mean (STD)	46.38 (19.32)	Leadership (2.775, 0.103)	(0.236, 0.630)

Table 6 Students' Passion Quotation regarding Sharing within Group by STEAM Dimensions

Dimensions	Mean (STD)	Comparisons ( <i>F</i> , <i>p</i> )	
<b>Science</b>	<b>48.69 (17.36)</b>	<u>By Gender</u>	<u>By Study Focus</u>
Technology	46.71 (17.09)	S (0.679, 0.415)	(0.049, 0.826)
Engineering	44.57 (18.25)	<b>T (4.878, 0.033)</b>	(0.214, 0.646)
Arts	44.58 (18.58)	E (0.000, 0.991)	(0.115, 0.736)
Mathematics	48.00 (16.98)	A (0.294, 0.591)	(0.252, 0.618)
Mean (STD)	46.51 (29.42)	M (0.038, 0.845)	(0.108, 0.745)

### Discussion and conclusion

To encourage students' sharing within a group assignment depends on their intrinsic motives or personal attitudes toward information sharing. This case study first found gender differences among the invited graduate students regarding their first and fast sharing attitudes. Given their learning experiences in the IST field, it was not surprising to find that the technology dimension also yielded a significant difference in their responses to the first and fast sharing attitudes. By employing the well-developed Passion Quotation, this study clearly revealed that the critical intrinsic motive, analytical curiosity, was viable in determining students' sharing attitudes. Two more intrinsic motives, acceptance and tranquility, were also deemed worthy of further exploration in future studies. Since the current study was a case study, it might be challenging to generalize its findings to other study contexts. Future studies are suggested to utilize the Passion Quotation and follow the statistical analysis procedures demonstrated in the current study to provide detailed analysis results. More interesting findings regarding different groups of project members in various study contexts are highly anticipated in future studies.

**Keywords:** Information Sharing, Project Management, Passion Quotation, Motivation Theory, STEAM (Science, Technology, Engineering, Arts, Mathematics).

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## **Empowering Women: A Literary Exploration of Identity and Empowerment**

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### **Abstract:**

This paper is an attempt to explore the multifaceted dimensions of women's identity and empowerment as portrayed in literature. Empowering women is to provide them opportunities to participate fully in social, political and economic spheres of life. Literature has been instrumental in exploring the larger aspects of women's identities, highlighting the intersections of different social categories and the various challenges faced by women with diverse backgrounds. In literary narratives, women characters often undergo transformative journeys, breaking free from societal constraints, and evolving to their true selves. The paper aims to shed light on the evolution of women's roles in society and how literature serves as a powerful medium for advocating women's empowerment and shaping their identities.

**Key Words:** Identity, Feminism, Gender equality, Resilience, Patriarchy, Empowerment.

### **Introduction**

Women empowerment and identity are powerful themes in literature, reflecting the struggles, triumphs, and evolving roles of women in society. In literary works, women empowerment often refers to the process of giving women the power and control to make decisions about their lives and shape their destinies. It involves challenging traditional gender roles, advocating for equal rights, and fostering self-confidence among women. Identity, on the other hand, investigates the complex interplay of personal, social, and cultural factors that define an individual. Afsana A. Sama elucidates "In context to women, empowerment essentially refers to a feeling of awareness of one's own situation backed up with the knowledge, skills and information which could enable women to gain higher self-esteem and facilitate their role as decision makers." For women, identity encompasses not only their gender but also their race, ethnicity, class, sexuality, and various other aspects of their lives. Literature has been instrumental in exploring the larger aspects of women's identities, highlighting the intersections of different social categories and the various challenges faced by women with diverse backgrounds. In literary narratives, women characters often undergo transformative journeys, breaking free from societal constraints, and evolving to their true selves. These stories inspire readers to question the social conventions and encourage them to embrace their own identities and empower others. Throughout history, writers have used literature as a tool to advocate for women's rights and challenge the status quo. Classic works such as Jane Austen's "Pride and Prejudice," Virginia Woolf's "Mrs. Dalloway," and Maya Angelou's "I Know Why the Caged



"Bird Sings" have portrayed strong, resilient female characters who navigate societal expectations and assert their identities. Virginia Woolf states, "For most of history, anonymous is women." Contemporary literature continues to explore these themes, highlighting the ongoing struggles for women's empowerment and identity crisis in the modern world. By engaging with these literary works, readers gain insights into the diverse experiences of women, fostering empathy, understanding, and a collective commitment to promoting gender equality and women's empowerment.

In English literature, the theme of women's empowerment and identity has been explored in various contexts throughout history. During different periods, social norms, cultural beliefs, and legal frameworks greatly influenced the portrayal of women in literature. In medieval literature, women were often confined to traditional roles and portrayed as submissive and obedient. However, there are exceptions like Chaucer's "The Wife of Bath's Tale," where the female protagonist challenges societal norms, providing early glimpses of women's empowerment. The Renaissance period saw a shift in attitudes towards women, reflecting changing social and political landscapes. Writers like Shakespeare explored complex female characters in plays like "Macbeth" and "Hamlet," showcasing the intricacies of women's identities and roles in society. The 18th century saw the rise of feminist literature with writers like Mary Wollstonecraft, who argued for women's rights and equality in works like "A Vindication of the Rights of Woman." In the 19th century, novels like Jane Austen's "Pride and Prejudice" critiqued societal expectations placed on women, emphasizing the importance of individual identity and choice. The Victorian era brought progress and challenges for women. Writers such as Charlotte Brontë ("Jane Eyre") and Emily Dickinson (poetry) depicted strong-willed, independent female characters, challenging the social and cultural constraints of the time. Eventually feminist literature gained momentum. Virginia Woolf's works, like ("Mrs. Dalloway,") the complexities of women's minds and identities, highlighting their inner struggles and desires. The feminist movement in the mid-20th century significantly influenced literature. Writers like Sylvia Plath ("The Bell Jar") and Maya Angelou ("I Know Why the Caged Bird Sings") explored the struggles and triumphs of women, addressing issues of identity, empowerment, and societal expectations. In modern literature, authors like Margaret Atwood ("Surfacing") continue to explore themes of women's empowerment, identity, and the intersectionality of gender in context to race, class and ethnicity. Throughout history, English literature has provided a platform for diverse voices, reflecting the evolving perceptions of women's empowerment and identity in society.

The struggle to find a relevant place in social structure and the quest for identity is not only a challenge for women characters, Women writers also have faced numerous challenges in addressing gender issues since beginning. They have often been marginalized, their voices silenced, or their work dismissed. Some challenges include limited access to education and publishing opportunities, social expectations and gender norms that dictate what women should write about, and a lack of recognition compared to their male counterparts. Additionally, women writers frequently face sexism, discrimination, and gender bias in the literary world. Their work is sometimes negotiated

into specific genres or considered less significant. Overcoming these challenges often requires immense determination, resilience, and support from both within and outside the literary community. Despite these obstacles, women writers have made significant strides in addressing gender issues through their work, contributing valuable perspectives and narratives to the broader conversation about gender equality. Challenges remain, but the resilience and creativity of women writers continue to shape and redefine the literary landscape. In this context feminist movement played a pivotal role to provide better and equal opportunities to women writers.

Feminist literature has played a significant role in women's empowerment by challenging traditional gender roles and advocating for gender equality. Through powerful storytelling and critical analysis, feminist literature has raised awareness about the experiences, struggles, and aspirations of women. It has provided a platform for women's voices, highlighting issues such as patriarchy, sexism, and discrimination. By depicting diverse female characters and their journeys, feminist literature has inspired women to question societal norms, pursue education and careers, and assert their rights. It has fostered a sense of solidarity among women, creating a supportive community that encourages them to challenge injustice and demand equal treatment. Additionally, feminist literature has contributed to academic discourse, shaping feminist theory and activism. It has influenced social and political movements, leading to policy changes and legal reforms that promote women's rights. By promoting inclusive narratives and challenging stereotypes, feminist literature has paved the way for a more inclusive society where women can express themselves freely and participate in all aspects of life.

Feminist literature has a rich history spanning centuries, reflecting the social and political evolution of women's rights and gender equality. It began to gain prominence during the 19th and early 20th centuries with works like Mary Wollstonecraft's "A Vindication of the Rights of Woman" (1792). The first wave of feminism, focusing on suffrage and basic rights, inspired writers such as Virginia Woolf, whose essay "A Room of One's Own" (1929) explored women's need for independence. In the 1960s and 1970s, the second wave of feminism emerged, leading to an explosion of feminist literature. Authors like Simone de Beauvoir ("The Second Sex," 1949) and Betty Friedan ("The Feminine Mystique," 1963) critically examined women's roles in society. This period also saw the rise of feminist fiction and poetry by writers like Margaret Atwood ("The Handmaid's Tale," 1985) and Adrienne Rich ("Diving into the Wreck," 1973). The 1980s and 1990s marked the third wave of feminism, characterized by a focus on diverse voices and intersectionality. Authors like bell hooks ("Ain't I a Woman? Black Women and Feminism," 1981) and Audre Lorde ("The Master's Tools Will Never Dismantle the Master's House," 1984) explored race, class, and sexuality within the feminist movement. In the 21st century, feminism continues to evolve with the emergence of fourth-wave feminism, amplified through digital platforms and social media. This wave emphasizes inclusivity, body positivity, and challenging gender norms, with authors like Roxane Gay ("Bad Feminist," 2014) and Chimamanda Ngozi Adichie ("We Should All Be Feminists," 2014) contributing to the discourse.

Throughout history, feminist literature has played a crucial role in challenging societal norms, advocating for women's rights, and promoting gender equality.

The feminist movement has had a profound influence on literary works, shaping the way gender, power, and identity are portrayed in literature. Feminism has led to the creation of multidimensional, strong female characters who break traditional stereotypes. In modern literature, female protagonists are more likely to be portrayed as independent, intelligent, and resilient, reflecting the real-life experiences and aspirations of women. Mary Wollstonecraft emphasizes the importance of self-identity, "I do not wish them (women) to have power over men, but over themselves." (*A Vindication of the Rights of Women*, 1996) Feminist literature often critiques patriarchal societies, highlighting the unequal power dynamics between men and women. Authors challenge traditional norms, showcasing the impact of patriarchy on women's lives. This critique has prompted readers to question societal expectations and gender roles. Feminist writers delve into topics such as reproductive rights, domestic violence, sexual harassment, and workplace discrimination. By addressing these issues, literature becomes a platform for raising awareness and advocating for change. Authors bring marginalized women's experiences to the forefront, fostering empathy and understanding among readers. The feminist movement has emphasized the intersectionality of women's experiences, considering factors like race, class, sexuality, and ethnicity. Literary works now explore the unique challenges faced by women belonging to diverse backgrounds, leading to a richer and more inclusive representation of women's lives. The feminist movement has encouraged and celebrated women authors, providing them with platforms to share their stories. This support has led to a surge in women's voices in literature, contributing to a more diverse and representative literary landscape. The feminist movement has profoundly influenced literary works by challenging stereotypes, amplifying women's voices, and fostering a more nuanced understanding of gender dynamics.

In literature, the theme of empowering women and their journey towards self-discovery and empowerment has been a recurring motif for centuries. This theme delves into the complexities of a woman's identity and the various societal factors that either hinder or catalyze her growth. Rashmika Goswami illustrates, "Fundamentally, a woman must be liberated from what may be referred to as "dependence syndrome"...The process of liberating women from this state of structural dependence by realizing their inner strength is at the heart of women empowerment." Through the lens of literature, we can explore the multifaceted aspects of women's lives, their struggles, and their triumphs on the path to self-empowerment. Here are some poignant and thought-provoking works by some significant voices in literature.

*The Awakening* by Kate Chopin: In this novel, we follow the journey of Edna Pontellier, who grapples with societal expectations and her own desires for self-discovery. Edna's struggle for autonomy and her awakening to her true self, serve as a powerful exploration of identity and empowerment.

*The Yellow Wallpaper* by Charlotte Perkins Gilman: This short story offers a harrowing look into the mental confinement of a woman prescribed the "rest cure." The protagonist's gradual descent into

madness is a poignant commentary on the suppression of women's voices and their struggle for agency.

*Jane Eyre* by Charlotte Brontë: *Jane Eyre's* journey from an orphaned child to an independent woman illustrates the resilience and determination required to break free from social constraints. Her pursuit of love and self-respect embodies the theme of empowerment. *Jane Eyre* seeks dignity and respect, she describes, "I am no bird; and no net ensnares me: I am a free human being with an independent will."

*The Handmaid's Tale* by Margaret Atwood: In this dystopian novel, Atwood explores a world where women's identities and agency are stripped away. Offred's internal struggle to regain control over her life and her body is a stark representation of the fight for empowerment in the face of oppression.

*I Know Why the Caged Bird Sings* by Maya Angelou: This autobiography recounts Angelou's childhood and adolescence, where she confronts racism, trauma, and sexual abuse. Through her powerful writing, Angelou illustrates how she found her voice and identity, ultimately achieving empowerment.

*Becoming* by Michelle Obama: In her memoir, the former First Lady shares her personal journey of empowerment. She discusses her experiences as a woman of color in leadership roles and the importance of embracing one's unique identity.

## Conclusion

Through literature, we gain a deeper understanding of the intricacies of women's identity and their relentless pursuit of empowerment. These works provide insights into the challenges women face, the strength they possess, and the transformative power of self-discovery. The present study focuses not only on the feminists giving voices to subjugated women but strengthening women's role in the growth of society and nation. 'Empowering Women: Literary Exploration of Identity and Empowerment', is an attempt to advocate the enduring relevance of this theme in literature and society.

**Keywords:** empowering, women, literary exploration

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## Human Rights and Women Empowerment in India

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### Abstract

Throughout India's history that has been written down, the position of women has undergone several transformations. In Indian society, women play a crucial role. Ancient Indian women had a high social rank and were in good health. In terms of equal opportunity, schooling, conjugal and familial life, race and gender, religion, and culture, women in modern Indian society preserve or decline from their ancient and medieval standing. The Vedic women were economically independent. Some women were working as teachers. The location of production was the home. Clothes were made by spinning and weaving at home. Women support their husbands' agricultural endeavors as well. In the religious sphere, the wife had full rights and frequently performed rituals with her husband. The husband and wife both participated in religious rituals and sacrifices. Even religious discussions saw active participation from women. Women's standing did slightly improve throughout the Buddhist era, but not much. In Ancient Indian Literature, women play a significant part. Many educated women lived in ancient India. The Medieval age saw a further decline in Indian women's position, which proved to be very discouraging. This study leads us to the conclusion that women participate equally in human development. She represents half the human race. But in society, she falls short. In contrast to ancient Indian civilization, women are not treated with respect nowadays. In today's culture, women are frequently the victims of crime. They were reliant on their male relatives throughout their whole lives since the provisions of the Constitution were insufficient to grant them a respectable standing in society. It concludes by discussing the importance of women and the role of society in releasing women from a patriarchal culture where they are persecuted and kept in the dark.

Keywords: Racism, male domination, domestic violence, persecuted, medieval era

### Introduction

Women have been granted a secondary role in our historically patriarchal culture, and this is reflected in the social, political, and economic sectors. The empowerment of women has, however, always been a top priority and has received the highest attention from all parties involved. In the Indian social structure, women played the most important role. Without a doubt, the Rig Vedic women in India were in good health and had great social positions. Even women were given the chance to reach a high level of intellectual and spiritual achievement. Indian culture does not believe that humanity is now seeing a significant revolution for women. Women's voices are becoming more prominent in the legislature, courts, and public spaces. The Indian Constitution has always provided women equal rights with males, unlike the West, where women had to battle for more than a century

to obtain some of their basic rights, such as the ability to vote. In terms of equality, education, marriage and family life, race and gender, religion, and culture, women in modern Indian society preserve or decline from their ancient and medieval standing. This essay also aims to shed light on the issues that women have encountered over time and their position in society.

Gender-based discrimination is among the most prevalent kinds of prejudice in India. There has never been a period in history or location where women lived in total equality with men. Even if the current state of this issue has changed from ancient times, it is still gravely unbalanced. In light of this, gender equity was incorporated into India's plan to alleviate poverty and human suffering. Because women can contribute new energy and new insights, the policymakers were adamant that a strong commitment to gender equality and fairness would boost every area of work to alleviate poverty. Since the previous several decades, there has been a lot of discussion about women and growth. The significance of the feminist perspective on the concept of justice has been progressively increasing and receiving academic respectability.

Fundamental rights as well as human rights are both violated by gender discrimination. All human beings have rights, including both men and women. There has never been a period in history or location where women collectively enjoyed themselves total parity with males. Health, educational, economic, and political disparities between men and women in India are referred to as gender inequality. The sex ratio in India, the health of women during their lifetimes, their educational achievement, and their economic circumstances are all impacted by gender inequality and its societal causes. The lack of skill in an economy due to gender discrimination against women has detrimental effects on the economy. Different types of gender discrimination exist. Many social customs that are accepted as legitimate from a religious or cultural perspective exclude women from the economic mainstream. Due to the fact that they prevent society from using the creativity that women naturally possess, these social norms might have significant economic repercussions.

In the middle of the 1990s, women throughout the globe adopted the human rights framework and started to formulate political and logical justifications for the theories and practices of women's human rights. "Women's human rights" has been utilized as a venue for praxis, or the development of political tactics affected by the mingling of theoretical concepts and practical political actions. A vehicle for women to build the political competence needed for the twenty-first century has emerged thanks to the required tools, coordinated activity, and extensive international networks that have sprung up around movements for women's rights. A woman's human rights framework provides young women with the means to organize, analyze, and report their encounters with violence, wickedness, and negligibility. Due to international efforts for women's empowerment, the situation in India, where it is a high priority on the nation's progress agenda, is equivalent to that in other nations. Because it is now widely understood that the economic empowerment of women is a prerequisite for national growth, the issue of women's economic empowerment is of the highest significance to political thinkers, social thinkers, and reformers.

Women's empowerment is a constant and dynamic process that has made it possible for females to take part in decision-making in all areas of public life, including the economic, political, and social ones. Additionally, it makes it easier for individuals to change the settings and systems that keep them restricted. Increased power for women ensures societal stability. The interests and value systems of women are crucial to the development of a decent family, a wonderful society, and eventually a good country. On a worldwide scale, women's empowerment is seen as being crucial to a country's development. The human rights framework creates a space where it is more likely that a distinctive record of women's lives will be established. The fundamental principles of human rights that provide each individual with an awareness of the case for human dignity give women a vocabulary for describing every violation and obstacle to the exercise of their human rights.

### Pre Independence

The position of women in the nation was poor during the time before independence. The predominance of male domination was a key contributor to this. As a result, women's status was compromised. The women's primary duties were focused on carrying out home duties; they were not permitted to take part in other work and activities or to voice their opinions. The customs of polygamy, sati, child marriage, and female infanticide were all too much for them to handle. With the introduction of Islam, their situations improved and they were given privileges. Before India gained its independence, there were many issues and difficulties affecting the position of women in the country. Due to the predominance of the male gender, women were subject to limitations in a variety of areas, including as the ability to get education, career prospects, forced child marriage, the purdah system, sati, and so on. Prior to India's independence, women's standing was mostly influenced by their upbringing and the culture they lived in.

Women struggled for their rights and attained talents and abilities before the country attained its freedom. In the battle for independence from British domination, women also made significant contributions. However, certain women who belonged to lower castes and socioeconomically disadvantaged groups in society did not have access to equal rights and opportunities, and their living circumstances were subpar. They were reliant on the male members and had to abide by the conventions, regulations, and policies put in place by them. Women were in a low position. In this time period, several codes of conduct that established certain standards and behavioral characteristics for women were put into action.

During this time, women were prevented from making meaningful contributions in the social, economic, religious, and political realms. They were only allowed to live in homes, where they had to take care of all the domestic chores and needs as well as those of their family members. Numerous systems that had negative consequences on women were put into place at this time. These include polygamy, female infanticide, widow remarriage restrictions, child marriage, and the purdah system. The efforts of social reformers and social workers over time led to the formulation of policies that improved the position of women. In the course of history, women's status declined during

the medieval era. The Bhakti movement made a great impact on both the advancement and degradation of women's position during this time. This movement's main goal was to raise women's standing in society.

**Polygamy:** Polygamous unions were frequent in India before independence. The warrior tribes and the affluent merchant elite both engaged in this practice often. This practice was impacted by a number of elements in ancient India, including the people's individual opinions, status symbols, and social, moral, and religious obligations. The regulations governing marriage in the present day are clear-cut in terms of every faith.

**Sati:** The widespread practice of widow immolation, also known as Sati, was one of the major difficulties that all campaigners and reformers faced. According to this custom, Hindu widows would clamber up onto their husbands' funeral pyres and burn with them. Ancient India had a similar method. A notable reformer who made a huge contribution to raising women's status was Raja Ram Mohan Roy. Together with Lord William Bentinck, he fought for the elimination of the sati system.

**Child marriage:** Child marriage was viewed as a major issue that had an adverse impact on people's general quality of life. As a result of this issue, girls and women suffered far more than boys did. Gandhi worked to end the practise of child marriage, and the Child Marriage Restraint Act was implemented in 1929 as a result.

**Widow Remarriage:** The circumstances of widows were not good. Numerous issues were expected of them, which made their lives miserable. The main difficulties and issues they faced included being prohibited from engaging in social, religious, cultural, or political activities; being unable to express their opinions; being excluded from participation in decision-making processes; being denied the right to own property; and being denied access to a variety of opportunities. As a result, they chose sati. The people who made a substantial contribution to the reform movement of widow remarriage were Ishwar Chandra Vidyasagar, Mahadev Ranade, and Dayanand Saraswati.

**Right to property:** There remained uncertainty regarding the right to property, and legislation emphasising the rights of women were not put into place. When these problems and worries remained unresolved, it became challenging for the widows to find new husbands. The Dayabhaga and Mitakshara statutes, which went into force in 1956, emphasised the idea that, in the absence of a son or grandchild who is male, a widow might succeed to her husband's property upon his death. She can only keep the property she inherits from her spouse for as long as she lives.

**Female infanticide:** When a girl child is killed after birth, the term "female infanticide" is used. The girl kid was viewed as a liability by her parents from the moment of birth. It was thought that she would simply make demands and would not be worth investing in. Female infanticide was a widespread practice among several castes and tribes in India, particularly in the north and northwest regions.

Islam brought about a profound transformation in women's position and ended discrimination against them. According to Islamic beliefs, women should be independent and have their own identities rather than being completely reliant on males. Prior to independence, there was a drop in the



proportion of women in India. The primary cause of this decline was thought to be sex-selection abortion. Women enjoyed respect and acknowledgment in society throughout the Vedic era, but with time, their standing in society degraded. The Indian culture makes it clear that women are revered as goddesses, such as Lakshmi, Saraswati, and Durga. On the other side, women were abused, and subjected to female infanticide and female feticide as well as various types of verbal and physical abuse.

The several types of issues that women faced throughout the mediaeval era included polygamy, sati, child marriage, widow remarriage, entitlement to property, and female infanticide. Women in Indian society did not get favourable treatment before to the arrival of Islam, but with the spread of Islam, their standing improved in terms of their rights to life, to education, to equality, and to property. Numerous issues and obstacles faced the position of women throughout the Mughal era, including child marriage, sati, female infanticide, and prostitution. In comparison to men's education, women's education is seen as being less significant during the Mughal era. The Mughal rulers were well-cultured and educated, so they understood the need to educate everyone, including ladies, to help them advance better living conditions for themselves. There were several social reformers during the time of the East India Company, including Raja Ram Mohan Roy, Ishwar Chandra Vidyasagar, and Jyotiba Phule. These social reformers overcame many obstacles and made a significant contribution to raising women's standing in society. The main improvements were on ending the practice of sati, encouraging widow remarriage, outlawing child marriage, granting women the ability to own property, and outlawing dowry. The position of women was improved as a result of these actions.

### Post Independence

Improvements were achieved in a number of areas that contributed to the welfare of women in society in post-independence India. The creation of several initiatives and plans with the primary goal of advancing women took place. The key factors that support women's empowerment include encouraging them to pursue education and participate in the workforce. Despite the implementation of laws and legislation, women are still seen as inferior to males in some rural areas. One of the regrettable things is that women and girls experience violence and mistreatment across the nation. However, as globalization and industry advance, women are being given more prospects for advancement. Women from metropolitan areas are mostly improving their standard of living by getting a decent education and finding career prospects. The position of women in post-independence India, women's empowerment, gender issues in post-independence India, women's political engagement, and challenges facing working women are the primary topics that have been considered in this research study.

According to the Universal Declaration of Human Rights, children and mothers need special attention and protection. All Indian people are guaranteed equality, liberty, and the right to life under the country's constitution. The nation's residents must also stop engaging in traditions and behaviors

that have a negative impact on women's standing. The Indian Constitution includes rules and regulations that are largely aimed at advancing women's position. Since 1950, when the democratic constitution was adopted, women have had equal access to social and political rights. Each state is required to uphold law and order and provide justice for women.

#### Technology, Education, and Employment

The 1920s saw the start of the women's movement, which was based on the social reform movement of the previous century. During the time of intense nationalism and the war for independence, the women's movement developed. The movement's most notable accomplishments, among many others, were India's independent constitution's guarantees of women's equality and universal adult suffrage. Nevertheless, these strategies did not significantly improve the position of women. The people of the present, who are mostly from rural areas and have conventional ideas and perspectives, still want a male kid and see girls as burdens. Men's conduct is ingrained in Indian society at a deep level. They hold the belief that they are superior to and more capable than women and that they are thus entitled to control, authority, and the power to make crucial choices. There have been changes brought about in women's standing.

In the areas of social, political, cultural, economic, and religious, they are making a significant impact. Women are enrolling in educational institutions and going to college. Technology is said to have made a huge impact on changing how people live their lives. There are a lot of advantages to technology. In the modern world, people rely on technology to do many different chores and activities. Women now have new opportunities thanks to the changes brought about by technology's breakthroughs and achievements. In the modern day, people from various cultures and backgrounds have come to understand the value of education. Girls and women can develop their academic talents via education, but they can also raise awareness of several other issues. The expansion of educational chances is recognized as one of the crucial factors that has aided in increasing women's well-being. Women who are educated can become independent and less dependent on others.

#### Women's Empowerment

When learning about women's empowerment, attention is not only directed toward their material advancement but also toward their economic expansion. Typically, it makes a sizable contribution to the overall growth plan. Women are largely recognized in society as householders, which is their status. They carry out several duties and domestic activities. As a result, an educated and empowered woman would be able to perform her professional obligations in an orderly way. On the other hand, if she lacks education and is subjected to discrimination, she may struggle to carry out chores and other domestic duties.

The seeds of women's emancipation were first planted in India in the early 18th century. In India, it started to gain recognition in the 19th century. According to dietary and health disparities as well as apparent variations in the death rates of boys and girls, the Indian population is said to be more

articulate with a clear preference for males and women. Girls are reported to obtain health care services and medical help less frequently than boys. This is thought to be one of the main obstacles in the way of achieving empowerment chances. Compared to boys, malnutrition has affected girls more frequently. The rate of maternal mortality in the nation is relatively high as a result of malnutrition. Despite the restrictions put in place, child weddings, which are extremely widespread in some rural areas, have been noticed. It also states that prostitution is commonplace throughout the nation.

Violence and criminality against women have been pervasive across the nation. It is crucial to take into account a number of things in order to enhance empowerment opportunities among them. These include treating women with respect and decency, protecting them from abuse and mistreatment, giving them equal opportunities, especially in terms of obtaining education and employment, and not viewing them as liabilities by families and communities. Women's empowerment must be seen as part of the whole process of social transformation that leads to a fair society without distinctions or prejudices. The effectiveness of supportive socioeconomic policies and concurrent changes in the political system are key factors in determining the success of women's empowerment. To get the intended results, the execution of activities in terms of all strategies must be spontaneous. An examination of the position of women must be done in order to put the ideas and methods into action. Women who have solid career possibilities and are highly educated do not need to worry about obtaining opportunities for empowerment. Women who lack education, struggle to make ends meet, and frequently endure violence and harassment are those who need to be most concerned about empowering chances.

### Gender and Dowry Issues

Violence and gender-based disparities have occurred not just in India but also in other nations throughout the world. Women are thought to have faced a major difficulty known as gender difficulties. When women and men work in the same organizations, there are times when women are not paid equally to men for doing the same job requirements. As a result, they face wage discrimination. Women are not engaged in manual labor since it is thought that women lack the skills necessary for such work. Men were therefore given physical labour tasks. Men, on the other hand, abuse and mistreat women because they believe they are less capable than they are.

Gender disparities have an impact on how women grow generally. The status of women in society is diminished in many ways by the gender issues that have been brought about by society. The demands made by the society around dowry have led to problems. Dowry is the amount that the parents of the bride must pay the parents of the groom at the time of the wedding. The primary problem, which allows families and society to view females as burdens, is said to be the dowry. Families from underprivileged, marginalised, and socioeconomically disadvantaged areas of society frequently struggle to pay dowries, therefore the arrival of a girl child does not make them happy.

## Right to Vote

After India gained its independence, women were granted the power to vote. Unlike women in America and Britain, women in India did not face difficulties or obstacles when trying to get the right to vote. The leaders of India, including Mohandas Karamchand Gandhi and others, stressed the need for widespread participation in the nation's freedom movement. When several women gathered, they voiced their worries in the legislative assembly as well. Women had the opportunity to engage in the several independence movements that were started. Participation of women in the Lok Sabha and Parliament strengthens their political engagement even further.

In India since independence, changes have been occurring to the position of women. In India, it's believed that women make up about half of the country's population. A nation or society cannot be deemed civilized if women are not treated with respect and decency. In India, legislation and policies that support women's empowerment possibilities have been developed. The use of technology, access to education and work, and the reduction of violent and criminal activities are the primary areas that are thought to be important and that have improved the status of women. Women have been making progress in India since its independence. For them, possibilities for empowerment are being established, and these opportunities are making a substantial contribution to their advancement. However, there are times when women are not treated similarly to males and are viewed as liabilities. The majority of people who live in rural areas seem to have this opinion. They hold the opinion that females should be taught how to carry out home duties and that education is not intended for them.

Women were given the vote once the nation gained its independence. Additionally, they are gaining seats in the Lok Sabha and Parliament. Women are therefore becoming more active in politics. Education acquisition is seen to be a crucial factor in the successful growth and development of people. Women are enrolling in higher education institutes in order to improve their academic aptitude and capabilities. They work in a variety of occupations and professions, including those of physicians, attorneys, teachers, researchers, educators, engineers, administrators, and so on. Working conditions, lack of technology, materials, and infrastructure, ineffective training and development programs, sexual harassment in the workplace, terms, and relationships with coworkers, lack of equal rights and opportunities, lack of knowledge and information, conflicts and disputes, and finding a balance between personal and professional life are some of the issues that they encounter. Finally, it may be said that women's issues need to be addressed. They should be treated equally both within and outside the house, and they should be encouraged to pursue education and work possibilities.

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## Poland Economic Development: Ukrainian Women in the Spotlight

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### Extended Abstract

According to UNHCR statistics, a year after the Russian invasion of Ukraine, a third of the country's population has been forced to flee their homes (UNHCR, 2023). Almost 8 million refugees have fled Ukraine, and nearly 6 million people have been displaced within the country's borders. According to the Center of Economic Strategy's (Ukrainian refugees, 2023), as of the end of June 2023, 5.6–6.7 million Ukrainians are abroad due to the war, which is more than forecast estimates, in particular due to strikes on the energy system of Ukraine in the winter of 2022–23, increased missile attacks on Ukrainian cities in May, as well as the detonation of the Kakhovskaya HPP in June 6, 2023.

According to the data of the European Statistical Service, as of May 2023, the largest share of Ukrainian refugees is in Germany (27%) and Poland (24%) (Fig. 1). Additionally, the country geographically became a logistical hub for communications between Ukraine and the world in light of the impossibility of air travel and severe restrictions on sea transportation.

Country	Data Date	Refugees from Ukraine registered for Temporary Protection or similar national protection schemes	Refugees from Ukraine recorded in country	Border crossings from Ukraine*	Border crossings to Ukraine**
Bulgaria	28.02.2023	153 170	50 592	Not applicable	Not applicable
Czech Republic	26.02.2023	493 149	494 793	Not applicable	Not applicable
Estonia	27.02.2023	43 485	67 601	Data not available	Data not available
Hungary	28.02.2023	34 248	34 248	2 284 425	Data not available
Latvia	27.02.2023	46 048	35 243	Data not available	Data not available
Lithuania	27.02.2023	75 197	75 197	Not applicable	Not applicable
Poland	28.02.2023	1 563 386	1 563 386	9 900 327	7 634 691
Republic of Moldova	26.02.2023	Not applicable	109 348	780 896	410 528
Romania	26.02.2023	117 028	112 575	2 031 387	1 643 800
Slovakia	28.02.2023	110 239	110 444	1 214 136	946 009
<b>Beero</b>		<b>2 635 950</b>	<b>2 653 427</b>	<b>16 211 171</b>	<b>10 635 028</b>

Fig. 1. Refugees division by countries (Situation, 2023)

The gender profile of refugees is specific and cannot be compared with the previous one. According to Eurostat, data from 2010 showed more male migrants than women in European countries (55% men, 45% women). Even though more recent assessments have shown a shift in gender-based migration patterns, female worker migrants outnumbered males by only 2% (51% against 49%) (Annual report on intra-EU labour mobility, 2021).

Today, Ukraine's wave of refugees is different; women and children represent 87% of all family members who left Ukraine, and 13% of family members are older. Among those who traveled accompanied, 5% traveled with unrelated children (Situation, 2023). Polish profile is even more

gender-imbalanced (fig. 2). Moreover, this time, refugees are primarily well-educated women (46% have higher education compared with the average level of 29% for Ukraine and 33% of the EU population) with a child who have worked or owned businesses in Ukraine.

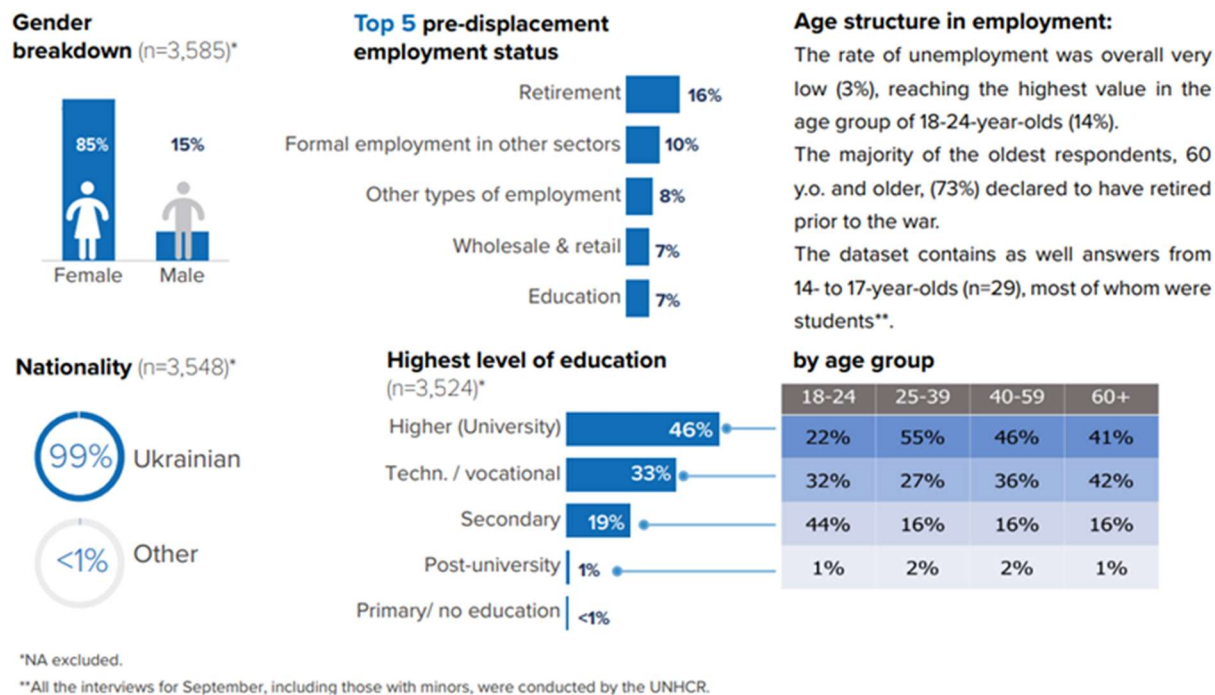


Fig. 2. Refugees from Ukraine in Poland (Refugees from Ukraine in Poland, 2022)

It starts with economic issues and notes that refugees' well-being has generally decreased, which is expected (fig. 3). Notably, 42% have enough money only for food or not enough for food (compared to 12% before the full-scale invasion) (Ukrainian refugees 1st wave, 2022). This, on the one hand, motivates people to look for work and, on the other, to spend to ensure a certain level of comfort (albeit minimal).

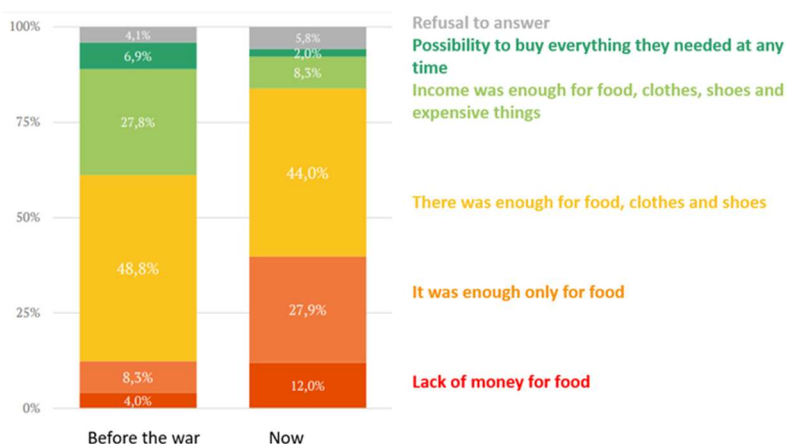


Fig. 3 Assessment of refugees' well-being (Ukrainian refugees, 2023)

A full-scale war of Russia against Ukraine, according to the estimates of the European Investment Bank (recovery, 2022), may reduce real private consumption of the EU by 1.1% due to the inflation

channel, primarily in the Central Eastern countries and South-Eastern Europe. However, migrant spending supports private consumption in these countries. In particular, in 2022, Ukrainians' spending abroad will more than triple compared to the previous year - to \$2 billion monthly (countries, 2022). Spending on Ukrainian migrants stimulates public consumption, particularly in housing infrastructure, health care, and education systems (considering the significant share of children - from 28% to 44% in different countries).

According to Credit Agricole (sales, 2022), the influx of migrants from Ukraine was the main driver of the acceleration of retail sales in Poland in March, which offset the negative impact of inflation and the deterioration of consumer sentiment on household spending. This was evidenced, in particular, by a noticeable increase in sales in the categories "clothing and footwear" (41.9% y/y compared to 2.6% YoY in February) and "furniture, electronics, and household appliances" (2.8% y/y compared to -4.4% YoY in February).

In general, numerous studies of the impact of Ukrainian migrants on the economies are very different and based on various assumptions. Still, all come to the same conclusion that this influence is positive. Thus, Strzelecki et al. (Strzelecki, 2022) studied the economic consequences of labor migration of Ukrainians to Poland from 2013 to 2018. Increasing the workforce was about 0.8% per year, and the contribution of Ukrainian migrants to annual GDP growth was 0.5%. They assume that the additional contribution to the annual growth rate of Poland's GDP will be about 1.2 % per year. A study by Oxford Economics (Refugees will lift economy's potential, but challenges remain, 2022) presents different forecasts. If 650,000 Ukrainian migrants remain in Poland, the labor force will increase by an additional 210,000 (1.2%) by 2030 and potential GDP by 1.2% compared to the basic Oxford Economics forecast. Instead, the influx of 1 million migrants will increase the labor force by 370 thousand (2.1%), and the potential GDP - by 2.0% by 2030.

According to Deloitte data (Polsce, 2022), the integration of Ukrainian forced laborers immigrants in Poland can increase Poland's GDP by 0.2–3.5% annually in the first five years, depending on the quality of the country's integration policy. Favorable factors for this are increasing the labor market's flexibility and solving housing market problems.

According to the calculations of the National Bank of Ukraine based on estimates from the IMF study, surveys by the UN and the Razumkov Center, under other constant conditions, thanks to the contribution of Ukrainian migrants, the output of goods and services in Poland in 2026 will be 2.2–2.3% higher than in the base scenario without migration (countries, 2022).

This tangible positive impact, however, requires the solution of social issues and integrating Ukrainians, those currently in Poland, and those who plan to stay (now, it is about 20%, Fig. 4), but as we know, planning the future, for now, for Ukrainian is complicated and ambiguous.

Let's focus on the prerequisites and problems of such integration, which lie in the social sphere. Thus, although 63% of the surveyed migrants worked in Ukraine before the full-scale invasion, in September, only 28% were employed (Refugees from Ukraine in Poland, 2022).





Fig. 4 Distribution by respondents' plans to return to Ukraine (Ukrainian refugees, 2023)

At this point, Poland has the most favorable conditions - so 1.2 million migrants received social insurance numbers, and about half of them found work (Economy, 2022). For comparison, more than 350,000 Ukrainians looking for a job were registered in Germany in June, but less than 10% found work. However, most migrants worked in areas with a lower level of payment - logistics, industry, agriculture, construction, and hotel business - although a significant part of them had higher qualifications. At the same time, 76.9% of newcomers learn Polish independently, in courses, or with tutors (Ukrainian refugees, 2023), demonstrating the willingness of Ukrainians to adapt to the language environment. Many Polish employers try to adapt workplaces for women. For example, one of our customers in the electronics business reoriented their production. There it was necessary to lift loads plus 15 kg, which is already not allowed for women. Therefore, in the summer, they fully automated the line to raise the goods from the floor to the line automatically. Thus, it was possible to open about 80,000 jobs for women (Polsce, 2023).

However, the full-scale participation of Ukrainian migrants requires the further development of legalization and recognition of education systems for the opportunity to work in a specialty. This will not only improve the situation for refugees (and reduce the burden on the budget by reducing social benefits) but will also allow more efficient use of the potential of the labor force to create Polish GDP. Among the other possible problems that will intensify will be the real estate market in Poland, which showed signs of scarcity and inflated prices even before the pandemic. The possible forecast is increasing demand without a corresponding increase in affordable housing and a shortage.

Here it is worth reminding again about the specific composition of modern migrants - women with children who need the opportunity to use educational services. Regarding the Ministry of Education and Science of Poland, Polish Radio stated that 187,900 children and teenagers from Ukraine came to Poland after full-scale Russian aggression studying in Polish schools and kindergartens. Most of

them are in Warsaw, Wroclaw, and Krakow. 36,900 Ukrainian children attend kindergartens (almost 7,000 more attend various preschools), 116,800 participate in primary school, and 27,200 attend secondary schools. These children afterward increase demand for higher education services, contributing to higher education quality.

At the same time, this structure of migrants makes them vulnerable because children need care and regular services from health institutions. Women, who used to have the opportunity to take care of their children daily and in case of illness (relatives and partners), now have to solve these issues on their own. This, expectedly, complicates their integration and reduces competitiveness in the labor market. At the same time, the need to combine work and childcare (without the possibility of "asking someone") provides opportunities for the development of small towns and communities that are more comfortable due to their territorial compactness. And this will also mean a chance to revitalize their economic and social life.

In summary, it is worth underlining that today's migrant from Ukraine is an educated woman aged 35-45 with a child with a civic position determined to actively participate in social-economic life but needs institutions' help. In addition, financial support is not always the core; the most important is help in the preparation and legalization of documents, advice on employment and child care, renting an apartment, etc.

82% of Ukrainian citizens who arrived after February 24, 2022, found employment in Poland within a year. This is a colossal indicator that shows that the citizens of Ukraine are not looking for ways to be under the financial protection of Poland. They try to find work and be independent (Polsce, 2023). Even though Poland responds quickly to many of these challenges, there is still a long way to go and a lot of work to make these procedures non-discriminatory, transparent, and understandable. Such steps will work for the benefit of Poland even when the Ukrainians return home. But for now, it will allow them to be more actively involved in developing their new home – Poland.

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## **Cultural Preservation and Economic Management among the last indigenous People of Negros Island, Philippines**

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### Extended Abstract

In the World Bank Report 2023, it was stipulated that indigenous people are culturally distinct societies and communities that make up approximately 6% of the global population and accounted for 19% of the extreme poor. Of the estimated 476 million Indigenous Peoples worldwide, they spoke 4,000 of the world's 7,000 languages and often lack formal recognition over their lands, territories and natural resources. Moreover, it was reported that the land and natural resources on which they depend are inextricably linked to their identities, cultures, livelihoods, as well as their physical and spiritual well-being from which they have been displaced (World Bank, 2023).

Furthermore, it was pointed out that dance (as element of culture) establishes contacts between humans and the supernatural beings as cited in Giurchescu (2001). Recognizing the value of art and culture to the community development field served as a key pillar in the approach to economic development and important in elevating community identity and power (Crane, 2020; Clammer, 2015). Kwon (2021) asserted that most graduate school dance programs offered similar characteristics of courses which comprised theory, performance, and workshops with dance performance appeared to be an important of dance programs in Korea (Kwon, 2021). Georgios (2017) stipulated that the experiential way of learning and transmitting dance from one generation to the other, is characterized as "the first existence" of dance in Greece (Georgios, 2017). Clammer (2015) stipulated that without a cultural content to economic and social transformation the problems found in much development – up-rooting of culture, loss of art forms, languages and modes of expression and performance – may only accelerate and paying attention to the development of arts as a content of development helps to amend this culturally destructive process (Clammer, 2015). Moreover, Crane (2020) asserted that recognizing the value of art and culture to the community development field as a key pillar in the approach to economic development is important in elevating community identity and power (Crane, 2020; Clammer, 2015). Some scholars argued that culture and economics are closely linked with each other. On the other hand, Colchester (2016) stipulated that exclusionary models of land management can be traced as early as the first millennium and added that the conservation through the establishment of 'national parks', pioneered in USA and applied world-wide, has violated the rights of indigenous peoples causing impoverishment and social problem. Moreover, it was stated in the same study that international laws now recognize indigenous people's rights and new conservation policies accept that indigenous peoples may own or manage protected areas (Colchester, 2016). Nelson et al., (2015) stressed that in terms of sustainability, a crucial facet of the self-determination of peoples such as indigenous nations and communities is the

responsibility and the right to make plans for the future using planning processes that are inclusive, well-informed, culturally-relevant, and respectful of human interdependence with nonhuman and the environment where indigenous knowledges often play a crucial role in indigenous planning processes (Nelson et al., 2015).

In the Philippines, the National Commission on Indigenous People (NCIP) was organized in 1997. This is also known as The Indigenous People's Rights Act of 1997 at the time of then President Fidel Ramos with the purpose of protecting the indigenous people and their ancestral domain. The NCIP has 14 major thematic concerns that if properly address, may benefit the indigenous people. These are: 1. Formal recognition of ancestral domains, 2. Control and management of ancestral domains, 3. NCIP's capacity to deliver its mandate, 4. Destruction of the ecosystems within the ancestral domains, 5. Non-compliance and violation of FPIC, 6. Pagkawala ng kultura ng IPs (lost of indigenous people's culture), 7. IP governance is weak, 8. Impact of government services are not felt, 9. Overlapping claims over ancestral domains, 10. Di pagkilala ng mga ahensya sa mga IP leaders (agencies that do not recognize IP leaders), 11. Displacement of IPs from their ancestral domains, 12. Kakulangan sa kaalaman sa karapatan (lack of knowledge on human rights), 13. Discrimination of IPs, and 14. Peace and security. Perez-Brito (2021) stressed that if there is no data, there is no story. The report further stated that this is the case of the Philippines, where despite the passing of the indigenous Peoples' Rights (IPRA) in 1997, ethnicity variables were only introduced since 2000 census. Moreover, Indigenous Peoples (IPs) in the Philippines are estimated at 10 to 20 percent of the 102.9 million national population, yet no official figure can be confirmed based on census data where IPs tend to be grouped under a single category according to geographical areas, ignoring the rich ethnolinguistic diversity existing across the country (Perez-Brito, 2021). The Municipality of Mabinay, in Negros Island in central Philippines is among the few remaining islands in the archipelago that still hold some of the few indigenous people whose beliefs, culture, traditions and indigenous agricultural methods are still practiced amidst modernity. The area is home to the Ata-Negrito indigenous group who lived and flourished from ancient times up to the present times. These people have distinct characteristics such as being short body stature, having black skin, kinky hair, and generally dwelling in the isolated hinterlands of Negros Island. Zaide (1994) wrote that when the first Spaniards arrived in the Philippines in the 16th century, they were surprised to see early Filipinos having a civilization of their own and living in well-organized independent villages called barangays which term originated from balangay, a Malay word for "sailboat" (Zaide, 1994). The Ata-Negrito traditional culture and practices are in the verge of extinction brought about by modernization in the 21st century.

The result of this study served as significant information for the Philippine Government, Department of Education (DepEd), Department of Trade and Industry (DTI), Department of Agriculture (DA), researchers, non-government organizations (NGOs), government organizations (GOs), indigenous people, educators, scholars, and other stakeholders who are working towards the development and empowerment of indigenous communities as well as the protection of ancestral domains. Moreover,

this study is a qualitative research that looked into the phenomenology in terms of the experiences of cultural preservation and economic survival management among the Ata-Negrito, the last indigenous people of Negros Island particularly those situated in the Municipality of Mabinay, Negros Oriental, Philippines. The participants were identified through snowball sampling where four indigenous Ata-Negrito community elders were identified for interviews. The primary criterion of the interviewees must be born and have lived in the community. The experience narratives on the indigenous cultural preservation and economic management were recorded, transcribed and interpreted using Colaizzi's method (Sanders, 2023). The Colaizzi's method of phenomenology analysis was used in this research to interpret the data transcription. The Colaizzi's method of phenomenology analysis was used in this research in 7 steps in the interpretation of phenomenological data such as 1) acquiring a sense of each transcript, 2) extracting significant statement, 3) formulation of meaning, 4) organizing formulated meanings of themes, 5) describing the investigated phenomenon, 6) defining the fundamental structure of the phenomenon, and 7) returning to the participants (Sanders, 2003). The soft and hard copies of data are kept for safe storage. The data will be discarded after five months. Moreover, the interviewees were tribal leaders of the Ata-Negrito indigenous group who are serving the village for 5 to 10 years. These leaders are either village chieftain or barangay (village) officials. The age ranged is from 33 to 55 years old. All have gone to elementary level and at least able to write their names. They had attended seminars regarding basic literacy, numeracy, indigenous rights, backyard farming, entrepreneurship, and environmental protection facilitated by mission groups, non-government and government organizations especially by the local government units. All are breadwinners of the family. The average interview took an average of 120 minutes. It was found out that the Ata-Negrito indigenous people longed to have their traditional culture, beliefs, traditions and ancestral domain permanently protected. All of them aspired to have their culture such as mode of dressing, food preference, indigenous songs and dances, worship and ceremonial practices, traditional government and traditional medical practices carefully preserved with the support from various sectors and be taught to younger generation. They aspired to have these cultural traditions integrated as part of the curriculum in the local community schools. They have the fear that their culture and traditions will be totally lost in the coming years if no stronger policies and regulations are made. All of them took pride in their unique cultural heritage and aspired for a sustainable economy in their indigenous community aligned in their cultural practices and traditions. All aspired to receive more trainings in entrepreneurship and modern farming techniques in order to ascertain survival in the long term. Based in the findings, the researcher recommended that holistic approaches in the protection, development and management of indigenous communities be created in order to protect the indigenous people including the Ata-Negrito. It is also recommended that the government agencies such the Department of Education (DepEd) may play an active role in the reintroduction of indigenous culture in the curriculum of schools that are in close proximity to the indigenous communities. It is also recommended that the Department of Trade and Industry (DTI) and similar

agencies to actively conduct seminars for entrepreneurship and the Department of Agriculture (DA) to introduce agricultural methods and techniques without compromising the indigenous cultural practices. It is also recommended that the ancestral domains of the indigenous people be closely monitored by the local, national, and international agencies when development is introduced in the area in order to protect their rights to survive and to thrive in the 21st century. This recommendation is offered to the Philippine Government, the Department of Education (DepEd) of the Philippines, The Department of Trade and Industry (DTI), Department of Agriculture (DA), other government and non-government organizations both national and international organizations, educators and researchers.

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## **Revealing Disparities: An Elaborate Survey Design to Unearth the Gender Pay Gap in the Indian Corporate Context**

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### Introduction

Background: In the later part of the last century (20th century), India, along with other countries, adopted substantial market-oriented reforms. During the early 1990s, the Indian economy underwent significant transformation marked by the rapid liberalization of trade and industrial policies. Nevertheless, this series of reforms did not have resulted in higher engagement in the waged employment sector for either men or women. This trend was evident from the marginal decline of the male participation rate and substantial decline of the female participation rate over the period covering 1983 to 1999. In the 21st century, gender pay gap, despite the swift growth of Indian economy and India's emergence as a growing economic power in the global arena, still remains a persistent and pertinent issue across the globe, including India. The gender gap is a matter of significant concern for corporate workers because it represents an inherent inequality in opportunities, pay, and advancement based on gender identity. This disparity not only affects individuals' economic security but also perpetuates societal injustices. Closing the gender gap is important for the creation of a fair and inclusive workplace where diversity and equality are valued and promoted. In this context, it can be said that gender bias directed towards women in the workplace diminishes the pool of available talent within an economy leading to adverse economic outcomes. In academic research arena, gender discrimination is modeled as a complete exclusion of females from the labour market. In developed countries, gender discrimination in the labour market is commonly associated with disparities in wage rates. Despite the rising youth and female empowerment in the 21st century, India experiences one of the lowest levels of formal employment among women. The gravity of this issue is evident from the corporate organisations' proactive efforts directed towards mitigating gender pay gap related challenges, such as diversity and inclusion programs, transparency in salary structures, implementing pay audits etc.

### Aim and Objective

This academic paper, as the title suggests, aims to discover the details of the gender pay gap amongst Indian corporate workers. In other words, the research seeks to shed light on the diverse factors contributing to the gender pay gap. The primary objective of the study is to understand and analyse the extent of the pay gap in the Indian corporate landscape while also exploring the complex interplay of socio-cultural, economic, and workplace factors. In this way, the paper aims to contribute valuable insights into the dynamics of gender pay gap with informed discussions on this issue being facilitated.

## Methodology

In this research, survey research design methodology was applied for collecting data from a sample of individuals (50) through structured survey questionnaires. Through utilising survey research method, sincere efforts were invested for providing a quantitative or numeric description of trends, attitudes and opinions of the selected population by studying a sample of that population. Females working in the organised corporate sector were surveyed through asking structured and close-ended survey questions. Careful planning, non-probability sampling, snowball sampling and proper questionnaire design were emphasised for ensuring the reliability and validity of survey (primary quantitative) results which were obtained through the application of descriptive statistics. The survey results were presented in diagrammatic and tabular formats. In this paper, emphasis is placed on the ethical considerations inherent in research of this nature, ensuring the anonymity and informed consent of all participants. Furthermore, search strategies were implemented in an effort of findings research topic specific information in this process, search terms and keywords were used effectively. In order to make search process effective and precise, Boolean Operators (AND, OR and NOT) were utilised. Google Scholar's advance search features were utilised for refining search with specific phrases being utilised. Also, other databases and resources were utilised for achieving a more comprehensive view of the current and previous literature on the topic. Apart from academic papers, various other non-academic sources (specifically grey literature) were utilised for the research, such as corporate reports and media reports. The analysis of the existing literature was done with the objective of contextualizing the study within the broader landscape of academic research. In other words, various scholarly works were examined for understanding the current state of knowledge and by doing so, the research was connected with established theoretical underpinnings and academic research-based findings.

## Results

The research strives to capture a holistic understanding of the experiences, awareness and perceptions of employees regarding gender pay gap. Furthermore, the research article delves into the role of government policies, corporate initiatives, and public awareness campaigns in addressing gender pay equity. It also examines the potential long-term consequences of pay disparity, not only on financial independence but on overall career development. In this way, the research findings revealed the extent of the gender pay gap in the Indian corporate sector with primary quantitative data on the disparity in earnings between male and female employees along with the variations in the gender pay gap across different corporate sectors. Also, the findings highlight variations in the gender pay gap on the basis of different job roles and hierarchical levels within corporate organisations. On the basis of the findings, the paper proposed certain recommendations and strategies for corporate organisations for reducing gender pay gap in the Indian corporate sections, such as introducing pay legislation in the country and mandating and increase of women representation in the leadership roles.

## Discussion

The research outcomes can be compared with the research findings of Ara (2021), Chancel and Piketty (2019), Craigie and Dasgupta (2017), Chamarbagwala (2006), Chakraborty (2020), Duraisamy and Duraisamy (2016), Gawali (2012), Rahul and Srivastava (2022) and Reilly and Dutta (2005). After comparing the research outcomes with their research findings, it has been found that disparities in gender pay gap are prevalent in the Indian corporate sector and addressing them is a matter of urgency. The findings of this research are expected to inform and influence policymakers, corporate stakeholders, and advocacy groups in their efforts to reduce and ultimately eliminate the gender pay gap in India. The research article aspires to make a significant contribution to the ongoing dialogue surrounding gender equality in the workplace and offer actionable recommendations for a more equitable and inclusive Indian workforce. This research has the potential to play a pivotal role in advancing the discourse on the gender pay gap within the Indian corporate sector.

## Limitations

The research, despite having potential to contribute to the existing literature pertinent to gender-based pay gap, has certain limitations. Firstly, since the research is based on survey method, it is not devoid of limitations in terms of validity and flexibility. Furthermore, the value of the research is likely to be compromised if the sample is tainted by participants with biases and acknowledging this potential scenario is of prime importance. Secondly, the small sample size can impact the generalizability and reliability of the research findings. Given the constrained time frame, we opted for a specific sample size to ensure the completion of the entire research within the short time. However, it is important to acknowledge that the potential for encountering this methodological challenge cannot be entirely dismissed. Thirdly, response bias, selection bias, non-response bias and cultural bias are the possibility challenges that we faced during the research. In spite of this, we emphasised on the transparent reporting and interpretation of methodologies and findings.

## Conclusion

After an in-depth investigation into the gender pay gap within the Indian corporate sector, the study had unveiled gender pay gap within the Indian corporate sector with the experiences, awareness and perceptions of employees being addressed. The significant impact of government policies, corporate initiatives and public awareness on gender pay gap has been highlighted. The research findings underscore the need for addressing the gender pay gap related issues through implementing the proposed recommendations not only for financial independence but also for the development in career.

**Keywords:** Gender Pay Gap, Disparities, Indian Corporate Sector, Workplace Disparities, Compensation Discrepancies

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## **Effect of Artificial Intelligence awareness on Job Performance: The mediating Role of Gender**

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### **Extended Abstract**

Artificial intelligence (AI) is one of the most cutting-edge inventions in the world (Samala et al., 2020). The concept of AI was first put forth at the Dartmouth Conference in 1956, however, artificial intelligence has not advanced quickly because of the limitations of computer data processing (Xu et al., 2023). Shi (2019) stated that artificial intelligence a subfield of computer science that studies artificial intelligence and the methods of creating intelligent computers or intelligent systems to replicate, extend, and actualize intelligent behavior. However, artificial intelligence goes beyond computer science and touches on issues related to health, security, education, music, art, hotel, retail distribution, manufacturing, and business applications (Buhalis and Leung, 2018; Crandall, 2019; Kayid, 2020; Kim, 2011; Mahroof, 2019; Noreen et al., 2023). As such, the agricultural sector is also leveraging benefits from artificial intelligence. In fact, artificial intelligence is quickly changing the agriculture sector by boosting productivity, cutting expenses, increasing sustainability and environmental advantages, raising crop yields, and enhancing decision making (Edison, 2023).

Due to the importance of artificial intelligence, many studies have focused on the impact of artificial intelligence on job performance. More precisely, it is demonstrated that artificial intelligence may have both positive and negative impacts on job performance (Chen and Xu, 2018; Lu et al., 2020; Malik al., 2021; Tong al., 2021; Vrontis et al., 2022; Xie al., 2020). However, there are few studies on how gender affects the relationship between job performance and artificial intelligence awareness. While other studies have shown no effect, (Belanche et al., 2019; Mackey et al., 2019; Sinangil and Ones, 2003; Shirom et al., 2008; Ufuophu-Biri and Iwu, 2014), others have discovered that gender can have a significant effect on job performance (Abusalma, 2021; Banjo and Olufemi, 2014; Younus et al., 2022). However, to our knowledge, there is no consideration of decades of research that has been done on the role of gender as a mediator in the relationship between artificial intelligence and job performance. To bridge this knowledge gap in the literature, our paper aims to examine the effect of artificial intelligence awareness on job performance in the service sector with gender of Tunisian employees as a mediating variable. We distributed 131 online questionnaires to Tunisian employees in the service sector. Using IBMSPSS.26 and IBMSPSS AMOS.24, explanatory factor analysis, confirmatory factor analysis, and path analysis were performed.

Our findings showed that artificial intelligence has a negative impact on job performance. However, gender has no mediating effect on the relationship between artificial intelligence awareness and job

performance. Studying the impact of artificial intelligence has several advantages for both academics and practitioners, such as identifying the potential benefits and risks of artificial intelligence adoption.

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## **Essence of Women in Leadership and Empowerment – Can Leadership Be Defined by Gender?**

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### Introduction

From leading nations, to standing up for human rights, to running the world's most important organizations, women continue to shape the world through their leadership. It is undoubtedly a significant time for the world to recognize the benefits of women in leadership, and to commit to placing even more women in positions of power. Women are powerful agents of change, and the far-reaching benefits of diversity and gender parity in leadership and decision making are increasingly recognized in all spheres. In spite of that, women continue to be vastly under-represented in decision making in politics, businesses and communities, notwithstanding the fact that women as leaders and decision makers at all levels are extremely critical towards advancing gender justice and gender equality, and to furthering economic, social and political progress for all. Why does this happen?

### Women Leadership Bears Far Reaching Benefits across the Globe

Women continue to be grossly underrepresented in leadership roles in spite of the facts that:

- When women are meaningfully represented and engaged in leadership bodies like legislatures, courts, executive boards, community councils, etc. – laws, rules and decisions are more likely to be inclusive, representative and exhibiting diversity of views
- Women leadership within households improves access to education and healthcare for their families
- Countries with a greater proportion of women as top decision makers in legislatures have lower levels of income inequality

### The Unfortunate Reality

In many parts of our world, even now when the girls hit puberty, they are made to drop out from schools forcibly because they are considered, fit for marriage and bearing children while the boys of the same age still enjoy their childhood and youth. Given a choice between a boy and a girl sibling, the parents and family still prefer to continue with the education of the boy while denying even the basic education to the girls. It's high time that the world must realize that a girl's education not only empowers families but also communities and the economy. It's the result of HER education that we all do better. Throughout history, we have told women that they are too kind and caring to be leaders, but the notion that someone who is not kind and caring can lead effectively is at odds with reality. Can we still refuse to believe that one cannot be both compassionate and strong in leadership? Can

we continue to underestimate the power of kindness and empathy in women knowing that both kindness and empathy come from a position of incredible strength?

#### Time to Pause, Reflect and Introspect

If there is one thing that we women are so well trained to do – it is to put the needs of others before ours. We are trained since our childhood to be good daughters, good sisters, good wives and good mothers. The extent to which other people need us, depend on us, and the extent to which we fulfill their every expectation, is how we think of ourselves as worthy. The more we take care of others, the more we place their needs before ours, the worthier we think we are. It is time for us women to change the paradigm. No longer do we need to feel embarrassed or ashamed to love ourselves, completely, wholly and first. In fact, the more we treat ourselves as completely celebratory, sovereign and worthy in every aspect, the more we will teach our future generation to honour who it is they are and to honour each other. It is vitally important to educate our young girls since childhood that they do not have to give in and fit into gender stereotyped roles ordained by a rigid patriarchal societal system, that they are completely free to chase their dreams, passions and ambitions and thereby become the best, highest and truest versions of themselves, they can be fierce and fearless in acknowledging and embracing their flaws and imperfections and wear them proudly as their badges denoting who it is they are in reality. We need a progressive and transformational education system which can educate our girls and daughters to unapologetically love and accept themselves for who they are - completely, wholly and first. In addition, this begins with placing us, the women, as role models to our girls and daughters - at the top of the ladder, at the front of the line and at the best seat at the table.

#### Are We Ready for an Awakened Era of Empowerment?

I urge all the women to be fierce and fearless and to acknowledge and embrace their flaws and imperfections and wear them proudly as their badges for who they are. I urge women to recognize all the opportunities that come their ways often in messy and confusing ways and make the best out of them. Women have to learn to take on things confidently that they have never done before. I urge women to be hungry and greedy for their ambitions and to remember that there is nothing wrong in wanting more for oneself as long as one does not harm or hurt others. I urge women to continue chasing their dreams, passion and ambitions relentlessly till they grow and evolve into their highest, truest and the most authentic version of themselves. It is not important what society expects out of us – the women, rather it is important what we expect out of us. There is a wonder woman in each and every one of us who is endowed with the ability to create, nurture and transform. We need to realize that especially as women, all our struggles and fights are never outside or extrinsic to us, in fact, they are always within us. The day we realize that we only have to essentially and significantly fight and divorce those voices in our head and marry the beats of our truly awakened hearts, we, the women, would be truly unstoppable"



Keywords: Women Leadership, Education, Women Empowerment, Empathy, Gender Equality

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**North East India : A study on history, Culture and Educational Way**

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**Abstract**

Post independence, the North-eastern region consists of only Assam and the princely states of Manipur and Tripura. Nagaland, Meghalaya, Arunachal, Mizoram were part of the larger territory of Assam. They subsequently got separated and formed their own state. The states of Tripura and Manipur were Union Territories till 1972 till they attained statehood. Prior to 2002, Sikkim was not a part of the northeast. During British rule, the city of Shillong served as the capital of the Assam province. It served as the capital of undivided Assam until Meghalaya separated to form its own state in 1972. Post Meghalaya's separation, the capital of Assam was shifted to Dispur whereas Shillong became the capital of present-day Meghalaya. In my paper I want to discuss about the history and culture of North east India, Culture and educational way that can seen in North eastern regions between tribal's and non tribal's as well as the origin of tribals in this region. I have used secondary source of data for my study form articles, books and websites.

**Keywords:** Educational way, princely, shifted, role, culture.

**Introduction**

North east India is consists of 8 states with beautiful hills, mountains and rivers. The beautiful land of the northeast has an interesting history. Surrounded by hills and beautiful rivers, these states fall in the category of eastern Himalayan ranges and Patkai-Naga hills along with Brahmaputra-Barak river systems and valley plains. The hills and basins are a mixture of mountain ranges, plateaus, low hills and valleys. Rich in natural resources and flora and fauna, the region is a gateway to east and South-East Asia. Right from the earliest settlers from South Asia to the new-age northeastern states, the region has come a long way in terms of economic, political, and social development. The earliest settlers were from Mainland Southeast Asia, who settled in different parts of the northeast. They belong to the Austroasiatic language speaking community. Post that, Tibeto-Burmese people from China settled in the region. During the 500 BC, Indo-Aryans from the Gangetic Plains arrived in the region. In the Greco-Roman periplus named "The Periplus of the Erythraean Sea", a tribe named Sêsataihas been mentioned who were inhabitants of the region that produced the malathion plant.

Kamarupa, also known as Pragjyotisha-Kamarupa is an early state, which was the first historical kingdom of Assam. Kamarupa straddled most of present-day Northeast India in the early historical period. This historical kingdom disappeared by the 12th century and got replaced by smaller political entities. However, the notion of Kamarupa persisted further and the region is still called by the name Kamarupa. In the 16th century, the Ahom kingdom came into prominence in the region. They also assumed the political and territorial legacy of the Kamarupa kingdom.

In the early 19th century, the Ahom and also the Manipur kingdoms ruling over the northeast were seized by a Burmese invasion. There have been three Burmese invasions of Assam between 1817 and 1826, during which the Ahom and Manipur kingdom came under the control of Burma. Then within the 19th century, the

British fought the primary Anglo-Burmese War with Burma, which led to the British's victory, this era is additionally named because the Colonial period.

During British reign, North archipelago became an element of Bengal Province. Within the early 20th century, the northeastern states were established and have become isolated from their traditional trading partners Bhutan and Myanmar. British also made a number of the communities of present-day Mizoram, Nagaland, and Meghalaya convert to Christianity. This can be the region majority of this community in these regions are Christians.

#### Research Method

They research is based on the secondary data which is collected for my study. I searched news articles on the Google and books search using certain keywords. These keywords were "North east India", "Culture and development of north east India, "Educational way in north east India." Culture of the people is based on their living and livelihood. In the north east eastern regions different people have their different culture and culture is transformed from one generation to another. Here the culture of north east is has been focused based on people, language, Literature, religion, occupation, lifestyle, fairs and festivals, music, art and craft and tourism. Most of the ethnic groups of the hilly regions have their origins in Myanmar, China, and Thailand who were also the earliest settlers. The plain area consisted of people from the Ahom kingdom. According to the 2001 Census, a total of 38 million people has been recorded. Around 160 Scheduled Tribes have been listed in the Sixth Schedule of the Indian Constitution. Many languages of the northeast are recognized as the official languages of the country. Assamese is an official language spoken in Assam and Arunachal. Bodo is another official language of Assam. The Manipuri language Meitei is the official language in Manipur. Nepali is another official language spoken by the majority in Sikkim. Santali is also spoken in many parts of Assam, Mizoram, and Tripura.

#### Literature

The heritage of folktales is quite popular in the northeast that tells the story of the origin, rituals, and beliefs of different communities. Assam and Manipur have ancient written texts to their legacy. These states find mentions in the great Hindu epic Mahabharata as well. The region has also witnessed the rise of modern literature in the 20th century. Most of the writers in the region write both in their mother-tongue and English mostly about the region's folklore, insurgency operations, Battles of the northeast, and many more. Two authors from northeast Birendra Kumar Bhattacharya and Mamoni Raisom Goswami have won the highest literary award in India.

#### Religion

Northeast is home to people of diverse religions. In the state of Assam Hindu, Muslims, Christians, Buddhists, Sikhs reside with the majority being Hindu. However, Lower Assam has a Muslim majority because of a heavy illegal influx of Bangladeshi migrants. Hindu ethnic groups consist of Assamese, Koch, Rabha, Dimasas, Ahom, Suriya, Meitei, etc. Buddhist groups are mainly migrants from Tibetans, Tamang, etc. Christian ethnic tribes include Garos, Mizos, Nagas, etc.

#### Occupation

Agriculture and weaving are the two major occupations of the northeastern people. People indulge in rice and pulses cultivation along with minor and major crops. Tea farming in Assam is one of the main sources of

livelihood of people with a vast number of people employed in tea estates. Other major works include traditional handicrafts, wood carvings, handlooms. Silk Muga handlooms in Assam are exclusive in the country. A major section is also employed in the oil and gas industry due to its presence in most of the region.

#### Lifestyle

Hunting and fishing are the prime occupations in such areas. Agriculture is an important part of the northeastern lifestyle. Most people believe in living a simple lifestyle with high values and morals. They are very warm and loving. Both women and men enjoy equal opportunities and status. The concept of dowry is not prevalent in any of the communities of the region.

#### Festivals and fair

Northeast has been hosting several fairs and festivals for decades. Some traditional festivals that are hosted annually are Bihu Festival, Nongkrem Dance Festival, Chapchar Kut, Wangala Festival, Kang China, etc. Bihu is an important festival of Assam. BohagBihu is the most popular one celebrated in Assam. Different parts of the region celebrate this festival with much zeal and enthusiasm. Nongkrem dance festival is the way of celebrating the harvest by the Khasi tribe of the region. Chapchar puja is a festival celebrated in Mizoram in March. There are several music festivals such as NH 7 weekender, Ziro festival, etc are hosted every year. The Northeast book fair is held every year in Assam. Film festivals are also an important part of Northeast's fairs and festivals. The state of Sikkim hosts an international flower show every year.

#### Music

Northeast is home to different genres of music. Each state has its own folk music and dance. Each community of a state has its own rich heritage of folk music and dance. Northeast has produced a plenty of talented musicians, singers, and dancers. are plentifully found in this part of the country. Some of the popular dance forms of the northeast are Bihu, Naga dance, Hajgiri, Nongkrem, Thang-ta, and Dhoi Cholom, etc. Some of the folk songs of the region are Bihu, Luko Geet, Tokari, Borgeet, Nongthang Leima, O Rhose, etc. The popular dance form Sattriya from Assam and Manipuri dance is classified under the list of classical dances of India.

#### Arts and Crafts

The tradition of art and craft culture is quite rich in the region with every state having its unique craftsmanship qualities. Arunachal and Mizoram's craftsmanship abilities are evident from astonishing carpet making, cane crafts, masks, painted wood vessels, bamboo and, weaving, woodcarvings, hand-made pottery, brass cutting, silver works, etc. Assam is dominant in agriculture coupled with handloom weaving, cane and bamboo works, etc. Besides other woodworks, Meghalaya's specialties include crafting musical instruments. For the rest of the states, weaving and wooden works is a specialty including jewelry and ornaments crafting, hunting, etc.

#### Tribes

The northeastern part of India is known to be the world's most culturally diverse region. The region is inhabited by more than 200 tribes, who boast of their indigenous and authentic traditions. Some of the most popular tribes are the Bodo tribe, Adi tribe, Nishi Tribe, Bhutia tribe, Garo tribe, Kuki tribe, and so on. The Bodo tribe is considered the heroic tribe of Northeast India. The Adi tribe is widely found living in the hills of Arunachal with their own village council. Another tribe of Arunachal in the Nishi Tribe who have originated from the Indo-Mongolia tribe. The major tribe of Nagaland is the Angami tribe. The Bhutia tribe is the inhabitants of Sikkim believed to be migrated from Tibet. They are one of the most developed and cultured tribes of the region.

#### Tourism

The entire northeast region plays an indispensable role in the tourism sector of the country. Arunachal places host various places of worship and pilgrimage including the largest monastery in India. Assam is the central state of the northeastern region. It has a number of wildlife reserves and sanctuaries.

#### Educational way in North East India

Educational way in the region range from insurgency for secession to insurgency for autonomy; from 'sponsored terrorism' to ethnic clashes, to conflicts generated as a result of continuous inflow of migrants from across the borders as well as from other States. There are different types of educational way that occurred in North east India after independence they are Specific educational way in the north east states

- a. 'National' educational way: Involving concept of a distinct 'homeland' as a separate nation and pursuit of the realization of that goal by its votaries.
- b. Ethnic educational way: Involving assertion of numerically smaller and less dominant tribal groups against the political and cultural hold of the dominant tribal group. In Assam this also takes the form of tension between local and migrant communities.
- c. Sub-regional educational way: Involving movements which ask for recognition of sub-regional aspirations and often come in direct conflict with the State Governments or even the autonomous Councils.

The variety of educational way that can be observed to be occur in different states of north east India after independence.

Arunachal Pradesh: The State has remained peaceful after the cease-fire with NSCN which was active in Tirap District. The policies initiated under the guidance of Verrier Elwin (a noted anthropologist) in the 1950s have resulted in considerable cohesion in the area with Hindi emerging as its lingua franca. There was some disquiet with the settlement of relatively more enterprising Chakma refugees from Bangladesh in the State in large numbers which appears to have subsided. Growing income disparities and constriction of employment opportunities could be a potential source of educational way.

Assam: A wide variety of ethnic conflicts prevail in the State e.g. agitations against 'influx of foreigners', perceived inability of the Government to deport them; occasional tensions between religious/linguistic groups and escalating educational way involving tribal communities who seek local autonomy etc

Manipur: Currently, it is the 'most insurgency ridden' State with about fifteen violent outfits representing different tribes/communities active in the State and has become a self financing extortion activity particularly in the Valley. The Commission, during its visit to the State, was told of several instances where development funds were siphoned off to finance various unlawful and disruptive activities.

At present an ethnic clash erupted on 3 May 2023 in India's north-eastern state of Manipur between the Meitei people, a majority that lives in the Imphal Valley, and the tribal community from the surrounding hills, including the Kuki and Zo peoples. As of 21 June, more than 100 people have been killed in the violence, and more than 300 others left wounded.

The dispute has to do with a long-standing demand by the Meitei people for a Scheduled Tribe status under the Indian Constitution, which would give them privileges comparable to the tribal communities. In April, a

Manipur High Court verdict directed the state government to make a decision on the issue preferably within four weeks. The tribal communities protested the Meitei demand. The All Tribal Student Union of Manipur (ATSUM) conducted a solidarity march in all hill districts on 3 May. By the end of the march, clashes broke out between the Meitei and Kuki populations in and around the Churachandpur district bordering the Imphal Valley. The Indian Army flew in close to 10,000 troops and paramilitary forces to restore law and order. Internet services in the state were suspended for a period of five days and Section 144 of the Indian Penal Code was invoked, prohibiting unlawful assembly or large gatherings that have a likelihood of disturbing the peace. The Indian troops were given "shoot on sight" orders to enforce the curfew in "extreme cases".

A panel led by a retired Chief Justice will investigate the violence, while a peace committee will be established under the Governor and security advisor Kuldeep Singh, along with members of civil society. The Central Bureau of Investigation (CBI) will probe six cases related to conspiracy in the violence, ensuring a neutral investigation to uncover the root causes.

Meghalaya: The State is fortunately free from violence of the intensity that prevails in many other parts of the region. Except violence against 'outsiders' particularly the Bengali speaking linguistic minority, there have been no major problems in the State.

The following are some future areas of concern:

- a. Increasing clash of interest between the State Government and the Sixth Schedule District Councils – the entire State is under that Schedule.
- b. Increasing inter-tribal rivalry.
- c. Emerging tensions about infiltration from Bangladesh particularly in the Garo Hills.

Mizoram: The State with its history of violent insurgency and its subsequent return to peace is an example to all other violence affected States. Following an 'accord' between the Union Government and the Mizo National Front in 1986 and conferment of statehood the next year, complete peace and harmony prevails in Mizoram. The State is recognized as having done a commendable job in the implementation of development programmes and making agriculture remunerative. The only potential areas of conflict are the growing income and assets disparities in a largely egalitarian society and the dissatisfaction of the three small non-Mizo District Councils with the State Government, on account of issues pertaining to identity and reservation as STs.

Nagaland - Certain areas of concern with regard to the future are: Capacity Building for Conflict Resolution  
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- (a) The lingering issue of a final political settlement including the demand for 'greater Nagaland' or 'Nagalim' which has already noted is causing disquiet in the neighboring areas, particularly Manipur.
- (b) Growing competition over the limited resources of the State and the problem of unemployment of the educated youth.

Sikkim: The State has not only done well in the sphere of development through decentralised planning but the constitutional mandate of striking a balance between the various ethnic groups (mainly the Lepchas, Bhutiyas and Nepalis) has also prevented emergence of major educational way.

Tripura: The State's demographic profile was altered since 1947 when mass migrations from the newly emerged East Pakistan converted it from a largely tribal area to one with a majority of Bengali speaking

plainsmen. Tribal's were deprived of their agricultural lands at throw-away prices and driven to the forests. The resultant tensions caused major violence and widespread terror with the tribal dominated Tripura National Volunteers (TNV) emerging as one of the most violent extremist outfits in the North East.

In the history of Tripura, the kings Ratna Manikya and the King Vijaya Manikya brought several navasak Bengali families such as Gope, Malakar, Teli, Tanti, Modak, Karmakar etc from Bengal. To fulfil the need of traditional handicrafts and cottage industries, and the same steps were taken by the previous kings also. A good number of bureaucrats too were similarly brought by the Tripura kings from the Bengal community, hence it can be seen that the Kings of Tripura were directly or indirectly dependent on the Bengali community. A large number of revenue of Tripura comes from the Bengali settled cultivators. The bengali laborer were forced by the kings of Tripura to dig the big tanks in south Tripura. So, the Bengali zaminder of Bhalua protected against the act of assassination of throne by Udaya Manikya.

In Tripura a new political party Tipra motha formed on 2019, demand for a separate land for the Tripura tribal people namely "Greater Tipraland", its main focus for the development of Tiprassa people. In the future there is a fear if it donot brings any ethnic violence in Tripura as many tribals calls the bengalis as Bangladeshi which can be seen in nowadays in social media, facebook etc, as they came from East Pakistan now Bangladesh during 1971, the time of Mukti judha (war).

A significant change in the mind of Bengalis has began that a large number of bengali people started leaving the hills and interior places and settled in the non Autonomous District council areas of the suburban areas. They have the fear that in future they will not be able to live peacefully in the hills.

#### Origin of tribals in North East India

From ethnic point of view of north east India the tribals living there has been divided into two broad groups: the Indid and the Mongoloids. The Indid groups mostly comprises the hindu castes abd the muslims, who may be considered as Caucasian in origin, while the Mongoloid group includes various tribes, both hill and plains tribes. North western China between the head waters of Hoang Ho and the Yang- taze Kiang rivers is supposed to be the originated home land of the Mongoloid populations, where from they migrated south ward and west ward during the pre historic time. It appears that certain large scale movement started in the early part of the first millennium B.C. First they moved south ward to reach north of Burma where they bifurcated, one group moved further south and came down to Burma and then to South east Asia, while the other moved to the Brahmaputra valley.

The Mongoloids are characterised by yellow or yellow – brown skin and wavy and coarse head hair, their eyes are black or dark brown in colour. The eye – slit is oblique. One of the the Mongoloid is the presence of Mongolian fold in their eyes. Their face is broad and zygomatic arches are very prominent. They have scanty growth of facial and body hairs.

This type of tribes is mainly found in Tripura or can be called as "Tiprassa". The language Kokborok of this people is to be a Sino – Tibetan language.

#### Conclusion

North east India has remained isolated from the rest of the country because of its location and terrain and has failed to secure equal benefits in the process of development. This has resulted into social-political disturbances and unrest for a few years. While the region has a lower level of industrial and economic

development, it has abundant forest resources. Petroleum and tea are two significant resources in the region. At the same time, agriculture, horticulture and handloom continue to be the main activities of these states. It has been seen that the north east regions are isolated but the development of north eastern states are going in a very slow process. However the north eastern regions are rich with natural resources. Tripura is the largest producer of natural rubber, pine apples and bamboo and its products are exported to other countries. Assam, Guwahati is to be said as a mega city of north east India. So finally it can be said that north eastern region in the future can be developed regions of India.

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## **Acknowledging Intercultural Competence Needs: Embracing Emerging Technologies in Business Schools**

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### **Abstract**

Communicating and collaborating effectively with people from different cultures is becoming critical in the polarizing world. Intercultural competence is vital to International Business Education, especially post-Covid divergent glocalization. This paper highlights the emerging trends in intercultural competence teaching in business education and how they transform the curriculum in business schools and universities as communities of practice. The paper focuses on the evolution of cultural studies-related subjects and the expected competencies of the ICC lecturers who teach in higher business education. It provides insights into the developing intercultural competence from the perspective of using digital innovations like AI tools, ChatGPT, VR, and Metaverse brought into the international business schools' classrooms.

**Keywords:** Intercultural Competence (ICC), Cross-cultural Leadership, International Management, International Business School (IBS), Higher Education, Digital Skills, ChatGPT, VR, AI-generated content

### **Introduction**

In international business, cross-cultural communication skills are essential for aspiring international business leaders to navigate the complexities of multinational distributed teams. Heavily influenced by glocalization and digitization, effective business communication requires understanding how cultural differences impact verbal and nonverbal communication, synchronous and asynchronous communication, and adapting one's communication style to suit the needs of diverse, multicultural groups. With a solid foundation in communication studies, future cross-cultural leaders may be able to convey their message effectively, both in written and spoken form, as well as facilitate understanding among team members and avoid misunderstandings and cultural incidents.

Over the years, business schools have been changing the titles of their courses to keep up with the new challenges and progress. In the 1980s, it was Anthropology; in the 1990s, it was Culture Studies; and in the 2000s, it was Intercultural Communication. Nowadays, courses like Intercultural Competencies, International Management, Cross-Cultural Leadership, Global Management, International Business Consulting, International HR & Diversity Management, and International Negotiations are becoming more attractive to International Business Schools students, especially in intercultural, cross-cultural, and multicultural domains.

As these disciplines are integral to the success of international business endeavors, the communities of practice should carefully investigate these changes in the business disciplines' curricula to

understand how they affect Higher Education and what opportunities they might bring. ICC is a tool to influence people's behavior, but its instruction often needs significantly more teaching time for practical application and building valuable skills on top of the theoretical overview.

The teaching professionals in this field are required to have a firm grounding in communication studies, business organization and management, and cross-cultural competence. The question remains to investigate how to ensure that these disciplines are taught to a high standard with an adequate number of qualified and certified teaching instructors who possess advanced master's or doctoral degrees in all three areas simultaneously. With the rise of the need for digital content to be introduced into the classroom, the fourth area of the teachers' capability is teaching digitally-ready soft skills (Shtaltovna & Muzzu, 2021) comes handy to the curricula writers.

Several training programs, frameworks, and self-assessment tools have been developed and implemented to evaluate and identify educators' digital competence. One of the widely recognized frameworks in Europe is the DigCompEdu, which assesses "their competence, identify their training needs and offer targeted training" (Punie & Redecker, 2017, p. 8). The 3 focuses of DigCompEdu are now necessary skillset of an intercultural competence lecturer in an international business school:

Focus 1: Digital communication and collaboration,

Focus 2: Digital content creation and media literacy,

Focus 3: Digital problem-solving.

Apart from possessing advanced communication studies certifications, a comprehensive international business management course is essential for individuals aspiring to become cross-cultural leaders in international business. Cultural differences have a significant psychological impact, which includes differences in values, beliefs, mental health, and a sense of belonging in the corporate environment. These psychological differences affect how individuals respond to leadership and management challenges in volatile, uncertain, complex, and ambiguous (VUCA) and brittle, anxious, nonlinear, and incomprehensible (BANI) world situations. From the corporate employee experience and employer brand perspective as from the company's financial outcomes, it is crucial to effectively motivate and inspire international team members from diverse cultural backgrounds to collaborate to reach the business goals.

What are the principles, challenges, and ways forward when Global Higher Education goes Digital? Curaj, Deca, & Pricopie (2020) edited outcomes of the fourth edition of the Future of Higher Education – Bologna Process Researchers Conference and underlined the need to intensify cross disciplinary and cross-border cooperation. In the rapidly changing glocalised and divergent business, where the knowledge economy is transforming into an emerging Industry 4.0/5.0, it is crucial to prioritize the development of communication skills and cultural competencies. (WEF 2015, 2021, 2023).

The rise of the networked society in the Digital Age and the pandemic's digitization of social communication have led to significant changes in doing business, necessitating a transdisciplinary understanding of various areas of human knowledge and experience. The shift from the job market to the talent market demands a shift from measuring outcomes and key performance indicators across business sectors to effectively acquiring and mastering cross-cultural communication and collaboration skills and workflows for the future graduates of business programs to succeed in this new landscape. Additionally, it is essential to look beyond the "Digital Humanities Event Horizon" (Semerikov, Mintii & Makhachashvili, 2021) for Higher Education and International Business Education to remain a part of this transformation.

International Business Schools have a strong reputation for being early adopters of innovative teaching methodologies, frequently incorporating innovations into the learning process before traditional universities do. As a result, with the rapid growth of online technology 4.0, there is enormous potential for business schools to adopt and incorporate virtual platforms like the Metaverse and AI-generation bots (e.g., ChatGPT) and virtual reality (VR) to create a more immersive and interactive learning experience for students studying these disciplines. The Metaverse, a shared virtual space, offers a unique opportunity for business students to engage with people from diverse cultural backgrounds and practice intercultural communication in a controlled and safe environment. By leveraging AI-powered tools such as DALL-E and ChatGPT and integrating them into learning platforms, students can engage in real-life business scenarios and cases, learning to navigate linguistic and cultural differences more effectively.

Technology's exponential development overwhelms but gives new horizons for integrating it as a performance tool into the learning process. The forthcoming multimodal LLM is expected in March 2023 to possess 500 times the power of ChatGPT, as it will be built on a foundation of 100 trillion parameters, compared to the 175 billion parameters used to build GPT3 in May 2020. It is anticipated that GPT4 will be able to process video and be language-independent, capable of answering questions in one language and responding in another. The impact on daily business decision-making and management has already generated awe and admiration in equal measure, being unprepared to address the complexities of the challenges at hand. This highlights the need for innovative approaches to overcome current organizational structures' limitations. The human brain is not equipped to handle the complexity of our world (Gilbert, 2014), but AI can provide a means to process these complexities to understand them better and act accordingly. However, lecturers should consider trust, agency, and ethical questions in this context.

The importance of Natural language and generated text requires new terminology to mitigate these issues and overcome biases. COVID-19 has shown that humanity struggles to learn, and the majority of people cannot grasp the immediate benefits of AI. To make AI more accessible, practical and user-friendly applications are necessary.

The introduction of ChatGPT into the international business classroom may manifest a significant shift from the traditional education paradigm. In the past, classrooms were often centered around

the teacher and their instruction, with students largely expected to absorb information and repeat it on exams. This approach limited the opportunities for students to engage with the material meaningfully and explore their perspectives and ideas, as they would need to be tested against peers' or teachers' experiences. With the incorporation of ChatGPT, the intercultural business competence classroom becomes a space of experimentation, debate, and cross-checking fantasies. The technology allows for a more dynamic exchange of ideas, where students can engage in dialogue with a language model with access to vast knowledge and expertise. This may create a unique opportunity for students to explore and test their ideas against a virtual expert and to see how their perspectives compare to others.

Traditionally, exams have been centered around memorizing and recalling information - the lower range of the HOTS (Higher order thinking skills) does not necessarily reflect real-world problem-solving or critical thinking skills. With the introduction of ChatGPT, exams can become more interactive, with questions that require students to apply critical thinking skills and work collaboratively to solve complex problems. ChatGPT's impact affects the examination and questions used in the classroom.

Using ChatGPT to master written and soon spoken conversational skills simultaneously with critical thinking skills may significantly shift how we approach business education and ICC teaching. By taking on the role of a conversational partner, ChatGPT allows for a more dynamic and interactive classroom experience as students can engage with ChatGPT and develop their critical thinking and problem-solving skills through a more collaborative learning environment. By incorporating ChatGPT into the classroom, teachers can try to stimulate practicing the scenarios created at the time of speaking, along with the news of today and challenges of today for each of the student's specialization in mixed classes, preparing them for the challenges they will face in their international careers and therefore enhancing students digital competencies (Shtaltovna & Muzzu, 2021).

The real-world scenarios are often complex and require creative solutions in intercultural management classes. The cases might be limited by many parameters such as accessibility (behind the paywall), recommended literature to the course, the language of learning, date of the case publishing, relevance to the specialization of the students, etc. Thus, the core needs of a case study might be apparent: to demonstrate synergy and complementarity (Barmeyer & Franklin, 2017). In addition, VR technology can also create immersive intercultural experiences that simulate business meetings and negotiations with individuals from different cultures. Such simulations enable students to develop cross-cultural competence by practicing intercultural communication in a realistic virtual setting, preparing them for real-life business scenarios.

The implementation of AI technologies in businesses introduces unique ethical challenges. This section provides an overview of these challenges, with a focus on privacy concerns related to customer data, biases in AI algorithms, ensuring the safety and well-being of employees and customers, and addressing potential unintended consequences in decision-making processes. By analyzing the European approach to AI and the European Digital Rights and Principles, we lay the

groundwork for the ethical framework that future managers should be equipped with to address these challenges effectively.

In order to strengthen Europe's potential to compete globally, the EU aims to foster excellence in AI by:

- a. enabling the development and uptake of AI in the EU (EC, July 2022)
- b. making the EU the place where AI thrives from the lab to the market (EC, November 2022)
- c. ensuring that AI works for people and is a force for good in society (EC, June 2022)
- d. building strategic leadership in high-impact sectors. (EC, June 2022)

By integrating online tools like the Metaverse, AI tools, and VR into business school curricula, educators have the opportunity to create a more engaging and realistic learning experience that can better and quicker equip students with intercultural competence skills for the global business world. These immersive technologies can enhance the effectiveness of cross-cultural training by allowing students to practice in a safe and controlled environment and develop proficiency in navigating linguistic and cultural differences in communication. Furthermore, these tools may have broader implications beyond the classroom, such as their application in real-world scenarios involving high-stakes negotiations or conflicts.

Introducing innovative teaching approaches in business school classrooms is essential in preparing international management students with the necessary skills for the 21st-century work environment and enhancing their employability in the Future of Work. With global conflicts, climate change challenges, and the need to adapt to new and diverse cultural backgrounds, virtual intercultural competence training can help students navigate the complexities of the modern world. However, with the exponential change of perma-crisis or poly-crisis, there is a need for methodological material to teach negotiations and strategies for unprecedented situations.

Answering the Research Question, "How can universities enhance students' capabilities for life?" the recent findings in the Role of Universities: Enhancing Students' Capabilities for Work and Life (Jakubik et al, 2023) published in Handbook of Research on Sustainable Career Ecosystems for University Students and Graduates (Donald, 2023) were:

- There is a need for an 'ontological turn' in education (Barnett, 2015a, 219), i.e., to teach students how to be and operate successfully in a rapidly changing world and the ever-changing world of work
- There is a need for evolutionary and enacting pedagogies in HE (Gidley, 2012). University education should focus on the formation of human beings, enhancing their authenticity, responsibility, attitude, and values, i.e., on the personal becoming of students.
- The nature and quality of the relationships between educators and students vastly depend on the HE context, macroenvironment, and university ecosystems.

- The role of universities is to enhance personal skills development, including critical thinking, creativity, problem-solving, public speaking, digital literacy, leadership skills, work ethics, intercultural fluency, respect, fairness, personal and social responsibility, integrity, self-awareness, attitude, how to manage stress and career shocks or how to respond to global challenges (Akkermans et al., 2018; Blokker et al., 2019; OECD, 2019; Seibert et al., 2012; WEF, 2022)."

Similarly, based on the findings from this research, we can extend how Universities can enhance students' capabilities for employability and sustainable career development and life choice and well-being by incorporating emerging technologies such as AI, VR, ChatGPT, etc. into the teaching of intercultural competencies in classrooms of international business schools:

By embracing an 'ontological turn' in education, these technologies can facilitate the instruction of students on how to navigate and thrive in a rapidly changing world and the dynamic realm of work, leveraging their potential to provide immersive and interactive learning experiences.

- a) Applying AI-based chatbots as virtual mentors or learning companions, offering guidance and support to students in their personal and professional development, and fostering self-reflection and critical thinking.
- b) Using VR simulations to facilitate experiential learning, such as role-playing activities that challenge students to navigate intercultural conflicts and find innovative solutions in a safe and controlled environment.
- c) Integrating AI-driven feedback systems that provide instant results to interactive testing, constructive feedback on students' intercultural competence development and suggestions where to focus, highlighting areas for improvement and relevant course snippets, materials, videos, offering tailored recommendations for further growth.

By employing evolutionary and enacting pedagogies in higher education (HE) to shape the formation of students as authentic, responsible individuals with strong values and attitudes. Strategic and practical integration of AI, VR, ChatGPT and other technologies can support this transformative process by enabling personalized and adaptive learning pathways for students, nurturing their personal becoming.

- a) Integrating AI algorithms into learning management systems to provide personalized learning pathways for students, personal reminders and time management, adapting content and resources to their individual needs, interests, and learning styles.
- b) Using AI-based recommendation systems to suggest relevant and diverse learning materials, articles, books, and multimedia resources that broaden students' understanding of global issues, cultural diversity, and intercultural competencies.

- c) Incorporating virtual reality experiences that expose students to global workplaces and international business environments, allowing them to gain insights into cross-cultural management and decision-making processes.

By nurturing the nature and quality of educator-student relationships as these dynamics are heavily influenced by the broader Higher Education context, macroenvironment, and university ecosystems. Introducing AI, VR, and ChatGPT can foster a more dynamic and engaging teacher-student interaction, facilitating personalized feedback, mentorship, and guidance while promoting a collaborative and inclusive learning environment.

- a) Employing AI chatbots or virtual assistants as learning assistants, providing students with 24/7 on-demand support, answering student questions, and offering additional resources related to intercultural competencies.
- b) Utilizing virtual collaboration platforms with AI-enhanced features allows students and educators to engage in real-time discussions, teamwork, and cross-cultural projects regardless of geographical barriers.
- c) Incorporating AI tools for automated grading and assessment freeing educators' time to focus on providing personalized feedback and mentoring to students.

By fostering the development of essential personal skills in today's interconnected world, including critical thinking, creativity, problem-solving, public speaking, digital literacy, leadership skills, work ethics, and intercultural fluency, among others. Using AI, VR, and ChatGPT can enhance the acquisition of these skills by providing realistic simulations, intercultural communication platforms, and AI-powered language learning tools, preparing students to respond effectively to global challenges and succeed in diverse cultural contexts.

- a) Using AI-based tools for data analysis and visualization to enhance students' critical thinking and problem-solving skills, enabling them to understand complex intercultural issues and make informed decisions.
- b) Integrating virtual reality environments that simulate cross-cultural negotiations, leadership situations, and ethical dilemmas, fostering the development of leadership skills, work ethics, and decision-making abilities.
- c) Employing AI language processing tools to analyze students' written or spoken reflections on intercultural experiences, providing insights into their self-awareness and prompting further development of attitudes, values, and intercultural fluency.

In the context of preparing university graduates for sustainable careers, it is imperative for business schools to acknowledge the significance of integrating emerging technologies. This integration aligns with the identification of four critical future of work themes, namely 'skill development,' 'motivation,' 'career ownership,' and 'well-being' (Donald, 2023). As we contemplate the evolving landscape of

work, marked by shifting demands and resources pertinent to early career talent and organizations, it becomes essential to discern actionable measures that can enhance the career readiness of individuals as they navigate the transition from university to the workforce.

A solid understanding of business communication studies, business psychology, and intercultural competence is fundamental for successful cross-cultural leadership in international business. This formula recently gained another game-changing component, the digital tempo of the new digital technologies penetration into the ICC classrooms to gain a competitive advantage in the International Business Schools education market. However, there is a concerning trend of reducing the hours dedicated to intercultural competence-related topics, with the Cross-cultural Leadership disciplines often only receiving two or three ECTE credits. With these high-end, digitally-ready intercultural management competencies, future business leaders may be able to manage cultural differences better and build more cohesive teams to withstand critical times.

The IDG toolkit (Stålne & Greca, 2022) addresses the significance of an inclusive mindset and intercultural competence. On an individual level, it urges educators and students to reflect on their readiness to embrace diverse perspectives in the context of emerging technologies. Within educational organizations, it emphasizes the development of strategies to incorporate dissenting viewpoints and underscores the commitment to inclusivity in adapting to new technological advancements as using GenAI, MetaVerse platforms and creating video explainers with the use of the video generators. Collaboration, a crucial aspect, encompasses communication, co-creation, trust-building, and intercultural skills, necessitating both individual and collective skill development. This perspective aligns with the principles of SDG goal no 17, which underscores the importance of cross-boundary cooperation in adapting to the evolving landscape of educational technology. The integration of emerging technologies into intercultural competence training equips stakeholders with the tools to effectively navigate the complexities of a technologically driven world, reducing the risk of conflicts and misunderstandings in the process.

In the context of business schools and their adaptation to emerging technologies, the recognition of intercultural competence needs gains particular relevance. When working with individuals from diverse cultural backgrounds in the context of technological advancements, such as virtual environments and artificial intelligence, cultural differences can present challenges. Core dimensions, including power distance, individualism/collectivism, femininity/masculinity, and uncertainty avoidance, significantly impact how technology is used, communicated, and perceived. Acknowledging these dynamics, intercultural competence training is tailored to encompass lectures, reflective exercises, group simulations, and communication training. It seeks to foster a balanced approach, providing insights into potential cultural pitfalls without perpetuating stereotypes. Ultimately, such training enhances the capacity for creative collaboration across cultural boundaries, reducing the risk of conflicts and promoting personal and collective development by broadening participants' values and behaviors. However, it must be approached with caution to avoid reinforcing



stereotypes and, instead, foster open-ended awareness of the impact of emerging technologies on intercultural dynamics in the business school environment.

Within the ongoing discourse regarding the functions of universities, it is essential to acknowledge that universities have historically fulfilled diverse roles contingent upon factors such as their legal structure, funding sources (governmental or private), and associations with industries. These roles will continue evolving to align with the demands of work and life in the future. Traditional universities will exhibit notable distinctions in their roles compared to those focused on scientific and technical disciplines.

Similarly, business and law schools will adopt distinct roles to foster growth and maintain competitiveness. Universities with a specific industry focus, such as those specializing in agriculture, architecture, and construction, and institutions dedicated to arts, music, and film will also adopt various roles. It is imperative to avoid rigidly categorizing universities based on their roles, and instead, adopting a cluster-based approach could offer a more strategic perspective for envisioning how universities can adapt their strategies to enhance employability. Crafting a growth strategy for universities may necessitate establishing clear expectations and delineating roles for stakeholders while referencing a comprehensive list of roles that could benefit higher education institutions' management and leadership.

## Conclusions

Incorporating modern online technologies like the Metaverse, GPT chatbots, and virtual reality (VR) into business school curricula holds the potential to revolutionize the teaching of intercultural competence (Shtaltovna & Muzzu, 2021). These technologies offer a more engaging and immersive approach to learning, thereby enriching the educational experience and bolstering the effectiveness of intercultural competence training for students preparing for the global business arena. Beyond their utility within the controlled environment of a business school, these tech tools can also prove invaluable in high-stakes real-world scenarios, such as resolving conflicts or navigating critical business negotiations.

By fostering innovative methodologies within the business school setting, we can empower international management students with the essential skills required in the 21st century, thereby enhancing their employability. In the backdrop of ongoing global challenges like the Russia-Ukraine war, climate change-related crises, and increasing polarization, virtual intercultural competence training emerges as a vital resource for equipping future business professionals to excel in diverse cultural landscapes. However, it's worth noting that these unprecedented scenarios have not been addressed in traditional cross-cultural communication courses, leaving educators ill-prepared to impart the necessary negotiation strategies, as no existing case studies can serve as methodological material.

Through immersive virtual simulations of intercultural interactions, business management students can gain practical experience in navigating linguistic and cultural differences (Shtaltovna & Muzzu,

2021). This enables them to develop the precise skills required for effective communication and collaboration in diverse cultural contexts, especially within the intricate challenges posed by today's volatile, uncertain, complex, and ambiguous (VUCA) world. Given the rapid obsolescence of knowledge, practices, and products in this VUCA environment, both students and educators must acknowledge the imperative of cultivating creative cross-cultural collaboration expertise, as emphasized by Shtaltovna and Muzzu in their 2021 works. These skills are essential for preparing individuals to thrive in dynamic and disruptive working conditions.

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## **Comparative Analysis of Small-scale Accommodations at Hotspot Destinations in Jamaica: Evaluating Guest Satisfaction**

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### **Abstract**

With almost 2 million stopover tourist arrivals in 2019, Jamaica stands as one of the most celebrated destinations in the Caribbean, renowned for its pristine beaches, vibrant local culture, and iconic reggae music. While prior research has extensively examined Jamaica's role in the global tourism landscape, a comprehensive analysis of traveler experiences within the most popular resort regions - Ocho Rios, Montego Bay and Negril (Jamaica Tourist Board, 2021) - remain an underexplored territory. However, a research gap exists at the micro-level regarding traveler experiences, emotions, and perceptions within these distinct destinations. Moreover, though research exist on hotel location from the perspective of hoteliers, guest satisfaction with hotel location has not received much attention in academia (Yang et al., 2018), especially from aspect small-scale hotels which play a crucial role in shaping Jamaica's tourism market (Clarke et al., 2017; Smith & Haughton, 2018). Though extant research in the tourism industry have recognized various factors contributing to guest satisfaction, including food, staff, service, facilities, cleanliness, location, and value (Choi & Chu, 2001; Gu & Ryan, 2008; Gundersen et al., 1996; Kandampully & Suhartanto, 2000; Mattila & O'Neill, 2003; Ren et al., 2016), this research aims to enrich the current knowledge base by uncovering previously unexplored dimensions of guest satisfaction based on the analysis of online reviews.

### **Literature review**

#### **Customer satisfaction in the hotel industry**

Customer satisfaction revolves around generating value for guests and meeting their expectations (Dominici & Guzzo, 2010). This value is determined by the perceived quality of service in comparison to the anticipated value from transactions or relationships with rival suppliers (Blanchard & Galloway, 1994). Traditionally, comfortable sleeping facilities, cleanliness, room size, hotel location and accessibility, food quality, extra services, and staff attitude (Gu & Ryan, 2008); sensory experiences, the performance of the staff, the perception of aesthetics, and the geographical setting (Ren et al., 2016); housekeeping, reception, food and beverage services and price (Kandampully & Suhartanto, 2000); guest room comfort and amenities, the willingness of receptionists to assist and the efficiency of the check-in process at the front desk (Gundersen et al., 1996); quality of staff service, room

characteristics, and value for money (Choi & Chu, 2001); cost, room cleanliness, maintenance, staff attentiveness (Mattila & O'Neill, 2003) have been proven as antecedents of customer satisfaction

## Methodology

A total of 19,042 online guest reviews of small-scale hotels in Jamaica's top tourist destinations—Ocho Rios, Montego Bay, and Negril were collected from google maps using web crawler SCTM3 on March 3, 2023. Voyant tools was used for the t-SNE qualitative word clustering while Linguistic Inquiry Word Count (LIWC) (Boyd et al., 2022) was used to numerically extract variables for the quantitative analysis. Subsequently, an ANOVA analysis discerned statistical differences across the three destinations by calculating the mean scores. Thereafter, a linear regression analysis explored the relationship between the variables and visitor satisfaction.

## Results

### Qualitative Analysis

Voyant Tools was used to run the t-distributed stochastic neighbor embedding (t-SNE) visualization. For each location, the 50 most frequent words were divided into 5 clusters (each) by the t-SNE application (Lau et al., 2021). The extracted clusters for Ocho Rios were "Service", "Facilities", "Experience", "Food" and "Location"; for Montego Bay, "Service", "Experience", "Entertainment", "Other People" and "Location"; and for Negril, "Food", "Service", "Location", "Experience", and "Facilities".

### Quantitative Analysis

Based on the results of the ANOVA analysis, Ocho Rios displayed the highest mean scores for "negative emotions", "curiosity", "food" and "spending". Montego Bay displayed the highest means scores for "service failure" while Negril's factors with the highest mean scores were "positive emotions", "allure", "aesthetics", "leisure activities" and "crowding". After determining the differences in guest perceptions for the three locations, a regression analysis was conducted to ascertain how these variables impact satisfaction. For all three models, the variance explained was greater than 6%. The fact that online reviews often lack a structured format, poses a significant challenge in achieving high R-squared values, as noted by Kim and Noh (2019). The regression results showed positive relationship between "crowding", "family vacationing", "leisure activities", "food", "allure" and "experience". However, the factors "service failure", "boredom", "risk" and "spending" displayed an inverse relationship with satisfaction. There was no significant relationship between curiosity and satisfaction.

## Discussion and conclusion

The study highlights the significance of online reviews in uncovering less-explored factors in guest satisfaction, encouraging further exploration in through textual analysis. In Montego Bay, qualitative

analysis revealed the cluster "Other People", aligning with the regression showing "Crowding" as a significant factor enhancing satisfaction. This suggests that Montego Bay's vibrant atmosphere positively resonates with tourists, emphasizing the role of a lively environment in enhancing guest satisfaction, as supported by previous research (Jacobsen et al., 2019; Luque-Gil et al., 2018; Thomas & Saenger, 2020). Conversely, "Spending" showed an inverse relationship with satisfaction across all locations, highlighting the importance of value when selling services and products to travellers. "Service Failure" negatively affected satisfaction in all three locations, highlighting the critical role of consistent high-quality service in the hospitality industry.

The positive impact of "Family Vacationing" was evident in Ocho Rios and Negril, emphasizing the need to cater to family preferences for enhanced guest satisfaction. "Leisure Activities" positively influenced satisfaction in Montego Bay and Negril, emphasizing the importance of the proximity of excursions to the hotels at a destination. "Food" was significant in Ocho Rios and Negril, emphasizing the importance of offering local cuisine to visitors. Across all destinations, the positive influence of "Allure" and "Experience" on guest satisfaction highlights the significance of destination attractiveness and positive experiences.

This study contributes academic knowledge to the Caribbean's tourism industry and in so doing provides practical implications for stakeholders in tourism and hospitality. Hoteliers can enhance satisfaction by tailoring services to online review insights, while destination marketers can effectively differentiate and target destinations based on findings. Policymakers can regulate tourist flow and improve attractions, and hotel staff training programs can incorporate emotional intelligence. The study's limitations include the specificity to the three Jamaican destinations, emphasizing the need for caution in applying findings universally.

**Keywords:** Small-scale accommodations, online reviews, satisfaction, Ocho Rios, Negril, Montego Bay, Voyant Tools, LIWC

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## **Intercultural Integration via E-Learning and online Conferences - a Case Study on the Institute of non-profit Service**

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### **Abstract**

The Institute for non-profit Services gGmbH ([www.InstitutfuerDienstleistungen.de](http://www.InstitutfuerDienstleistungen.de)) in Germany provides E-Learning Services for refugees and migrants coming to Germany with the support by Niedersächsische Lotto Sport Stiftung in Hannover since 2016. The intercultural integration became an important issue in Germany with the refugee crisis in 2015. Millions of refugees came to Germany due to crisis in their own countries, mainly young men from Syria and Afghanistan. It became a crisis not due to masses of refugees but of the different cultural background and religion of the refugees. In addition, Germany was not prepared for this task. The migration stream before were rather small or not problematic, e.g. the streams from Türkiye and Italy in the 60ies (Gastarbeiter), Vietnamese during the Vietnam war by the USA, and the war in Yugoslavia. In 2015, there were basically no integration concepts and almost no integration worker. The Institut für gemeinnützige Dienstleistungen gGmbH (Institute for non-profit Services) started therefore 2016 a new integration program. At the same time, many integration projects were started in Germany. Many of them still exist today and handle the next refugee crisis due to the war in Ukraine, mainly female refugees with or without children. In addition, more refugees came from Syria and Afghanistan and masses of migrants from Africa. Since 2022/23, the team organizes an international online Conference on contemporary Studies in Management (CoSiM). This paper describes descriptively the case study of the Institute for non-profit Services.

### **Introduction**

The Institute for non-profit Services gGmbH ([www.InstitutfuerDienstleistungen.de](http://www.InstitutfuerDienstleistungen.de)) in Germany provides E-Learning Services for refugees and migrants coming to Germany with the support by Niedersächsische Lotto Sport Stiftung in Hannover since 2016. First it was administered by the Ostfalia University of Applied Sciences and since 2018 as an independent Institute for non-profit services in the form of an gGmbH.

The integration work became important in Germany with the refugee crisis in 2015. Never before Germany faced such a massive integration stream. The known migration streams such as the Gastarbeiter from Türkiye in the 60ies were rather small. The refugees coming from Vietnam in the 80ies were not a problem as well. Interesting to mention is, that the refugee crisis from Yugoslavia with over one million refugees were not a problem as well. The following graph shows the massive migration of young men from Islamic states such as Syria and Afghanistan. For the first time, migration to Germany was discussed as a problem that needs to be solved. Thousands of volunteer

helpers and Integrators started to welcome the refugees and helped where ever they could. Now it became clear, that migration needs to be organized properly.

#### Activities during the Refugee Crisis 2015-2017

The activities of the Institute can be structured in three phases. Phase one was the arrival of refugees from Syria and Afghanistan in 2015-2017. Phase two was the integration of the refugees into the labour market. Phase three was the start of the Ukraine war in 2022.

In phase 1 with the arrival of masses of refugees, the integration of people with very different background and religion was the key issue. Therefore, the Institute offered different integration courses. First, Launer and Delekat supported the arrival program in Uelzen 2015-2016. Hundreds of refugees arrived in the small town Uelzen. Later, Launer and Delekat organized a program and held a program session in Uelzen in 2016. Program Director and Train-the-Trainer for the program was Dipl.Vw. Joachim Delekat. Experts in the respective fields were hired. Most important was the basic training Intercultural Integration administered by Dr. Noeme Hermeking. It was a more theoretical training as a basis for all other courses. Second was a more pragmatic course in Intercultural Communications offered by Pari Niemann. To better understand the juristical issues, a specialist was hired from the Ausländeramt Uelzen (administration of foreign affairs) Bachir Yzidi. It was important to understand the practical implications of the Asyl Laws. It is important to mention, that this were mainly young men that wanted not only to flee from their respective country but also wanted to be integrated and achieve professional goals.

#### The Multiplier Model

In the first phase of the refugee crisis, the key teaching concept was a train-the-trainer model. It was important to very fast train so called Volunteer Integrator. They helped voluntarily all over Germany in thousands of Groups without professional training. At this time, the students of the Institute in 2015-2017 were Volunteer Integration and helpers (Integrators). Most of them were volunteers without former training. The first basic model was to train about 10 Integrators online via E-Learning. These 10 Integrators became multipliers and were able to train another 10 more multipliers each in their respective region in presence ( $10 \times 10 = 100$ ). Each Integrator then could take care of about 10 refugees ( $100 \times 10 = 1000$ ). In 2016-2017 the Institute actually trained about 100 Multipliers leading to 1000 qualified Integrators ( $100 \times 10 = 1.000$ ) helping 10.000 refugees ( $1.000 \times 10 = 10.000$ ).

#### Integration into the Labour Market 2018-2019

In the second phase of the refugee crisis, the Institute offered a program to integrate the refugees into the labour market starting in 2018. Lectures in International and Intercultural Management were offered by Prof. Dr. Markus Launer as theoretical basis. The personnel training was performed by Dr. Anne-Kathrin Auer for the departments of companies. Dipl.Vw. Joachim Delekat trained the



refugees personally. Most important were the questions how to write an application, how will the interview be, and what to expect at the beginning of the new job. This was important to integrate the already culturally integrated refugees and migrants into the professional labour market in Germany 2018-2019. In this phase, the refugees were trained personally and directly. Therefore, OStR Frank Nierath started an additional training in German culture, which led later to the course *Leben in Deutschland* (Living in Germany). In addition, the Institute offered a training in German history by Dr. Alexandra von Ilseman.

#### Ongoing Training since 2020

Ever since, the Institute offers a standard program in integration courses. In Germany developed plenty of integration courses privately and organized by the government. Therefore, the basic training was and is covered well. Therefore, the Institute offered a niche program in addition to the existing courses. OStR Frank Nierath developed a course based on German and Austrian lyrics and music. This program was not only accepted by refugees but also lots of people interested in music, arts, and lyrics. Delekat concentrated of an additional course on *Leben in Deutschland* (Living in Germany). This course is a pre-requisite to apply for German citizenship. The German citizenship can be applied for after 6-8 years being in Germany and after 3 years when married with a German citizen. The government offers this course as well, however, Delekat is a specialist in government and political law. This course was not only for people in an integration and application process but for people interested in politics. In addition, we are supported by country delegates such as Dirk Böse for Latin America and Devonry Legarte for Asia. Legarte runs on Facebook an online Group called "Asian in Germany". This was to maintain the integration program.

#### Ukraine War and a second Refugee Crisis since 2022

In 2022, a new refugees crisis hit Germany with the war in Ukraine. About 1 million refugees came from Ukraine to Germany. These refugees were mainly women with or without children. In this case, the refugees were already familiar with our culture. The women integrated rather smoothly into the labour market and the children were included into the German schools (inclusion). In this case, the language training was most important.

In addition, a Zoom Lecture Series was offered by Launer and a international Group of professors for Ukraine lectureres. Out of this lecture series a new research project was applied for and approved with Prof. Marja Nesterova from Dragomanov Ukrainian State University working as the Head of the Centre of Social Innovation in Education and Head of Laboratory at the Research Centre of Cognitivistics. In addition, a lot professors from Ukraine could network with colleagues around the world and many of them participate now in the international Workshops and the CoSiM Conference.

#### Analysis of the additional Activities

Starting in 2016 in Uelzen, Launer started with local, national and later international Workshops which lead to international Conferences. Called CoSiM. This was a challenge in particular, we will report separately.

No references

#### Comments

Sorry, some very long headlines had to be shortened in the table of content. We also apologize if not each extended abstract or paper was included in the first draft. Now it should be complete,

**Thank you very much to all participants of CoSiM 2023**

*Markus*