Vol 11, Issue 2, (2021) E-ISSN: 2222-6990

Digital Revolution & Digital Culture, a Critical Review gap on Receptivity and Challenges of Digitalization on Employee Engagement, the Case of PHEI's in Malaysia

Assoc. Prof. Dr Tan Seng Teck, Christina Rathy A/P Anthony Samy

Faculty of Business & Communication, INTI University, Nilai, School of Business & Communication, INTI International College Subang Jaya Email: sengteck.tan@newinti.edu.my, christina.rathy@newinti.edu.my

To Link this Article: http://dx.doi.org/10.6007/IJARBSS/v11-i2/8438 DOI:10.6007/IJARBSS/v11-i2/8823

Published Date: 25 February 2021

Abstract

Digitalization brings about a vastly different cultural, psychological and anthropological ambience, and it is precisely this psychological change in digitalization and its digital culture across the more 'sentimental' industries. "Cultural gatekeepers" have significantly kept the encroachment of digitalization and its digital culture at bay within the art community. The culture resembles the gatekeepers innately limit individuality and manage to smooth out the varieties in cultures, that's conundrum to culture barriers that involve the age and gender. It is argued perhaps a similar trend is expected in education sector as an aesthetic work of art. The education sector particularly the Malaysian education sector has lacked behind employee engagement relatively low compared to PHEIs, the cultural barriers acceptance digitalization is lacking, there is scarcity of literatures and or researches that examine and measure the impact of digitalization and digital culture on employee's engagement within the PHEI. Employee engagement has transpired in the organizational concept in recent years. It has developed one of the most prominent in the human resource practitioners however there are no research found predominantly on digitalization and digital culture on EE. This study aims to contribute the on-going debate on the impact of digitalization and digital culture on EE in PHEIs in the private sector. This research will scrutinize the gatekeeper as the cultural barriers where the author ascertains that, the age and gender are the submissive factor towards digitalization in EE that compromises the social media and gamification as a tool to enhance EE in PHEI. Conversely, this study partakes a mixed method. Therefore, the chosen respondents for this study are academicians from the private universities in Malaysia which are not being explored widely in Malaysia context.

Keywords: Digitalization, Digital Culture, Employee Engagement, PHEI.

Vol. 11, No. 2, 2021, E-ISSN: 2222-6990 © 2021

Introduction

Humanity has always quest for technological development (Johansson, 2018). However, technological development has progressed with a combination of evolution and occasional revolutions, each bearing a significantly distinct impact on humanity (Brown, et, al, 1996). Technology and humanity has largely coexisted in "unison", improving the quality of life, social interactions and usher economic dynamism (Turkle, 2011). However, the term 'technological development' is a misnomer. It at best resembles a broad and undefined expression because although humanity experienced consistent technological advancements, each phrase of the development encompasses a distinct ideal and relative impact. Usurping a general term in a thesis is perilous as it invites an 'open' and unlimited spectrum of discussions, making it both impossible and futile to engender a fertile research. Therefore, in order to refine this term, the author briefly exposes the different phraseological stages of technological development, paying particular attention to the term 'digital revolution'.

Several sectors are enabled through digital systems (Schneider et. al., 2009) for instance the traffic control systems, medical and other equipment, elevators while sectors in the mass media, television, recorded music, film, progressively dispersed digitally. This means it is the inauguration to converge with digital forms, such as Internet, the World Wide Web, and video games, to fabricate a seamless digital landscape (Gere, 2002). This is where the acme of Industry 4.0 escalates (Schwab, 2016). According to the Internet world statistics (as off 31st March 2020) there are almost four billion and a half (4 574 150 134). From the same source, the usage of internet in the world today is about 58.7% from the entire world population and this is viewed regionally as visible contact around the world. The ultimate distribution rates are in North America (94.6%), Australia and Oceania (67.4%), followed by Europe (87.2%), the Middle East (70.2%), Asia (54.9%) and Africa (39.3%). The statistical evidence, therefore, is clear however, Asia countries (inclusive of Malaysia) are way behind to be compared with North America, Australia and Oceania, Europe and the Middle East¹.

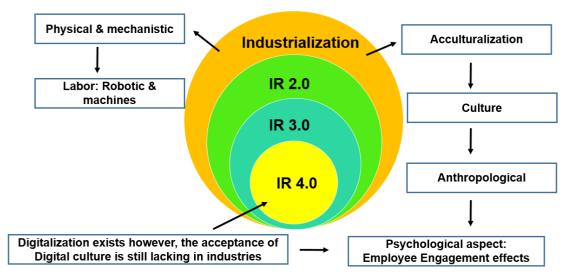


Diagram 1: Revolution of Digitalization and impact on Culture

Distinct from largely tangible revolution at industrialization stage, digitalization changes the psychological and anthropological (**Diagram 1**) structure of society and business.

-

¹ https://www.internetworldstats.com/stats.htm (accessed date: 29th May 2020)

Vol. 11, No. 2, 2021, E-ISSN: 2222-6990 © 2021

Digitalization brings about a vastly different cultural, psychological and anthropological ambience, and it is precisely this psychological change in digitalization that met fierce resistance (Abelson et, al., 2008). For example, the community arts have a history of resistance towards digitalization and its culture. Termed as the ""dialogical art" or "community-engaged art", it is deemed that digitalization and its culture has defied hegemonic artistic values through facilitating mass creative production, contesting notions of artistic processes, and the role of the artist in the culture (Causer, et, al. 2014).

Table 1 below clearly shows that other industries that falls under the category of professional services at 81% (Law, engineering, and consulting services) employees engaged however, there is no evidence indicating in Education industries despite education industries are categorized as the professional service too (Times higher education, 2020), the Finance service at 80.7%, Technology and Healthcare 79% respectively, the nonprofit 78%, Business services, Utilities and Restaurants at 77% and lastly the manufacturing industries at 76.2%.

Table 1
Employee Engagement (EE) Index

No.	Industries	Percentage
1	Professional service	81.0%
2	Finance	80.7%
3	Technology	79.5%
4	Healthcare	79.1%
5	Non Profit	78%
6	Business Services	77.8%
7	Utility	77.4%
8	Restaurant/ Hospitality	77.3%
9	Manufacturing	76.2%

Source: DecisionWise (2017)

Background of the Study

Digital technology as an instrument for private higher education institutions (PHEIs) in retorting to the revolution of digitalization on how PHEIs improves the use of digital technology in the PHEIs (Times Higher Education, 2019). Digital technologies and online resources now extend across all fields of teaching and learning (Kane et al, 2017). They are changing PHEIs and promoting innovation in higher education pedagogy and teacher training (European Commission, 2014). Rapid technological development is transforming Higher Education Institutions, beginning a new era through which it helps students achieve high learning outcomes by using these technologies in the teaching process (EC, 2017).

According to Insider Higher Education article (2019), academicians are known as the "change agent", however, in PHEIs EE is lacking (Anitha, 2014; Rodriguez & Shaw, 2014). This

because, in PHEI, most academicians are absorbed in research, teaching, scholarly and creative activities, student related activities thus engagement among colleagues is deficient (Cano & Whitfield, 2019). In developing region of Asia Pacific, the Malaysian Higher Education,

Vol. 11, No. 2, 2021, E-ISSN: 2222-6990 © 2021

plays an important role in supported more than 35,000 academic faculties (Wan et al. 2015) in their career development. However, in the recent restructuring initiated by the "Malaysian Education Blueprint 2015-2025" scheme, the output of Malaysia universities has been expeditiously growing between the year 2012 to 2016 (Ministry of Higher Education, 2012). The progression shows in the output of scholarly by 7.2% that marked the highest growth rates compared to other research countries for instance, in Australia at 4.6%, China at 4.2%, Singapore at 3.6% (Elsevier, 2018). Looking at this growth, it is an academic achievement for Malaysia Education however researcher has proven that on the other hand, academicians suffer from poor mental health (Mey and Yin, 2015; Ministry of Health, 2016).

To discourse on the mental health challenges, the Malaysian government instigated the National Strategic Mental Health Action Plan, that enhance in increasing approach to the mental health support and awareness (Ministry of Health 2016); however, its definite effects are yet to be seen. An example, during the years of thriving academic development, a university lecturer in Cardiff committed suicide as he was under significant pressure and struggled to complete his grading, assessing, planning for lectures, and responding to emails (BBC, 2019). According to the Internal surveys, seen by BBC Wales, it shows as a third of staff that worked under some unreasonable hours to fulfil PHEI job obligations, thus this had made the University decided to take the welfare of staff immensely seriously (Jones, 2019). In the Malaysia context, the number of Malaysian academicians' anguish from mental illness outspread from 10 to 20% (Hezmi 2018; Ministry of Health, 2016). Undeniably, more than a third of Malaysians who suffered from mental health problems did not ask for support (Chong et al. 2013). One cause for the increased of mental illness is stigma (Ministry of Health, 2016) Stigma and negative mental health attitudes are associated with, and predictors of poor mental health (Kotera et al. 2018a; b; d; e; f). However, to rendezvous these relationships that have not been explored in Malaysian in depth, hence, a study by Bersin (2014) found that Malaysians are dearth in socializing at work, sharing their problem and tend to bottle up their issues within them at work. This has resulted that only 13% of worldwide employees are fully engaged at work. In addition, twice as many are disengaged that this detrimental behavior is splurge to other employees (Bersin, 2014). Further, according to Deloitte 2015 report, the focus of "retention and engagement" have become No. 2 to the business leaders, second after the challenge of building universal leadership (Schwartz et. al. 2014).

Retaining engagement among academician is stressful (Bersin, 2014). This is because it is developed from the intemperance of work. Feeling of anxiety, tension, frustration, and depression occurred (Kyriacou, 2000) and this has formed the academicians as an unpleasant, undesirable and unenthusiastic feeling. Workload stress tenseness the motivation and performance of academicians that badly could affect the learning of students too. Smither & Robbins (2003) stated that heavy work load, student's attitude and low salary affect the academicians' motivation in deleterious manner which in turn affect the overall learning. A motivated academician with composed and balanced expression presents a positive image and tries to create a comfortable working. Finlayson (2003) enhanced that in teaching profession, stress was found to be a major cause of poor health, turnover, absenteeism, and other problems thus it will badly affect the passion and motivations of academicians which affect not only affect PHEI motivational level but also affect PHEI student's motivation and learning. It is influential to exuberant academicians vigorous and motivated as it promotes a direct impact towards students learning hence the engagement level should begin within the

Vol. 11, No. 2, 2021, E-ISSN: 2222-6990 © 2021

colleagues so that the sense of belongings is obtainable the same to the students. The researcher would like to reconnaissance on a different way to scrutinize the engagement level among academicians in PHEI that involves a digitalization environment.

However, to scrutinize engagement level among academicians that evade the gatekeepers from facilitating engaging in a digitalized environment, the acceptance it as a culture among academicians is famished. In this research, the researcher indicates that some of these obstacles academicians must comprehend as there is a need to adapt a digitalized learning environment (Ryan, Carlton & Ali, 2004). In a research by Ross and Seymour (1999), an academician's attitudes towards digitalization were observed. As a result, from the research, most of the academicians attitude were famished and were negatively correlated, predominantly because of demographic factor that is seen as the gatekeeper culture in PHEIs (Haryani & Rose (2009). Further to this, there were another studies by Appana, 2008; Barker, 2003; Mancuso-Murphy, 2007; McIsaac, 2003, a related assumptions on faculty attitudes towards digitalization and digital culture. Academicians who are nurtured for new technology are most likely to embrace it however, the challenges to adopt digitalization in EE are still wanting in PHEI in both public and private sector. In this research, the author will analyze the impact of digitalization and digital culture in EE in PHEI in the private sector.

Problem Statement

World widely, only 13% of employees working for an organization are engaged (Gallup, 2012). In Malaysia, the employees' engagement level in Malaysia lesser than in other countries (Ang, 2020). A study by Aon (2017) trends in the Global Employee Engagement Report, the levels of employee engagement in Malaysia dropped by 2% to 59% compared to the previous report in 2016 previously. These explain that employees in Malaysia are among the least engaged employees in the Asian markets. (HR Asia, 2020; Baker et, al., 2011). It is inevitable that the engagement level in PHEI should endure hence the workforce motivated and productive subsequently with the weak employee engagement can lead to PHEI's downfall (Winns, 2018; Bates, 2004; Richman, 2006).

An analysis was carried by Cornerstone On Demand (2019), although 81% of respondents in favor that faculty and staff have a countless influence towards student success, however an approximately about 47% of higher education do not track or measure employee engagement (Ellucian, 2019). From the same survey, a total of 39% of academicians were not provided with employee engagement opportunities, such as leadership development, recognition programs, or coaching. This has resulted, employee engagement in education is among the least involvement seen in any industry with only 34% of university faculty and staff are engaged (compared to the average of 65% for all other industries (Aon Hewitt, 2019). Employee engagement as being categorized as "engaged" "disengaged" and "actively disengaged" (Bakker, et. al, 2012).

Vol. 11, No. 2, 2021, E-ISSN: 2222-6990 © 2021

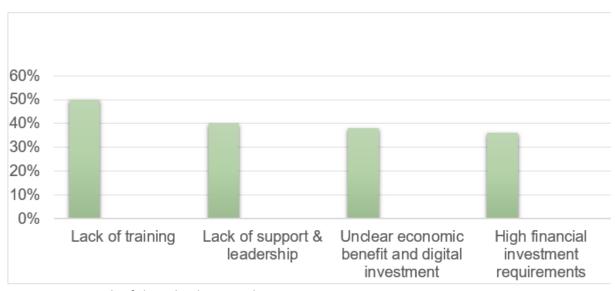


Diagram 2: Lack of digital culture and training in PHEI

Source: Global Industry Survey, (2016)

Diagram 2 illustrate on the few challenges that the PHEI faced in enhancing employee engagement among academicians that 50% of them feels that lack of training in the aspect of digitalization, 40% of PHEI members feel that there is a dearth in the digital operations vision and support from the top management (Global Survey, 2016). Also, 38% shows on unclear economic benefit and digital investments (Global Survey, 2016) while 36% feels there is a need in the high financial investment requirements (Global Survey, 2016). This conclude that an engaged employee are loyal and productive (Bakker et al, 2012), that clearly explains on their passionate towards their work and a feel of connection to the company's mission (Carnevale et al., 2016). Wherelse employees who are not engaged, or "disengaged" are employees who may be productive and satisfied with PHEI jobs, however they are not intellectually or emotionally associated to PHEI work and workplace with no outcome on employee engagement in PHEI (Gallup, 2012; Bakker et al, 2016). The cataclysmic developments in the rapidly changing networked world have forced author to rethink on the gate keeper influence in digital culture. The digital culture barriers are subject to gatekeeping influences on the age factor and gender factor of academicians in accepting digitalization in PHEI where in the digitalization aspect the author will examine on how gamification and social media plays a role to influence digital culture toward EE in PHEI.

Theoretical Framework

In this paper, the researcher elucidates with an example of a study in cultural anthropology. This research examines by using the Kahn's theory into how the gatekeeper cultures influence the digitalization towards employee engagement in PHEIs. Though this theory application as theoretical framework, the author will examine on the variables in depth in literature review.

Vol. 11, No. 2, 2021, E-ISSN: 2222-6990 © 2021

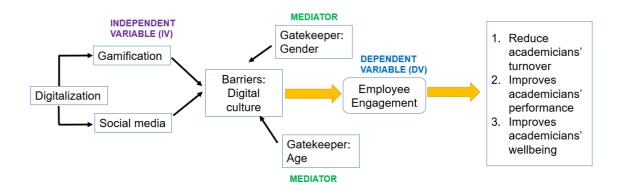


Diagram 3: Theoretical Framework

Diagram 3 clearly illustrates between independent variable (IV), mediator and dependent variable (DV). The IV in this research are gamification and social media however, the mediator for digital culture intervene the relationship between social media and employee engagement. Specifically, gamification and social media are influenced by the digital culture barriers, as the mediator in this research, which are the gender and age factor. The DV in this research is the employee engagement that impact in reducing academicians' turnover, improving academicians' performance and wellbeing. From diagram 3, the framework is to help the author to identify the limits to those generalizations, to specifies which key variables influence a phenomenon of interest in this research. It alerts the researcher to examine how those key variables might differ and allows the reader to conceptualize the study in a broader context.

Need for Study

The main aim is to integrate digital technologies in PHEI sector and to enhance EE among academicians. With this integration, it brings benefits to several stakeholders, as such the HR in PHEIs, the employee which we refer as the academicians in this research, the employer, MQA, PHEI and to the students as well. From the HR perspective, this study will help HR in developing effective ways to enhance employee engagement through automation, artificial intelligence (AI), block chain, machine learning, automated performance management (Writer, 2019). This implementation of this effective ways brings a paradigm shift from interpretation data from manual and excel sheets. This digitalization revamps in HR contributes to positive approaches among academicians towards PHEI organization and motivating the employees towards PHEI job (Herscovitch and Meyer, 2002). The research believe the outcome will provide a path for PHEI and academician to understand the importance of EE and it will be helpful to HR in training and informing academicians on the digital aspect that could improve employee engagement. This serves as a future reference for researches to understand the importance of employee engagement and to have a platform to get more information about the effect of employee engagement through digital influences (Miller, 2015).

Vol. 11, No. 2, 2021, E-ISSN: 2222-6990 © 2021

EE has a significant impact to the employer success (Bates, 2004; Harter et al., 2002). In this research, the significant impact is to PHEI substantially it benefits the institutions and community (Rothbard, 2001). The impact is developed from the talent strategy that drives the engaged academics that contributes to a long lasting effect that benefits the education quality, institutional performance and economy (Shaw, 2005; Lindquist, 2016). This study fills the gap in the body of knowledge which fulfills that gap in the literature where the researcher will have to address the research questions.

PHEI in Malaysia plays a prominence role in contributing to nation's social, economic and political development through a highly skilled and talented workforce. This research can be part of contribution to MQA and PHEI in Malaysia where this thesis can be conceptualized as the Malaysia Education Blueprint which can outlines on digitalization and employee engagement among academicians in PHEIs. In PHEI, among the many procedures and initiatives, the framing of a globally digitalization has been seen as an important key initiative in improving learning, skills and capabilities in supporting national policy and development goals.

Lastly, this thesis benefits to the students in PHEI. Students are needed to articulate or visualize how PHEI optimal of education and careers today may be impacted by digital change in future. Through this research, students may feel prepared to join the IR4.0 workforce; and PHEIs may also prepare students for the workplace therefore, students must gain exposure to IR4.0 and may be too reliant on only PHEI academic programs and academicians to make them job-ready.

Objectives

This thesis aims to:

RO1: To evaluate on the social media factors towards employee engagement in the PHEI.

RO2: To evaluate on the gamification factors towards employee engagement in the PHEI.

RO3: To evaluate the mediating effect of digital culture (age and gender) between social media and employee engagement.

RO4: To evaluate on the mediating effect of digital culture (age and gender) between gamification and employee engagement.

Research Gaps

Firstly, many PHEIs in Malaysia have specific digital plans and strategies (Imam & Shafique, 2014), yet implementation of these up to the highest standards is something many PHEIs is lacking (Khalid et, al., 2018), because Malaysia practices very high power distance (Hofstede & Bond, 1988) within each culture, people of different personalities, backgrounds, and experiences (Hwang, 1989) and power distance is conundrum where people accept a hierarchical order (Dato/Tan Sri/etc) which is seen as reflecting inherent inequalities, centralization is popular, subordinates expect to practice on what to be done while the ideal boss is a benign autocrat, however in PHEI, US (Yap et al., 2005) the relationship between the top level and employees lack of engagement conversely, shows as a low power distance. This is because, there is no sign of hierarchy (Wurtz, 2005) and an equal level shown between PHEI employers and employees therefore PHEI engagement level is very much better than Malaysia. This is because the educational sector in Malaysia has become too centralized. The federal Ministry of Higher Education (MoHE) articulates rules, develops plans and projects,

Vol. 11, No. 2, 2021, E-ISSN: 2222-6990 © 2021

controls financing and spending, and implements physical development that enhance the development of college/university curricula. Besides, they recruit, trains and posts teachers; and promotes all over the country. This is an example where the directive is from the center and the implementation on educational programs seen to be carried out within the state nevertheless, countries like the Asian countries like Japan, South Korea, Taiwan, the Philippines and Thailand, the trend is towards decentralizing the management of the education system. This research emphasized the EE in PHEIs are in the needs to wrestle the impacts of EE gradually through digitalization. The emerging technologies and PHEI effects towards a digital campus that needs to investigated and enlightened. Furthermore, to enhance this research, the research will examine the possible method to harness the obstacles and barriers towards digitalization. This research proposed a digitalization tool which is gamification and social media to examine the relationship with EE in PHEIs (Krause, & Coates, 2008; Nelson & Kuh, 2005) to reap the benefits attached to the technological progression. The present study will guide PHEIs academicians to understand the imperative need of digitalization and digital culture in EE.

Secondly, cultural barrier that is categorized as the "gatekeepers", the age and gender will be examined on the impact towards academician EE in PHEI. For instance, in the aspect of demographic, a senior male academician's sustainability in PHEIs is important and shows increasing in the aspect of longer life spans, that leads to an increased median age of workers. The proportion of elderly workers in the labor force (Brown, et, al., 2011) especially in economically developed countries (Fraccaroli & Deller, 2015). On the other hand, another research indicated that age as another factor relatively showed a negatively related to counterproductive work behaviors, thus the performance in training programs was found to be slightly lower in elderly workers. In contrast to these empirical findings, stereotypes against older workers are quite persistent. This is because they are contemplated as less bendable to digitalization, costlier, at higher health risk, less enthusiastics, and often shows fair minded in digitalized training (Posthuma, & Campion, 2009).

Thirdly, the outcomes on EE will lead to a better employee performance, in this aspect of reducing in turnover and improves the wellbeing of academicians in PHEIs. Moreover, the tendency in EE between the academician and PHEI is deteriorating because it has seen as more materialistic (Saks, 2006; Bhattacharya et al., 2012), hence establishing a trend in excavating the disengagement among employees leads to "engagement gap" and affect the performance which eventually form turnover intention. The turnover within the PHEI creates an impact to the PHEI performances consequently when the employees develop an intention to leave, they are most likely to have disengaged himself from the organization. The author also stated that the academic staff EE level in PHEIs is disquieting, in line with the research made by Zakaria, Jidi, Zani, Mislan and Eshak (2014) hence it is expected that implementation of digitalization in PHEIs would reduce the turnover, improves performance and wellbeing of academicians. May et al (2004), Saks (2006), Bakker et al (2007) show that higher levels of engagement are noted on academicians with PHEI exhibiting more relationship-related behaviors (Xu and Thomas, 2010).

Vol. 11, No. 2, 2021, E-ISSN: 2222-6990 © 2021

This present study emphasized on digitalization that emphasize on gamification and social media, with the to the digital barriers such as age and gender towards EE. Gamification (Chou, 2013) an example of using human computer interface to motivate, and engage people in PHEI work. Terrill (2008), who described gamification as the process of adding game mechanics to other web properties to increase engagement and social media which is known as the facilitating on the creation and sharing of information, ideas and other forms of expression that included as an interactive computer-mediated technology via virtual communities and networks (Dahl et. al, 2011). Social media provides a new breadth in building of relationships between colleagues at workplace (Doherty, 2010) and supports more alliances with a greater transparency, and increased trust between employees and the organization, becoming an important vehicle for many aspects as communications are relevant to employee engagement (MacLeod & Clarke, 2011). For these reasons, the intersection between digitalization and the evolving culture of deeper engagement provides many opportunities at workplace. These variables of gamification and digital communication in the aspect of digitalization in PHEI has barriers in order for the academicians to adopt digital culture into the PHEI. These barriers are known as the gatekeepers' culture. This gatekeepers' barrier are gender and age. The receptivity and challenges of digitalization and digital culture in PHEI significantly impact the scope of employee engagement in PHEI that effects the in reducing academician's turnover, improving in academician's performance and improves academician's wellbeing a well.

Notwithstanding the fact, researchers has proven that relatively there were little academic research that has be carried out in employee engagement (Michie and West, 2004; Macey and Schneider, 2008; Robinson et al., 2004; Hakanen, 2008) pertaining to digitalization and digital culture in PHEIs. It also been justified that there were different approached and measurement used to gauge EE, namely, engagement as an illustration as of conditions under where people work, engagement as a behavioral outcome, and engagement as a psychological presence (Robinsons et al., 2004; Robinson et al., 2007), consequently it is proven that there were no research found directly on digitalization, digital culture on EE in PHEIs.

Conclusion

This paper can be conceptualized as the Malaysia Education Blueprint which can outlines on digitalization and employee engagement among academicians in PHEIs. In PHEI, amongst the policies and related intellects during the last decade, the enticing the national qualifications, specifically in digitalization in keeping student readiness to IR 4.0, it is important for academicians as well to be the limelight in adapting the IR4.0 especially in utilizing the digitalization concept in EE in PHEI.

Vol. 11, No. 2, 2021, E-ISSN: 2222-6990 © 2021

References

- Abd Karim, M. R., Hashim,Y.(2004)The Experience of the E-Learning Implementation at the Universiti Pendidikan Sultan Idris, Malaysia. Malaysian Online Journal of Instructional Technology (MOJIT) Vol. 1, No. 1, pp 50-59.
- Aditiawarman, U. (2007). Factors influencing online learning acceptance in Indonesian Open Learning University Universities Terbuka(UT). M.S thesis, International Islamic University Malaysia,
- Agboola, A. K. (2005) A Study of readiness towards the introduction of e-learning as a teaching and learning environment among lecturers: A case study of the International Islamic University Malaysia", Ph.D. dissertation, International Islamic University Malaysia.
- Anitha, J. (2014). Determinants of employee engagement and tPHEIr impact on employee performance, *International Journal of Productivity and Performance Management*, 63 (3) pp. 308 323. Retrieved from http://www.emeraldinsight.com/doi/abs/10.1108/IJPP M-01-2013-0008. (Accessed date: 10th May 2020)
- Ambrozowicz, M. (2019), Examples of Digital Transformation Across Industries, https://www.digitaldoughnut.com/articles/2019/may/digital-transformation-across-industries.
- Bakker, A. B., and Leiter, M. P. (2010), "Work Engagement: A Handbook of essential theory and research", Psychology Press.
- Brown, J. S., and Duguid, P. (1996). "Universities in the Digital Age," Change 28 (4) July: 11-19 Bose, R. (2009) 'Advanced analytics: opportunities and challenges', Industrial Management & Data Systems, Vol. 109, No. 2, pp.155–172.
- Deming, P. J., and Robert, M. M. (1997). Beyond Calculation: The Next Fifty Years of Computing. New York: Springer-Verlag
- Feinstein, C. (1998). "Pessimism Perpetuated: Real Wages and the Standard of Living in Britain during and after the Industrial Revolution". Journal of Economic History. 58 (3): 625–58. doi:10.1017/s0022050700021100.
- Harter, J. K., and Blacksmith, N. (2010). Employee engagement and the psychology of joining, staying in and leaving organizations. In Oxford handbook of positive psychology and work, ed. Alex Linley, Susan Harrington, and Nicola Garcea, 121–30. New York: Oxford University Press.
- Hanaysha, J. (2016) Determinants of Job Satisfaction in Higher Education Sector: Empirical Insights from Malaysia file:///C:/Users/christina.rathy/Downloads/DeterminantsofJobSatisfactioninHigherE ducationSector.pdf.
- Johansson, A. (2018), "We need to reduce our dependence on technology if we want to keep innovating",https://thenextweb.com/contributors/2018/07/25/we-need-to-reduce-our-dependence-on-technology-if-we-want-to-keep-innovating/
- Jones, A. (2016) Digital Technology and the Contemporary University: Degrees of Digitization, Taylor & Francis.
- Johari, J., Adnan, Z., Yean, T. F., Yahya, K. K., and Isa, S. N. (2013). Fostering Employee Engagement through Human Resource Practices: A Case of Manufacturing Firms in Malaysia, *Jurnal Pengurusan*, 38(2013) 15 26
- Kane G. C., Palmer D., Phillips, A. N., Kiron, D., and Buckle, N. (2017). "Strategy, Not Technology, Drives Digital Transformation" MIT Sloan Management Review and Deloitte University Press.

Vol. 11, No. 2, 2021, E-ISSN: 2222-6990 © 2021

- Khan Academy. (2020) https://www.khanacademy.org/humanities/world-history/world-history-beginnings/ancient-mesopotamia/a/mesopotamia-article
- Lucas, R. E. Jr. (2002). Lectures on Economic Growth. Cambridge: Harvard University Press.pp. 109-10. ISBN 978-0-674-01601-9
- Mun, Y. S., Suhaimi, M. N. Abdullah, S. S., Abdul Rahman, S. & Nik Mat, N. K. (2012). Employee Engagement: A Study from the Private Sector in Malaysia. Human Resource M anagement Research, 3(1): 43-48
- Mun, Y. S., Suhaimi, M. N., Abdullah, S. S., Abdul Rahman, S., & Mat, N. K. (2012).

 Employee Engagement: A Study from the Private Sector in Malaysia. Human Resource
 M anagement Research, 3(1): 43-48
- Price, L., and Kirkwood, A. (2014) 'Using technology for teaching and learning in higher education: a critical review of the role of evidence in informing practice', Higher Education Research & Development, Vol. 33, No. 3, pp.549–564.
- Robinson, D., Perryman, S., & Hayday, S. (2004). The drivers of employee engagement. Report-Institute for Employment Studies.
- Szreter & Mooney; Mooney. (1998). "Urbanization, Mortality, and the Standard of Living Debate: New Estimates of the Expectation of Life at Birth in Nineteenth-Century British Cities". The Economic History Review. 51 (1): 104. doi:10.1111/1468-0289.00084.
- Samuely, A. (2017), Domino's grabs bigger slice of mobile sales via loyalty program, https://www.retaildive.com/ex/mobilecommercedaily/dominos-grabs-bigger-slice-of-mobile-sales-via-loyalty-program
- Schwab, K. (2017), The Fourth Industrial Revolution; Crown Business: New York, NY, USA.
- Schwab, K. (2016). *The Fourth Industrial Revolution*. Crown Business. ISBN 978-1-5247-5886-8.
- Tyner, K. (2014) Literacy in a Digital World: Teaching and Learning in the Age of Information, Routledge.