Keynote

Digital ethnography: A qualitative approach to inquiry in online spaces

Debra J. Borkovich, Middle GA State University USA, debra.borkovich@mga.edu

Abstract

Digital Ethnography evolved in the early 21st century as a qualitative interpretive method of ethnographic research (fieldwork) in an online space (the Internet). Also known as Digital Anthropology, Virtual/Cyber Ethnography, or Netnography, Digital Ethnography adapts the traditional, in-person ethnographic research techniques of anthropology to the study of online cultures and communities formed through computer-mediated communications. Digital Ethnographers study group culture on the World Wide Web, immersing themselves in the online communities of practice they are researching. Communities of all types exist in digitized interconnected spaces where virtual experiences take place. Although all ethnographers share a traditional anthropological past, Digital Ethnographers are engaged in a mobile, multi-sited, or "un-sited" form of research that crosses spatial and temporal boundaries online. Fieldwork is performed in virtual worlds, websites, and networked systems, as each portal is operationalized as an invitation to view and analyze a community of practice and system of meanings, consisting of online subject matter and discourse. Through Digital Ethnography we can study and analyze a plethora of online social-cultural groups, such as classrooms, organizations, meetings, newscasts, political events, videos, social media interactions, blogs, projects, gaming, marketing, sales, and advertising, etc. in synchronous and asynchronous settings. Traditional online research methods of surveys, polls, and content analyses glean important information regarding the "who, what, where, and when" questions. However, Digital Ethnography presents a lens to dig deeper for more elusive information regarding the "how and why" our online behaviors influence our opinions, habits, patterns, and worldviews as we participate in virtual environments.

Keywords: Digital Ethnography, Cyber Ethnography, Virtual Ethnography, Netnography

Digital trust and ethical standards

Ewa Stawicka, Warsaw University of Life Sciences, ewa_stawicka@sggw.edu.pl
Theo Anderson, University of Northampton, millichamp15@hotmail.com

Abstract

Digitization will change many companies. It turns out that the pace of the development of the use of digitization, i.e. broadband infrastructure enabling access to high-speed Internet, projects that increase the pool of public services available electronically, or projects encouraging people to use the Internet and increase their digital competencies, in practice, arouse a lot of attention and worries. Traditionally, trust has been based on trust in family or friends, and in an extended form - e.g. in organizations or professional groups. Stakeholder choices are based on human ethical standards and elements such as family, culture, religion, and communities. Framing the use of digitization and managing risk may seem complicated, but the process is similar to creating controls, rules, and processes that already exist for humans. The risk of AI technology depends on how it's used. However, it should be noted that the condition is that the technology remains under human control. The aim of the study is to assess the attitude of stakeholders to digital trust depending on ethical standards and the degree of risk. Information and data were taken from the literature and the results of their own research. Only strict guidelines and a high level of ethical standards can change the attitude of stakeholders to build trust in digital change.

Robotization and digitization as a management issue

Szymon Jarosz, Cracow University of Economics, szymonjarosz@poczta.fm
Małgorzata Zakrzewska, Cracow University of Economics, zakrzewm@uek.krakow.pl
Mariusz Sołtysik, Cracow University of Economics, soltysik@uek.krakow.pl

Abstract

Each of us is surrounded by artificial intelligence, using smart TVs, giving voice commands to our car, or using Siri on iPhone. This illustrates the significant impact of innovation on business, corporate organizational models, and our daily lives (Jarosz et al., 2020). The Fourth Revolution is associated with more and more advanced technological innovations (Wang et al., 2020). Future and current managers must be ready for the fact that a machine with artificial intelligence (AI) may appear on the board of their company, that the government can collect taxes using blockchain, or that an audit in their company can be carried out by artificial intelligence. (WEF, 2015). Revolution 4.0 means the disappearance of the barrier between humans and machines. All these changes will not go unnoticed when it comes to the organizational sphere of modern enterprises. In the literature, one can find trends to replace the concept of a learning organization with the concept of an intelligent organization (Lee et al., 2018; Galińska, 2019). Schoemaker and Tetlock (2017) indicate that two forces of influence shape what we now call the intelligent enterprise:

1. the growing importance of computerization and Big Data, which are fundamental in operations research, forecasting, and artificial intelligence,

2. the influence of people, understanding their logic, inference, and the reasons for making certain decisions.

The presentation aims to present the results of the undertaken research on the knowledge of artificial intelligence technologies and humanoid robots and their impact on the perception of their role in society. This problem is important from the point of view of managers in organizations that implement or plan to implement solutions based on this technology.

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The impact of school closures on subjective academic achievement

Karolina Eszter Kovács PhD, University of Debrecen, karolina92.kovacs@gmail.com
Prof. Piotr Dlugosz, Pedagogical University of Kraków, piotr.dlugosz@up.krakow.pl

Introduction

Due to the rapid and global spread of the COVID-19 pandemic, educational institutions were closed at the suggestion of experts. According to UNESCO data, the new digital agenda has been introduced, with which 1,598,099,008 students were affected. In Hungary, the provisions were introduced on March 16, 2020, and each training level has been executed with online platforms, take-home packages, and television. No adjustments had been made to the school calendar dates and curriculum due to the pandemic in the previous and current school years. Despite the quick response, the online teaching was not smooth (Prohánczik, 2020; OECD, 2021). Hermann (2020) stated that 7% of students in grades 6, 8, and 10 were not participating in education; furthermore, 7-7% in grades 6 and 8 and 6% in grade 10 have very limited access to online education. Those who have the tools to take part in online education depend on their families' socioeconomic status. The social aspect of school closures is also crucial, while it significantly deteriorates the relationship network of the students. However, it is well-known that the lack of participation in a community could cause students to not be persistent in their studies. Also, returning to school after a long break can create stress, fear from the increased academic burden and social relationships (Dlugosz, 2021), and social exclusion and lack of social support can lead to mental health problems and can decrease academic achievement, increasing the chance for dropout (Walawender, 2021; Kovács et al., 2021). Therefore, investigating students' attitudes toward distance education is significant to detect the strength and weaknesses of the system, the current education status of students, and their intentions of school participation during such a sensitive and insecure period. Understanding the psychological dynamics behind distance education can help us cope with difficulties when online education is a must and can contribute to designing e-learning applications and remote cooperation in school-family relationship patterns.

The research

The research was carried out in four Visegrad countries. Project No. 22110213 (Strategic Grant) is co-financed by the Governments of Czechia, Hungary, Poland, and Slovakia through Visegrad Grants from the International Visegrad Fund. The fund's mission is to advance ideas for sustainable regional cooperation in Central Europe. Our research project used a survey method, focusing on 7th and 8th -graders learning and living in peripheral areas. The international team of the Visegrad countries developed the questionnaire comprised of 31 groups of questions related to the sociodemographic background, mental health, and attitudes toward distance education. Mental health was measured by well-being (WHO Well-being Inventory, Susánszky et al., 2006), perceived stress (Perceived Stress Scale, White, 2014), satisfaction with life (If you could evaluate your life so far, overall are you rather satisfied or not satisfied with your life? 4-point Likert scale) and social support (Short scale of Youth's social support, Pluta et al., 2020). The Hungarian subsample involved 305 students living and learning in the peripheral areas of Hajdú-Bihar County. The gender distribution of the sample is almost equal (boys: 51.5%, girls: 48.5%). The mean age of the sample was 13.4 years (SD=1,096). 56.8% live in settlements of up to 5000 inhabitants, and 43.2% live in urban areas with more than 5000 but fewer than 20000 inhabitants. Parents were informed, and they gave their consent in accordance with research ethics. The current study aimed to investigate factors influencing subjective academic achievement in the light of sociodemographic, psychological, and distance education-related factors. We hypothesized that disadvantaged situation, worse psychological well-being, less social support, and worse attitudes toward distance education have a negative impact on academic achievement. The questionnaire data were typed into Excel and then analyzed in SPSS for Windows, version 22.

Implications

The results of the linear regression analysis partly confirmed our hypothesis. Concerning the impact of gender (ß=-0.062; p=0.582), type of settlement (ß=0.061; p=0.598), educational level of the father (ß=0.097; p=0.650) and mother (ß=-0.109; p=0.418) had no significant impact on subjective academic achievement. However, the objective financial situation had a significant negative impact (ß=-0.358; p=0.012), and the same could have been detected concerning the number of books (ß=-0.309; p=0.006). Concerning the variables related to mental health, the role of social support provided by the teachers is significantly positive (ß=-0.032; p=0.033) while the social support by parents (ß=-0.033; p=0.398) and peers were not significant (ß=-0.007; p=0.625). The effect of

well-being was not significant at all (ß=-0.003; p=0.390). However, the impact of the perceived stress level is significantly negative (ß=-0.034; p=0.009). The role of the attitudes toward distance education was also not significant (learning difficulties: ß=-0.011; p=0.872; health problems: ß=-0.024; p=0.768; saving time and staying safe: (ß=-0.053; p=0.509; preferring distance education: ß=-0.073; p=0.273).

Conclusion

Based on our results, the negative effect of the disadvantaged situation on subjective academic achievement can be detected, like in previous research focusing on children living in peripheral regions. School closures and the insecure situation caused by the pandemic also had a negative impact, widening the distance between families living in disadvantaged and non-disadvantaged situations. However, seemingly, attitudes toward distance education did not have a significant effect on subjective academic achievement. It may happen that the self-assessed academic achievement of children living in peripheral areas was poor even before the outbreak of the pandemic, as it is usually typical for disadvantaged children to undervalue the importance of education. We also would like to extend our sample to provide representative data concerning this issue in our project.

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Using a web framework in a server-side programming course

Orly Barzilai School of Information Systems, The Academic College of Tel Aviv-Yaffo, Tel Aviv, Israel,
orlyba@mta.ac.il
Ruti Gafni, School of Information Systems, The Academic College of Tel Aviv-Yaffo, Tel Aviv, Israel,
rutigafn@mta.ac.il

Abstract

Teaching undergraduate students' skills and tools needed for their future employment is one of the aims of the curriculum of Information Systems studies. The "Server-Side Programming" (SSP) course is an advanced course studied during the third academic year since 2018. The course aims to provide the theoretical and practical knowledge of building a server-side, Object-Oriented web project, incorporating Project-Based Learning (PBL). Some of the SSP courses included a commercial web framework based on the Model-View-Controller (MVC) model (Laravel, CodeIgniter). This study investigates whether a web framework should be incorporated into the SSP course. The remarks given by the lecturer to 63 projects delivered by students during six courses were analyzed. The SSP course lecturer was interviewed to gain insights into the students' difficulties. Results showed that students had difficulties implementing their projects using a web framework, although it assisted the OOP design as manifested by fewer errors.

Keywords: MVC model, web framework, project-based learning, PHP course, Server-side programming course, OOP.

Impact of selected automation and digitalization solutions for production processes on business continuity of manufacturing companies during the COVID-19 pandemic

Anna Kosieradzka, Warsaw University of Technology, Faculty of Management, anna.kosieradzka@pw.edu.pl
Justyna Smagowicz, Warsaw University of Technology, Faculty of Management, justyna.smagowicz@pw.edu.pl
Cezary Szwed, Warsaw University of Technology, Faculty of Management,
cezary.szwed@pw.edu.pl

The subject of the research is the analysis and evaluation of solutions implemented in manufacturing companies to ensure their business continuity under conditions of the COVID-19 pandemic. Solutions involving automation and digitalization of processes and activities are analyzed in detail. The research shows that the digital transformation of activities implemented in enterprises and its use in the management area can increase the resilience of the production system to pandemic threats. These issues are particularly relevant to the conference theme. The research presents selected results of a survey carried out using the mix-mode CAWI/CATI on a representative group of 600 manufacturing enterprises in Poland. The survey was a part of the research project *Models of the adaptation of work organization in enterprises to the limitations of public life (associated with a pandemic) in line with the demands of business effectiveness and efficiency*. The study included the identification of the application scope of various measures implemented in manufacturing enterprises in the COVID-19 pandemic. The measures were classified into five groups: (1) Legal and regulatory measures, (2) Personal protective measures, (3) Protective measures for groups of workers, (4) Work organization measures, and (5) Measures of production organization. A quantitative analysis of the collected data was carried out, including the use of statistical tools. The study was performed in two cross-sections. The first cross-section covered the evaluation of the share of a given measure in the context of characteristic parameters describing enterprises or production processes. The second cross-section referred to the relative (in percentage) scope of application of chosen measures to the selected group of enterprises. An analysis of the use of measures in the event of COVID-19 infections in an enterprise has been also added. A particular emphasis was placed on measures based on automation and digitalization of activities from the domain of organization of production processes. The data analysis has shown the presence of significant correlations between the type of applied measures and the characteristics of enterprises and their production processes. The research was preceded by a literature survey showing the current state of knowledge in areas similar to the subject of the study. The conclusions of the research show which solutions supported by the digitalization and automation of production processes have been and can be used in various kinds of manufacturing enterprises. The possibilities of using these solutions to ensure the safety of production processes were also presented. The impact of the analyzed activities on ensuring the enterprise's business continuity was assessed under conditions of the COVID-19 pandemic. In factual terms, the level of implementation of selected solutions from the area of digitalization and automation of production processes in Polish enterprises during the COVID-19 pandemic was determined. On a practical level, the results of the study can be used to manage the implementation of necessary actions in enterprises in similar situations. This includes increasing the resilience of enterprises to pandemic disruptions as well as improving the efficiency of their operations. This may be of particular importance if similar events occur in the future. In the research aspect, the proposed methodology of systematization and analysis of the collected data can be used to study similar crisis events.

Keywords: Production processes digitalization, production automation, business continuity, COVID-19 pandemic

The use of traditional and agile PM methodologies in ICT

Piotr Pietrzak, Warsaw University of Life Sciences, piotr_pietrzak1@sggw.edu.pl

Abstract

The main aim of this article was to present the use of traditional and agile project management methodologies in companies in the communication and information technology (ICT) industry. The following methods were used to obtain research material and present the obtained results: literature studies, diagnostic survey (with the use of the questionnaire technique), descriptive, tabular and graphic. The main results of the study indicated that most of the representatives of the ICT industry participating in the survey are familiar with at least one agile project management methodology. Moreover, they consider agile methodologies to be better than traditional project management methodologies in terms of work quality and efficiency. According to the authors, there is a need to continue research on a larger research sample, with the use of the in-depth interview technique.

Testing different sources of intuition: A primary scale development study

Markus A. Launer, Ostfalia University of Applied Sciences, Germany, *M-A.Launer@ostfalia.de*
Fatih Çetin, Niğde Ömer Halisdemir University, Turkey, *fcetin@ohu.edu.tr*

Abstract

One of the basic common understandings in the definition and function of intuition across different perspectives is relating intuition to the domain of the unconscious information processing system (Epstein, 1990; Lieberman, 2000; Dane & Pratt, 2007). Based on the dual processing approach, the concept of intuition associated with learning from experience and reach knowledge without consciousness with rapid, effortless, and automatic processing of information (Stanovich & West, 2000; Hogarth, 2001). On the contrary, the concept of rationality is based on the deliberative and attentive processing of information with intentional, extensional, and rule-based processing of information. Scholars propose some of the key attributes of intuition as being *instantaneous* - responses to complex, uncertain situations-, *affective* -accompanied with positive or negative gut feelings-, *holistic* -gets the bigger picture-, *unconscious* -only the outcomes are known-, and *unjudgeable* -cannot be determined as right or wrong- (Dane & Pratt, 2007). The heuristics and emotions/feelings are the main factors in understanding the concept and functions of intuition (Klein, 2003; Sinclair & Ashkanasy, 2005; Hutchinson and Gigerenzer 2005). From the heuristic's viewpoint, the intuition is coming from past experiences and knowledge through implicit and explicit learning processes. From the emotions/feeling's viewpoint, the intuition is coming from a gut feeling in the form of judgment with the right or wrong feelings and manifested as affect related with a particular stimulus. Scholars named these dimensions as "intuition-as-expertise" and "intuition-as-feeling". The main difference between these perspectives is that the former is based on a response of primitive urges but latter is the product of learning and experience. However, emotions/feelings and their reactions play also fundamental roles in directing people to the states of action readiness associated with the extensive mental simulations about uncertain future events (Poli, 2017). In this process, the greater uncertainty of future events leads to more intense emotional states based on their imagined experiencing rather than remembered experiencing. The mutual increasing interactions between mental simulations and emotional arousals may lead to anticipatory decisions. Therefore, another possible source of intuition for unconscious information processing toward uncertain future events is the anticipative decision-making perspective. On the basis of these three main perspectives and attributes, some possible sources of intuition may be proposed as holistic unconscious information processing, fast-spontaneous information processing, slow unconscious information processing, heuristics-based information processing, emotional information processing, and anticipative information processing. The holistic unconscious indicates an inferential process for perceiving the whole rather than parts. The fast-spontaneous information processing refers non-logical mental process with capability of handling complex abstractions in a flash. The slow unconscious information processing assumes that a distraction period makes unconscious information processing contribute more to decision making. The heuristics-based information processing emphasizes the role of past experiences and learning processes. The emotional information processing bases on the thought that all judgments are affectively charged and involve emotions. Lastly, anticipative information processing relates to imagined experiencing with mental simulations and emotional arousals for uncertain future events. The purpose of this paper is to test these possible sources of intuitive decision-making styles with pilot research by developing and validating a new measurement instrument. Exploring and testing different sources of intuitive decision-making may contribute to a better understanding of the unconscious information-processing mechanisms. Participants were179 employees working in different organizations in Germany. We asked both the existing items in the literature and newly developed questions for measuring the varying sources of intuition. After the translation and back-translation process conducted by experts, we searched the validity and reliability of the instrument through the explanatory and confirmatory factorial analyses by calculating internal consistencies. The primary results showed that the new instrument measuring individual perceptions on the sources of intuition separates types of intuition successfully.

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The importance of USR social media communication on faculty satisfaction
Paweł Korzyński, Koźmiński University, pkorzynski@kozminski.edu.pl
Anna Maria Górska, Koźmiński University, amg@kozminski.edu.pl
Grzegorz Mazurek, Koźmiński University, gmazurek@kozminski.edu.pl

Purpose

The aim of our study is to understand the importance of University Social Responsibility (USR) and its communication for faculty satisfaction. Recently USR has become increasingly important for Higher Education institutions (HEIs), as accreditation agencies, rankings, national and international institutions, as well as students and academics (Balyeva et al., 2018; Coelho and Menezes, 2020; Jorge and Andrades, 2017; Kouatli, 2019), become more conscious about the importance of the third mission of the University. Studies show that corporate (including HEIs) Corporate Social Responsibility (CSR) actions become a significant part of employees' (including academics) sense of belonging and impact their organizational identification (Oksa et al., 2021). Following the organizational identity theory (Tajfel and Turner, 1985), we argue that HEIs' USR activities are an important element of faculty sense of belonging to an institution and thus their satisfaction. Given that knowledge and ideas are acquired, accepted, or rejected through communication (Ihlen et al., 2011), communication about actions is crucial. Moreover, studies found that CSR communication minimizes the public cynicism towards these actions (DeKay, 2011; Waddock and Googins, 2011). Thus, to meet the stakeholders' expectations, HEIs, should not only act in a socially responsible manner but also communicate those activities strategically. However, previous studies found that HEIs, often struggle with effective communication of these actions to the stakeholders (Go and Bortree, 2017; Tetrova et al., 2021). Within the study, we argue that the way HEIs communicate their USR impacts how these actions are perceived and evaluated by academics, which relates to their work satisfaction. The study of satisfaction of faculty becomes especially important in the light of the changes occurring in HEIs, including the neoliberal shifts that increase the competitiveness of institutions for academics (Parker et al., 2021). Moreover, studies show that academic satisfaction may impact their performance and engagement (Shin and Jung, 2014). Previous studies analyzed multiple factors contributing to faculty satisfaction including individual characteristics, organizational support, mentoring, salary, and work-life balance (Bentley et al., 2013; Ward and Wolf Wendel, 2012; Webber, 2019; Webber and Rogers, 2018). However, the knowledge investigating the importance of USR communications and activities on faculty satisfaction is very limited. Studies in this regard often consider the corporate world (Cho et al., 2017; Kouatli, 2019), however, it seems that HEIs have been in large part omitted. As Kouatli argues and calls for more research on USR (2019, p. 888): "University social responsibility is still in its embryonic stage compared to CSR which is still debatable by researchers". Moreover, so far only a few articles considered USR communication, as according to Tetrevova review conducted in 2021, only six articles published in Web of Science journals researched this topic. This creates a research gap in the context of both: USR activities and USR communication alone. Within this study we aim to fill this gap and go further to understand the importance of USR and USR communication on faculty satisfaction. Therefore, this study fills a significant gap on the importance of USR communication and activities of HEIs and its mediating effect on faculty satisfaction. Moreover, within the study, we consider various types of USR in order to better understand which of these are more important for faculty satisfaction.

Design/methodology/approach

To answer the states research question, we test academic satisfaction using Collaborative for Academic Careers in Higher Education (COACHE) scale, USR based on the scale by Latif (2017), and the use of social media communication of HEIs on USR. Within the study, we consider USR from various perspectives: operational, internal stakeholder, legal, ethical, research, community engagement, and philanthropic responsibilities of the institution, in order to gain a comprehensive view on the topic of USR. The survey was conducted on a 110 sample of management scholars employed in top50 business schools in accordance with FT Times ranking. The analysis was performed using Partial Least Squares Structural Equation Modeling (PLS-SEM) to test the hypothesis and answer posed research question.

Findings

The study found a significant impact of USR communication on the evaluation of USR activities, which resulted in an increase in the general satisfaction of faculty. Moreover, we found that communication on social media about USR activities impacts the evaluation of these activities by academics.

Conclusions

The paper fills the gap on the topic of USR communication on social media, USR evaluation, and its impact on faculty satisfaction. Our findings suggest that communication in social media supports faculty satisfaction via organizational identification. The study brings also practical contributions.   The study can support HEIs in prioritizing types of USR activities as well as communicating them to increase the faculty satisfaction.

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A co-workership approach on digital transformation: Towards smart manufacturing
Anna Karin Olsson, University West, Sweden, anna-karin.olsson@hv.se
Kristina Eriksson, University West, Sweden, kristina.eriksson@hv.se
Linnéa Carlsson, University West, Sweden, linnea.carlsson@hv.se

Digital transformation refers to the process of organizational change, evolving over time for value creation and appropriation aiding for smart manufacturing (Skog, 2019). Regarding the role of organizational means, there is an embedded dynamic generator of challenges, opportunities, and resources that affect the digital transformation at various organizational levels related to social factors such as values, culture, and trust (Ibid). Earlier studies of the Swedish manufacturing industry imply that as the number of digital technologies increase within organizations, while striving towards becoming a smart factory, cooperation and social factors become more imperative (Björkdahl, 2020). By following this reasoning, understanding organizational prerequisites that facilitate the human-centric perspective in relation to digital transformation is crucial when approaching smart manufacturing by moving from Industry 4.0 (I4.0) towards Industry 5.0 (I5.0) (Navarandi, 2019). It is argued that a prerequisite for digital transformation is the employees' ability to cross organizational boundaries both horizontally and vertically (Carlsson et al., 2022) challenging management. The aim of this study is to explore organizational prerequisites for co-workership in digital transformation towards smart manufacturing. The concept of the co-workership wheel reflects the employee as an autonomous actor within the organization. As such, co-workership is vital for managing organizational change, e.g., digital transformation, capturing employees' initiatives and prospects (Andersson, et al. 2021). As illustrated in Figure 1 the co-workership wheel consists of four conceptual pairs: Trust and Openness; Community Spirit and Cooperation; Engagement and Meaningfulness; Responsibility and Initiative. Together these four pairs describe the foundation for co-workership within the organization, feedbacking a development process towards smart manufacturing.
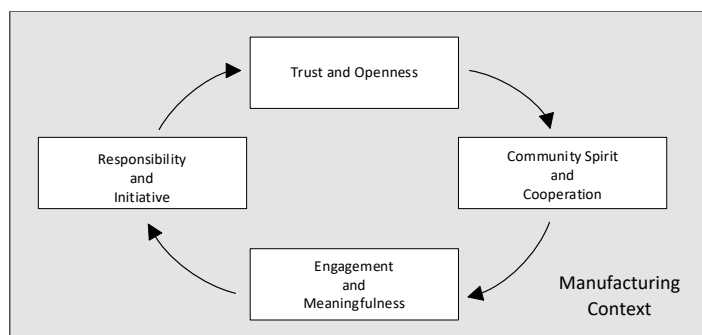

Figure 1. The co-workership wheel (Andersson et al., 2021) in a manufacturing context.

Inspired by the application of the co-workership wheel in the health care sector (ibid), this study builds on previous work by Carlsson et al. (2022) to further contribute to the exploration of co-workership in the manufacturing sector strengthening the I5.0 emerging research. By applying a qualitative case-study, organizational prerequisites for co-workership in digital transformation are explored (Yin, 2018). The term co-worker is herein applied in a general sense to explore employees' experiences covering both managerial levels and service functions. The case company is a large manufacturing organization in the Swedish energy sector. In-depth interviews (n=29) were conducted over nine months (Oct. 20 – Jun. 21), exploring co-workers' current and retrospective experiences of the early phases of digital transformation. Referral sampling was applied for selecting informants from functions such as design, quality, production, logistics, digitalization development leaders, and corporate service functions including HR, IT, and financial controllers. Access was granted to six internal documents guiding all employees covering the organization's strategic work with industrial digitalization, vision, and core values: responsibility, excellence, and innovation. Several rounds of data analysis followed, identifying organizational prerequisites related to each of the four conceptual pairs (Andersson et al., 2020) through a coding scheme based on the co-workership wheel, see Figure 1.

Findings show that employees interpreted digital transformation as difficult to navigate due to limited communication and cooperation across the organization. Furthermore, the need for trust in digital technologies and employee engagement for transformation are emphasized by informants. Thus, it is argued that an adaptive organizational culture and a focus on learning and competence are necessary organizational prerequisites for translating the means of digital transformation. Managers in the manufacturing sector hence need awareness and understanding of when and how to apply co-workership for transformational change. Manufacturing cultures need to absorb a more human-centric perspective when navigating I4.0, moving in incremental steps encompassing the whole organization, rather than treating digital transformation as scattered and disruptive activities. We argue that the findings give useful implications for manufacturing organizations navigating the challenges of digital transformation to reach the benefits of smart manufacturing. As digital transformation cuts across organizational structures and working processes, there is a need to highlight a human-centric perspective on smart manufacturing by applying the conceptual pairs of the co-workership wheel. Lessons learned show that by applying a co-workership approach with its aspects of trust and openness, community spirit and cooperation, engagement and meaningfulness, responsibility and initiatives, management needs to encourage organizational prerequisites such as an adaptive culture and learning and competence for reaching and sustaining a human-centric perspective on digital transformation.

Keywords: smart manufacturing, digital transformation, co-workership, human-centric, industry 4.0, industry 5.0

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Digital transformation of societies with the use of digital identity: A case study in Turkey

Sevgi Kavut, Istanbul Medipol University, Turkey, sevgi.kavut@medipol.edu.tr

Abstract

Digital identity and digital transformation may be able to affect societies and it has been a matter of wonder particularly in the last decades. Those who have digital communication tools, internet, the state of the art and cutting-edge technologies easily can be reaped the benefits communication technologies and digital citizenship rights. Which is why, the use of digital identity and digital citizenship is with regard to digital transformation and the state-of-the-art technology. Digital identity is a computer network that admitted equivalent to real identity of a person or a company, organization and firm. Furthermore, it is an emerging identity style coming about the proliferation of state-of-the-art technologies, online and digital communication technologies and social media (Kavut, 2022a: 20). The concepts of digital identity, digital society, digital transformation and how they can be applied is a discussed issue over the years. Turkey and numerous countries keep up with technology in digital society with like digital identity, digital applications, digital communication tools. In this sense, it is known that Turkey and around the world digital identity and digital citizenship studies has substantially accelerated. The aim of this study is to elicit information and to reveal the importance of digital transformation of the societies, the use of digital identity, digital citizenship degrees in Turkey.

This study is carried out through survey method being a quantitative analysis. In this study, it is applied Personal Information Form and Kavut (2021b), Digital Identity Scale. Data for this study were collected from only over 18 ages adult individuals living in the biggest three cities (Istanbul, Ankara, Izmir) in Turkey. The method of data collection was an online survey which constitute from Digital Identity Scale and Personal Information Form. Data were processed with the SPSS program. A total of 400 participants completed the online questionnaires and these questionnaires formed the data for this study. Online surveys were applied between December 2021 and February 2022.

An important finding of this study differs from digital identity, personality, communication, impression and reputation management, and the need for digital identity presentation viewpoints of participants according to lived cities in Turkey. In relation to the age group of participants, it turns out that the point of view of participants differs from each other on the digital identity topic. As a result, this study observes that the Digital Identity Scale sub-dimensions differ in terms of ages, education levels, and lived cities of respondents. In other words, this study confirms that digital identity definitions need for personality, digital identity, digital identity presentation and communication, impression, and reputation management in digital environments of respondents are different from each other in the areas of age, education levels, and lived cities. Another significant result shows that there is a bond between the Digital Identity Scale sub-dimensions. These findings suggest that three sub-dimensions have also a semantic relationship. Therefore, Digital Identity Scale seems that it is compelling evidence to elicit information in the fields of digital identity, presentation, communication, impression, reputation, and reputation management. According to these data, we can infer that the use of digital identity and digital citizenship concepts differ among the public in Turkey. Furthermore, this finding has important implications for developing digital identity, digital citizenship, digital transformation concepts, and the use of digital identity in every walk of life through Turkey example. This is an important topic for future research. Digital identity and digital citizenship are emerging concepts all around the world. Thus, there are still unanswered questions about digital identity, digital transformation, digital citizenship, and above all else the true use of digital identities.

Future studies on the current topic are recommended. In future investigations, it may be possible to use relationships between digital identity and other communication technologies, the effects of digital identity on societies, online impression and online reputation through digital identity, and so on. It is believed that this study will contribute to future studies. This paper demonstrates the limitations that digital identity, social media, digital identity presentations, personality communication, impression, and reputation management on digital environment topics. It offers the viewpoint of participants to demonstrate their digital identity definitions, needs for digital identity presentations, personality and communication, impression and reputation management on digital environments, social media and digital identity uses. Last but not least, according to current and lingering

digital identity studies, we can indicate that digital identity is likely substantially changing both societies and countries in the following years.

Keywords: digital identity, digital society, digital transformation, communication studies, digital citizenship

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Women on board in Turkey: How gender-diverse boards influence firm performance?

Özlem Atay, Ankara University, Turkey, ozkanli@politics.ankara.edu.tr
Fatih Çetin, Niğde Ömer Halisdemir University, Turkey, fcetin@ohu.edu.tr
Elif Savaşkan, Ankara University, Turkey, elifsavaskan@gmail.com

One of the ways to understand the activities, strategy or performance outcomes of the organizations is to explore the dynamics of the executive teams. According to Upper Echelons Theory (Hambrick & Mason, 1984), which deals with the top management teams, the executives act based on their personalized interpretations of the situations, which are shaped by their experiences, values, and personalities. Therefore, previous studies explored the relationship between firm related outcomes and personal characteristics of the executive teams such as size, age, ethnicity, educational background, gender, tenure, the share of ownership, among others. The main underlying thought for exploring these characteristics is that diversity can increase the creativity, innovation, and problem-solving ability of the work teams, and thus decision making can improve (Robinson and Dechant, 1997; Fray and Guillaume, 2007). The main purpose of this study is to explore the gender diversity in the boards of BIST 100 firms from Turkey, and test whether the firm performance differs for the diversified boards. The research sample was the firms from BIST100 (XU100, firms highest in market and transaction size) in Turkey. Blau's index of heterogeneity was used for calculating the gender diversity, Blau index can range from zero (when only one gender is represented on the board) to 0.50 (when there are equal numbers of men and women). The results indicated that the gender diversity in the boardrooms is very low, and there is no significant difference for the firm performance between somewhat diversified or homogeneous boards. All these results indicate a symbolic presentation of women in the boardrooms in the firms from BIST100.

Keywords: Women in boardroom, Firm performance, Turkey

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The importance of building trust in social media in times of crisis

Elżbieta Kacperska, Warsaw University of Life Science, elzbieta_kacperska@sggw.edu.pl
Katarzyna Łukasiewicz, Warsaw University of Life Science, katarzyna_lukasiewicz@sggw.edu.pl

Abstract

Social media is now a very popular means of communication. Thanks to it you can share ideas, thoughts, and information by building virtual networks and communities. It plays a huge role in a personal life and business. Trust is the basis of our relationships. Nowadays, companies are very much in the digital transformation stage, so trust becomes extremely important. Customers need to trust e-commerce platforms; they need to be sure that by choosing the digital image of a product they will get what they ordered. Digital trust will be directly relevant in achieving economic growth. The time of crisis caused by the COVID-19 pandemic is a time of change for society as a whole and it creates the need to adapt to various arising, yet unknown situations. It is also the time of increased use of social media. The study aimed to present the importance of building digital trust in social media distressing the time of crisis. The first part of the paper pinpointed the concept of trust and social media, and the following findings presented the importance of building digital trust in social media, considering the circumstances of a crisis based on research. The world is changing, which includes information technology, and as a result, the importance of social media as communication channels is also increasing. During the current pandemic crisis, the amount of time spent browsing social media multiplies, leading to an expansion of risks correlated to excessive use of social media. Does this mean that the users are more cautious and introduce control measures? The answers to this question were provided by a survey conducted on the population of 488 respondents from Poland and Ukraine. The surveyed respondents spend a considerable bit of time using social media, and the trust built in the media varies

Good thinking or gut feeling? Deliberation & intuition in traders, bankers, farmers and agricultural managers

Frithiof Svenson, UiT The Arctic University of Norway, Norway, f.svenson@hs-osnabrueck.de
Markus Launer, Ostfalia University, Germany, m-a.launer@ostfalia.de
Fatih Çetin, Niğde Ömer Halisdemir University, Turkey, fcetin@ohu.edu.tr

Abstract

Understanding how information consumers assess digital trust cues is crucial for any business. The prevalent viewpoint promotes a deliberate trust development approach for professionals in all industries and at all levels of organizations (people use good thinking). In this paper we use a survey to explore an alternative perspective, which holds that information processing of professionals depends both on industries and the organizational level to which they belong. Besides professionals using good thinking (deliberation), there are also professional using gut feeling (intuition) to make decisions. We compare the decision-making differences of managers working in the agriculture/farming and banking/finance industries.

The participants of this research were 628 employees (173 of them working in agriculture/farming, and 255 of them working in the banking/finance industries) from different countries worldwide. We have used the ANOVA test for determining the differences between decision-making styles across industries after homogeneity assumption has been provided. Moreover, we have explored the interactional effects of industry and position on decision-making styles. The results have indicated that employees from agriculture/farming (AF) prefer significantly less rational (Mean AF=2.79, SD=.99; Mean BF=3.12, SD=.75) but more intuitive (Mean AF=2.74, SD=.94; MeanBF=2.58, SD=.78) decision-making styles when compared to employees from banking/finance (BF) industry (F rational= 20.11, p<.01; F intuition= 3.56, p<.05). Top managers in both industries prefer significantly less rational decision-making style when compared to the middle level, first level, contributors, and self-employed groups (F between-subjects= 6.33, p<.01); middle-level managers in both industries prefer significantly less intuitive decision-making style when compared to the top level, first level, contributors, and self-employed groups (F between-subjects= 6.33, p<.01). Furthermore, the interaction effect has presented those top managers from agriculture/farming prefer a significantly more intuitive decision-making style when compared to other groups and industries (F between-subjects= 2.49, p<.05). All these results have indicated that decision-making styles differ in these two industries and the degree of management positions.

The implications of the findings highlight that digital trust cues are evaluated depending on the preferred decision-making style and hierarchical position in the organization. Such disparities in assessing information and taking decisions cast doubt on the global applicability of digital trust systems. The ability of information system applications to adapt to the decision styles of their users will be important to the success of knowledge management and information systems in many industries and levels of the organization. Professionals in banking and well as in farming each have a distinctive decision-making style. We claim that these differences between industries in prevailing decision styles need to be recognized, and the reasons underlying them understood, in order to develop and deploy effective digital trust systems.

Cross-cultural comparison of intuition and deliberation in decision-making

Frithiof Svenson, UiT The Arctic University of Norway, Norway f.svenson@hs-osnabrueck.de
Natalia Ermasova, Governors State University, USA, ermasova@gmail.com
Markus Launer, Ostfalia University, Germany, m-a.launer@ostfalia.de
Fatih Çetin, Niğde Ömer Halisdemir University, Turkey, fcetin@ohu.edu.tr

Abstract

Internationalization necessitates an understanding of how managers make decisions in different regions of the world, as well as how computer-based information systems can aid decision-making. Besides using good thinking (deliberation), there is increased attention to people using gut feeling (intuition) to make decisions. We compare the decision-making differences of managers working in different industries in China, Philippines, Taiwan, and the USA. The participants of this research were 1233 employees from four different countries. We have used the ANOVA test for determining the differences between decision-making styles across industries after homogeneity assumption has been provided.

The following hypotheses were formulated based on the cross-cultural business literature:

- H1: Individuals in countries with collective orientation national culture (Taiwan and China) have a higher mean for rational decision making than countries with individual-oriented culture (the USA and Philippines).
- H2: Individuals in countries with collective orientation economic ideology (Philippines and China) have a higher mean for intuitive decision making than countries with individual orientation economic ideology culture (the USA and Taiwan).
- H3: Individuals in countries with higher Individualism score (the USA and Philippines) will have higher scores of Rational thinking public sector than countries with lower Individualism score (China and Taiwan).
- H4: Individuals in Eastern country (the USA) will have higher scores of Rational thinking in public and private sector than Western countries (China, Philippines and Taiwan).
- H5: Individuals in Eastern country (the USA) will have higher scores of Intuitive thinking in the private sector than in Western countries (China, Philippines, and Taiwan).
- H6: Eastern countries with Guanxi (China, Philippines, and Taiwan) have lower scores for Intuitive thinking styles than the Western countries (the USA).

The findings indicate that national culture is significant for decision-making styles. The existence of international disparities in assessing and conceiving decisions casts questions on whether information systems generally have global applicability. The ability of IT applications to adapt to the decision styles of their users will be important to the success of knowledge management and information systems in many countries and cultures. Professionals in the public and the private sector each have a distinctive decision-making style in different cultures. We claim that these differences between cultures in prevailing decision styles need to be recognized, and the reasons underlying them understood, in order to develop and deploy effective information systems across sectors.

The Internet use by students: A research results

Agnieszka Tul- Krzyszczuk, Warsaw University of Life Sciences, Institute of Management, Poland,
agnieszka_tul_krzyszczuk@sggw.edu.pl
Barbara Wyrzykowska, Warsaw University of Life Sciences, Institute of Management, Poland,
barbara_wyrzykowska@sggw.edu.pl
Jerzy Gębski, Warsaw University of Life Sciences, Institute of Human Nutrition Sciences, Poland,
jerzy_gebski@sggw.edu.pl

Abstract
With the spread of the Internet we are witnessing a rapid development of information and communication technologies (ICT) and the information society in Poland. The term ICT is understood as information processing technologies used in the construction of computers and media, which can transmit information over almost any distance in digital form without distortion. The Internet gives seemingly unlimited and almost instant access to the necessary information and services, which is an unquestionable achievement of our civilization, radically accelerating the process of acquiring, collecting and verifying knowledge. Progressing digitalization stimulates changes in many areas of the economy, including the service sector and customer behavioral changes. These processes are compounded by the growing popularity of social media coupled with the proliferation of smartphones (Carr, 2011). Especially during the COVID-19 pandemic, has been observed a significant increase in interest in ICT solutions, both in Poland and other countries. The aim of the study was to answer the question how often and which services offered by the Internet are most commonly used by students? The online survey (Forms application, Microsoft 365) was used to collect data. The selection of the research sample was purposeful. The study involved 312 first-year students at WULS-SGGW in Warsaw who had the student status, had access to the internet and used the internet. Based on factors analysis taking into account students' online behavior and the tools used for this purpose, factors were extracted and used to define homogeneous clusters. From the point of view of service providers, the analysis of market segments is one of the most important factors for identifying the target market for products or services. The segmentation analysis is also very important for creating a concept of how the business will operate in the future, thus ensuring the highest profitability. However, while in the literature you can find a lot of information on the widely understood characteristics of the e-purchaser of tangible products, the e-purchaser of services is little known. From the conducted survey emerges a picture of students who very actively and extensively use the Internet in their daily lives. It can be concluded that the surveyed students belong to the new generation of digital natives, i.e. they are people born and raised in the environment of digital technology (computers, Internet, mobile phones). They use the Internet several times a day, both for entertainment (listening to music, downloading games, and films) and for communication purposes (using social networking sites, using e-mail). However, they use the Internet less frequently for practical purposes (using electronic banking, searching for information about goods or services, searching for health-related information, purchasing goods and services, checking weather services, maps, currency exchange rates, etc.) or educational purposes (e-learning, searching for information from newspapers or magazines online, public offices and institutions).

Keywords: Internet, online services, students, segmentation

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Women's Empowerment Pioneered by Women-led Businesses: A South-East Asian Perspective on Feminist Economics

Jessica Espinoza, University of Siegen, Germany, essica.espinoza.t@gmail.com
Salome Svanadze, Ilia State University, Georgia, salome.svanadze.1@iliauni.edu.ge

Abstract

Anchored in the gender and development (GAD) and women's entrepreneurship literature, our study investigates the transformative potential of women-led business innovation and gender lens investing in the Southeast Asian context. We chose a case study approach focusing on five women-led, growth-oriented, local small and medium-sized enterprises (SMEs) across different economic sectors who have received investments from a gender lens investment fund. These include an innovative hospital, an accounting firm, an organic food company, a mineral cosmetics retailer, and an artisanal bread and pastries producer. Drawing on Naila Kabeer's (1999, 2001) conceptualization of women's economic empowerment as well as the four dimensions of power framework proposed by Paola Pereznieto and Georgia Taylor (2014), we explore how gender-transformative change takes place and develops at the level of individual women-led SMEs as well as the role intentionality of investors plays in promoting gender equality outcomes. We further examine how this gender-transformative change affects and is affected by the broader context of entrepreneurship. To this end, we build on the "5M" gender-aware framework for women's entrepreneurship proposed by Candida Brush, Anne de Bruin and Friederike Welter (2009), which draws on institutional theory and adds "motherhood" and "meso/macro environment" to the classical "3M" framework of "market", "money", and "management". We find that women-led SMEs can play a crucial role in promoting women's empowerment and contribute to broader gender-transformative change. Our case studies reveal how women entrepreneurs create innovative and gender-transformative businesses where pay equity, gender-diverse leadership and feminist values are at the core of corporate culture. We investigate challenges and opportunities at the intersection of business innovation and societal challenges including gender-based violence, social norms and unpaid care work. This is the first study of its kind providing a rich analysis of how women entrepreneurs build companies from a feminist perspective and the role of gender lens investing to grow such companies with the dual goal of business success and gender equality outcomes. With this paper, we aim to contribute to theory building in the field of entrepreneurship from a feminist perspective as well as to inform emerging gender lens investing practice.

Keywords: women entrepreneurs, social norms, pay equity, gender lens investing, dimensions of power

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Exploring ICT adoption for sustainability: A replication study
Ewa Ziemba, University of Economics in Katowice, Poland

Abstract

Information-communication technologies (ICT) can play a significant role in bridging economic and social divide, and achieving economic, social, and human development (Cortés & Navarro, 2011; Niebel, 2018). ICT can support economic growth and innovation creations, enhance the decision-making quality, increase demand and reduce costs, boost employment and regional development, as well as alleviate poverty (Jurado-González & Gómez-Barroso, 2016). ICT is also anticipated to have a substantial impact on education and healthcare opportunities, cultural creativity, social integration of individuals with diverse cultural backgrounds, transparency and responsiveness of government units, democratic participation of citizens, human progress, social welfare, and well-being (Palvia, Baqir, & Nemati, 2018). Generally, all these possibilities make ICT an enabler of sustainability, i.e., ecological sustainability, economic sustainability, socio-cultural sustainability, and political sustainability (Miller, & Atkinson, 2014; Missimer, Robèrt, & Broman, 2017; Ziemba, 2013). This study replicates a previous study that examined how ICT adoption in enterprises contributes to sustainability. The theoretical model of ICT adoption contribution to sustainability developed in the previous study (Ziemba, 2019) has been adapted to the changing business and technological environment. The survey questionnaires were used, and data collected from 390 enterprises in Poland were analyzed to understand the correlations between ICT adoption and sustainability.

The findings of the present study have ensured the validity and the generalizability of the previous study results (Ziemba, 2019). Furthermore, the results reiterated the efficacy of the model for the contribution of ICT adoption to sustainability. The model includes two main constructs, i.e., ICT adoption construct composed of ICT outlay, ICT culture, ICT management, ICT quality, and sustainability construct comprised of ecological, economic, socio-cultural, and political sustainability. The construct of ICT adoption is shaped by 32 observed variables, whereas the sustainability construct is described by 20 observed variables. This study advances research and practice by developing and verifying the model to depict the dimensions of ICT adoption and their impact on different types of sustainability. Enterprises may find the results appealing and useful in enhancing the adoption of ICT, experiencing the full potential of ICT, and deriving various benefits from the ICT adoption. The findings can help not only enterprises but also governments develop sound ICT adoption plans for implementing the 2030 Agenda for Sustainable Development. The research sample included enterprises in Poland only. Researchers may use the developed model, approach, and methodology to do similar analyses with different sample groups in other countries. The model may be adapted for examining ICT adoption and sustainability in households and governments.

Keywords: sustainability, ICT adoption, sustainable development, enterprises, survey data, Poland

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Big data analytics quality and firm performance

Jeretta Horn Nord, Oklahoma State University, USA, jeretta.nord@okstate.edu
Alex Koohang, Middle Georgia State University, USA, alex.koohang@mga.edu
Angelica Marotta, MIT Sloan School of Management, USA, amarotta@mit.edu

Abstract

In this presentation, we propose a research model with eight constructs – leadership, BDA talent quality, BDA security quality, BDA privacy quality, BDA innovation, financial performance, market performance, and customer satisfaction. We then state and develop seven hypotheses to see 1) whether leadership affects BDA talent quality, 2) whether BDA talent quality affects BDA security quality, 3) whether BDA talent quality affects BDA privacy quality, 4) whether BDA talent quality affects Innovation, 5) whether innovation affects financial performance, 6) whether innovation affects market performance, and 7) whether innovation affects customer satisfaction. Collected data form from owner/executive/c-level, senior management, middle management, intermediate, and entry-level from various organizations in the USA were analyzed to test the hypotheses via path modeling using SmartPLS 3.0 software. We aim to report the preliminary results.

Keywords: leadership, BDA talent quality, BDA security quality, BDA privacy quality, BDA innovation, firm performance

Stress induced innovation – A study of overload and norm deviation for their effects on innovation

Fatih Çetin, Niğde Ömer Halisdemir University, Turkey, fcetin@ohu.edu.tr
Kuanchin Chen, Western Michigan University, US, kc.chen@wmich.edu
İrge Şener, Çankaya University, Turkey, irge@cankaya.edu.tr
Joanna Paliszkiewicz, Warsaw University of Life Sciences, joanna_paliszkiewicz@sggw.edu.pl

Abstract

Associated with several contextual or individual factors, there are inconsistent findings concerning the form of relationship between digital technology-related stressors (such as overload) and individual innovation in the organizational literature (Ren & Zhang, 2015; Karimikia, Singh, & Joseph, 2020). Digital technology-related overload in the workplace indicates an individual's subjective perception and evaluation of fulfilment of responsibilities coming from people, data, or systems that are beyond the person's capability (Langer and Saegert, 1977). Although these stressful situations predominantly associated with negative attitudinal and behavioral outcomes (Zhang et al., 2016; Yin et al., 2018; Salo et al., 2019), there can be also positive aspects based on the individual subjective perceptions and contextual features. According to coping theory (Lazarus and Folkman, 1984) individual perception of control over any stressor (i.e. technology-related overload) may lead to positive stress responses as a challenging opportunity to improve job performance (Beaudry & Pinsonneault, 2005). This response consists of two related cognitive and behavioral processes: the evaluation of the potential consequences of an event (appraisal) and the evaluation of the different actions to deal with the situation at hand (coping efforts). Within this framework, individuals may perceive digital technology-related overload as a challenging situation for innovation in the workplace. Because some studies have presented that the effects of stressors on creativity depend on the type of stress and how stress develops (Byron, Khazanchi, & Nazarian, 2010). Accordingly, in the challenging situations, individuals may perceive either positive or negative consequences of the situations and evaluate the coping options available to them. Then they specify the level of control they use and focus on efforts to deal with the situation by changing the environment (i.e. shifting barriers, pressures, procedures) or changing one's self (i.e. developing new behaviors, shifting aspirations, learning new skills). Therefore, individuals who desire and expect positive consequences in the workplace such as being innovative or successful may prefer a problem-solving approach in overload situations. These positive expectations may also motivate people to break possible social norms which prevent them to reach their desired personal outcomes. This situation can be explained by individual actions through exhibiting coping efforts to deal with the hampering social context. Even prior studies have associated norm deviance with harmful, dysfunctional, or counterproductive behaviors, the concept of positive deviance involves a departure from the norms of a referent group for the individual or organizational benefits (Spreitzer, & Sonenshein, 2004). Based on the explanations above the purpose of this paper is to study how overload inspires one to come out of his or her comfort zone to eventually actualize one's intention to innovate. Through this process of overload induced innovation we gradually narrow down the effects of overload to willingness to change, and from that to intention to innovate and to the actual innovation behavior. By doing so, our findings will clearly delineate two stages of the thought process for stress induced innovation, one that concerns about an evaluation of the consequence of change (norm deviation) by referencing one's relationship with others, and the other one that concerns about how such evaluation contributes to innovation intention. Our work adds new lights into efficacy-based coping theories by stressing the importance of how innovation decisions also require an evaluation of one's behavior in relation to others before an innovation will take place. The online questionnaire consisted of validated measurement instruments from literature was used to collect the data from employees working in the technopark organizations. The aim is to collect a total of 350 data for exploring the relations among variables by using the SmartPLS statistical program. The data gathering process is going on.

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An investigation of the relevancy of UTAUT2 in the context of online dating APP use among young adults in Taiwan

Celeste See-Pui Ng, Yuan Ze University, Taiwan, celeste@saturn.yzu.edu.tw
Michelle Pricillia Huwae, Yuan Ze University, Taiwan, michellehuwae42@gmail.com

Purpose

The event of COVID-19 pandemic in the past two years had somehow transformed how people find, meet, interact and maintain relationship with their potential short-term romantic and/or long-term committed partners. Driven by the movement restriction order and social-distancing measures issued by the government, many people are forced to stay at home and/or work from home. This had created a lot of barriers to social interactions and loneliness to many young adults. To counteract this negative effect, many young adults started to use various online dating apps; and online dating apps started to gain more popularity in our current society. In light of this new phenomenon in dating, this study intended to examine the factors affecting the use of online dating app. In order to achieve this, this study adopted the unified theory of acceptance and use of technology (UTAUT2), using six constructs and two moderator effects. Specifically, the study seeks to discover whether performance expectancy, effort expectancy, social influence, hedonic motivation, price value, and habit influence users' decision to accept and use a dating app. This study is relevant to the researchers and practitioners as no prior study has examined the phenomenon of online dating apps using UTAUT2; this allows us to provide insights from a completely new angle, based on the model and helpful implications for future research. The factors that influence users to use dating apps have been studied in several studies, including trust [1] [2], perceived norm [1], and hedonic motivation [1] [2] [3]; however, no comprehensive study has been conducted on user acceptance and participation of online dating app, using the UTAUT2. A better understanding of user participation in online dating app is considered necessary [1] to determine the success of online dating apps, and to benefit online dating app developers and providers to improve their services to attract and provide better services to more users.

The basis of the study

Online survey, using Google Form and the service of drsurveydone.com [4], was conducted in Taiwan. A total of 437 valid respondents were obtained in this study. This data was analysed using SmartPLS 3 [5]. Among the total respondents, 60.6% are female, while 39.4% are male. Most of the respondents (45.8%) in this study were aged below 20 years old, followed by 42.6% of the respondents with the age range of 25-40, and 11.7% over 40 years old. About 77.3% of the respondents have prior experience with online dating app. Fifty-one percent of them use at least one online dating app; 23.6% of them use at least two online dating apps. Findings from our data analysis showed that both hedonic motivation, and habit significantly affect the user intentions to use online dating apps. In contrast, other factors such as performance expectancy, effort expectancy, social influence, and price value provided no supporting evidence for the hypotheses tested in this study. Furthermore, multi-group analyses were also conducted to determine if the moderator variables (i.e., gender and experience) had the potential to influence the model's relationships [6]. We found that most of the moderator effect of gender were insignificant except for the relationship between habit and behavioural intention. Similarly, most of the moderator effect of experience were insignificant except for the relationship between habit and the number of apps used.

Implications

Habit and hedonic motivation were found to be important factors in explaining online dating app use; thus, app developers shall plan for more customer loyalty programs for their apps so that their users will get entertained, committed, and attached to their apps. The gender moderator was largely insignificant for most relationships. This implied that gender is less relevant as a differentiating factor. This could be due to gender equality access to IT technology, in our society and education settings since the past few decades. Similarly, experience as a moderator was also found insignificant for most relationships, which make the experience less important as a differentiating factor. This could be attributed to IT technologies pervasiveness, and users' familiarity with IT technologies usage in our modern society. Lastly, habit was found to influence the number of apps used, which was in turn found to influence the usage behaviour–this could imply that the more habits were formed from the use of the online dating app, the more dating apps the users were using.

Conclusions

Our findings in this study suggested that many of the UTAUT2 constructs tested were not found to be significant based our sample data. This indicated that the relevancy and validity of UTAUT2 in explaining the behavioral intention in our current settings of young adults in Taiwan, in the context of online dating app, is not evident. This suggests that more explorative studies are required in the future studies, to determine the dominant factors affecting the use of online dating app. On the hand, it is also important to investigate whether the introvert and conservative culture of the Taiwanese plays a role in undermining the significance of the factors in the UTAUT2. Thus, more cross-cultural studies are required in the future to confirm the findings here.

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Environmentally and socially sustainable behaviour determined by changes in the information environment

Agnieszka Werenowska, Warsaw University of Life Science, Agnieszka_werenowska@sggw.edu.pl

Abstract

Supporting and promoting environmentally and socially sustainable behaviours is one of the most important topics undertaken today by scientists and politicians. In the presented research, environmentally and socially sustainable behaviours and the role of mobile applications in their creation were identified among young representatives of generation Z. The research process was conducted in 2021. The main research method was a diagnostic survey among representatives of generation Z. Analysing the results of the research, four types of factors that actively influenced the analysed behaviours were indicated. The importance of mobile applications in the implementation and promotion of environmentally and socially sustainable behaviours was also highlighted. The analysis of research conducted to date in this area has led the authors to propose a model of socially and environmentally sustainable behaviours stimulated by mobile applications

The usage of mobile technologies in foodservices in a crisis situation – A case from Poland

Agnieszka Tul- Krzyszczuk, Warsaw University of Life Sciences, Institute of Management, Poland,
agnieszka_tul_krzyszczuk@sggw.edu.pl
Barbara Wyrzykowska, Warsaw University of Life Sciences, Institute of Management, Poland
barbara_wyrzykowska@sggw.edu.pl
Grzegorz Forysiński, POSbistro, Krakow, Poland, grzesiek@posbistro.com

Abstract

Mobile technologies are one of the key characteristics of the ongoing digitalisation process, as they are becoming ubiquitous around the world. Digital solutions are gaining ground faster. Banking and catering companies have accelerated the digitalisation of their services (Santander Bank Polska, 2021). The technological innovations and changing consumer preferences are also changing the way we use money (Bilotta N., Botti F. (eds), p. 19). The mobile technologies also play an increasingly important role in the economic and social life. They facilitate access to knowledge and enable new business models. The ability to simply connect users (e.g., suppliers and customers), regardless of their location, allows many companies to function that would not be able to reach customers in the analogue world (Digital Centre, 2021). Despite the growing importance of digital technologies in today's economy, measuring platform activity in official statistics is still insufficient. Platforms are adept at collecting and using large amounts of data about users, customers, and service providers. However, they often refuse to make their data available to independent researchers, making it difficult to publicly understand their performance and impact on the economy and society (OECD, 2021, p.6).

The primary objective of this study was to explore the users' behaviour of selected mobile applications used for the management of the foodservice establishment, including online ordering food and payments in Poland. The analysis was based on sales data provided by a provider of mobile technology aimed at foodservice companies. The study shows a change in the mechanism of customer behaviour in this market especially in a crisis situation, e.g., under the influence of the covid pandemic, economic crisis or finally in the face of the war in Ukraine. There have been relatively few attempts in the literature to combine research findings, i.e., focused on practical applications of mobile devices in the context of mobile e-commerce or mobile e-banking (Chmielarz, 2021, p. 2). There is usually no opinion on the mechanisms of using m-commerce or m-banking, especially in the food service market and in the face of crisis. This article aims to fill this gap.

The theoretical and practical implications of the findings are presented. The growing trend of innovative digital solutions facilitates communication and influences relevant consumer behaviour, also in the food service market. The development of new digital technologies contributes to the emergence of innovative business models, e.g., virtual catering establishments (dark kitches) or the introduction of new payment models, which are transforming the e-commers market worldwide. This is due to, among other things, the customer expectations and experiences, competitive pressure from FinTech providers. The globalisation and digitalisation of commerce, changing regulatory requirements and trends, savings and the desire to reduce and ultimately replace cash and cheques also have no small impact. The study can be seen as a preparatory stage for in-depth and international research on the use of these technologies. It should be noted that the research carried out in this way will make it possible to predict future trends related to the use of modern mobile technologies during the crisis, also in other areas of economic life.

Keywords: mobile technology, m-commerce, mobile payment, m-banking, foodservice, crisis, users' behaviour

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Purchasing behavior of seniors on the functional foods market
Anna Jasiulewicz, Warsaw University of Life Sciences, Institute of Management,
anna_jasiulewicz@sggw.edu.pl

The functional foods market is developing dynamically and belongs to one of the innovative, fastest-growing sectors of the food industry, both in the country and in the world. The demand for functional foods is systematically growing. The interest in pro-health products results from the increased awareness of the relationship between nutrition and health, the increase in the incidence of civilization diseases, rising costs of health care, aging of the society and the desire to improve quality of life. The aging of the society causes an increase in the segment of seniors interested in product innovations, which should have consequences in future designed marketing innovations, and above all in the marketing communication of enterprises.

The aim of the study is to present the issues of purchasing behavior of seniors on the functional foods market, taking into account nutritional neophilia and consumer innovation as features that may determine the choice of such food. The following research hypothesis was put forward and verified on the basis of own research: functional food is eagerly purchased, first of all, by innovative seniors that demonstrate nutritional neophilia.

In the first stage, the literature was reviewed using the following databases: Web of Science, Scopus, ProQuest, Google Scholar. The review covered such issues as: functional foods concepts, the impact of consumer innovation as well as nutritional neophilia and neophobia on purchasing decisions, and seniors' attitudes towards pro-health food. Using keywords, over 65 items were initially collected, which were then subjected to a selection process. Finally, 44 publications: books and scientific papers were analyzed. In the next stage, the own study was conducted using the CAWI method. Answers to the questions were collected in December 2020. Intentional sampling was used: the questionnaire was addressed to seniors over 60 years of age. Seventy respondents took part in the survey.

The results showed that although seniors have a low knowledge of the concept of functional food, they have awareness of its impact on the body. Pro-health values are an increasingly frequent motive for choosing this type of food, thanks to which seniors can eat in healthy and rational way. Food not only satisfies hunger, but also brings health benefits, important in times of civilization diseases and an aging society.

Seniors choose large-format stores and marketplaces, and the factor determining the purchase, in addition to pro-health values, is primarily the price and the opinion of specialists. Seniors appreciate simple, well-known and healthy products, therefore the marketplace can be a place where they buy fresh and unprocessed foods, which are naturally healthy, while in supermarkets they can choose processed products, but also in line with the trend of functionality and a healthy lifestyle. Seniors are interested in relatively cheap and recommended products with proven health-promoting properties. Therefore, the distribution activities and marketing communication of enterprises offering functional foods should take into account the places of purchase preferred by seniors and the expected features of such food.

According to seniors, the offer of pro-health products is sufficient, but there is too little information about it. It has been observed that the consumer's needs are targeted at specific nutritional information, which is to stimulate the buyer in the decision-making process. The information provided to the buyer builds the image of the product and fosters the creation of a bond with the consumer, however, this information must be objective and reliable. Therefore, the information flow should be made more attractive and improved with the use of various reliable sources in order to increase knowledge and thus acceptance of functional products.

The hypothesis that functional food is purchased primarily by senior innovators demonstrating nutritional neophilia has not been confirmed. Seniors prefer a variety of products, look for new products, and functional foods is an opportunity to satisfy curiosity, but also to try new and healthy food. However, no correlation is

observed between the neophilic nutritional attitudes and innovativeness of the respondents and the greater frequency of purchasing functional products.

The presented theoretical considerations and the results of own research are subject to many limitations. Only selected databases were used to review the literature. The results of own research are not representative and should be treated with great caution. The analyzed research sample was small due to the difficulties in reaching the target group of elderly people, which were caused by the need to conduct the study using the online survey tool in connection with the Covid-19 pandemic that existed at that time. Seniors are a group that uses the Internet to a low degree, which meant difficulties in reaching this segment. The undertaken research problem still leaves many questions worth looking for the answers in the future. There are still few Polish and foreign publications in which considerations about the behavior of seniors on the functional foods market were carried out. Therefore, it is advisable to conduct further, in-depth quantitative research on a representative sample and qualitative research in the area of this topic, as the segment of the elderly is becoming more and more important for producers and service providers and broadly understood marketing, as well as due to the development of perspectives for functional foods meeting nutritional and hedonistic seniors needs. Further research directions could include, inter alia, issues such as recognizing the role of various channels and methods of marketing communication in the choices of functional foods by older people or the influence of seniors' lifestyle on the choice of such food.

Impact of digitalization on the sustainability of supply chain: A comprehensive literature review

Sebastian Jarzębowski, Kozminski University, Poland, sjarzebowski@kozminski.edu.pl
Mykola Melnyk, Kozminski University, Poland, 14-ds@kozminski.edu.pl

Abstract

Digitalization has changed every aspect of our lives, including all kinds of businesses. Like other business sectors, digitalization has also transformed the supply chain sector and transformed it into Digital Supply chains (DSC). This study aims to highlight the importance and application of DSC in the current era. For this purpose, this research article has evaluated the impact of digitalization by con-ducting a literature review from published research articles and books. Online database from the past six years was researched using Elsevier's Scopus, Science Direct (Elsevier), Thomson Reuter's Web of Science, ProQuest (ABI/INFORM), and IEEE Xplore. A database of different keywords was used to search the books, journals and conference papers concerning digital technologies and supply chain management. This study found that the Suppliers and companies involved in the supply chain do share data with each other, and DSC has helped many firms and individuals generate and analyze the data. Digitalization has made supply chain management more efficient with a quick production cycle and lowers costs of operations. Moreover, this research article has also provided an opportunity for future research.

Keywords: Supply chain management, Supply chain digitization, Digital Supply Chain, Digitalization, Literature Review