

Migrating to e-Learning –Modelling the Framework

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Abstract

This paper presents the factors that advance or impede e-learning migration. Three conjectural perspectives (Technology Acceptance Model, Resource-based Theory and Institutional Theory) were studied and the framework was presented. Implications of the conjectural underpinnings were outlined.

Keywords: COVID-19, e-Learning, e-Readiness, diffusion/adoption.

Introduction

Due to the COVID-19 pandemic, universities have had to shift their mainstream courses online. This mandated a shift in prominence for the syllabus to be fully integrated online. For others, the transference has been challenging in that it necessitated both cultural and technological adaptations that might else have been premeditated over a longer duration. Some universities were enforced to speedily implement changes to realize the educational vision amid the pandemic. E-learning which has been defined by OECD (2005: 11) as the “use of information and communication technologies (ICTs) to enhance and/or support learning in higher education (HE)” is considered as a contemporary shift in HE towards scheming and realizing e-learning platforms that afford learners virtual access and instructions online. It is a growing pool of modalities, which we can revel given the opportunities, and this modality makes us more conscious of the contemporary limits of using technology. The adaptability of the academia in the face of an unprecedented pandemic has in many respects been permitted and facilitated by our aptitude to connect, absorb and act through the use of technology.

The precursors of this trend are technological advances, revolutions in innovation, the mounting diversity of students globally, and the changes in the education provision (Concannon et al., 2005; Keramati et al., 2011). The cohort of students presently entering into universities and their philosophical curiosity in utilizing technological resources is dictating the diffusion and usage of technology in teaching and learning (T&L), both inside and outside the classroom (De George-Walker and Keeffe, 2010). E-learning in the epidemic is a learning model of emergency management or remote teaching. Previous scholarships indicated that during the pandemic, the usage of online learning had increased considerably, but the real usefulness, and completion rate had not been meaningfully improved (Liu et al., 2020; Yang et al., 2021).

Execution of institutional e-learning unavoidably involves trade-offs and negotiations amid competing institutional and pedagogical objectives (Marshall, 2010; Uys, 2010). This instance of implementation has been unwaveringly supported because of emergencies that required a rapid content migration to the new Learning Management System.

The fruitful rollout of e-learning poses many gains and contests. The gains include the nonexistence of physical and temporal limits, the effortlessness of retrieving resources and flexibility, as well as the effectiveness of the resolution. Other studies have established that e-learning is advantageous to both student learning and student performance. Nevertheless, in order to attain the optimal results from e-learning, students are obligated to be vigorously contributing in the learning process (Aldossary, 2021; Altun et al., 2021).

The most frequently stated trade-offs include technological hitches and the incompetence to use e-learning, mediocre teaching quality, incapacity to instil relevant disciplines, and a deficiency of courses, connection, communication, and the internet (Altun et al., 2021). The adaptation of efficacious technology-based training to operative teaching methods, and poor teaching and delivery practices in managing the assessment and evaluation processes of learning are all shortcomings of e-learning (Debes, 2021).

Students' attitudes toward e-learning impacts migration to e-learning systems (Avsheniuk et al., 2021; Mathew and Chung, 2020). The challenges per se in e-learning accrue from greater student workload (Mathew and Chung, 2020), socialization difficulties (Adnan and Anwar, 2020), absence of face-to-face interaction (Didenko et al., 2021), physical and psychological health problems (Nenakhova, 2021), internet connection & technical problems (Adnan and Anwar, 2020; Mathew and Chung, 2020; Nenakhova, 2021).

Examining e-learning readiness could have a noteworthy influence on the fruitful diffusion/ adoption of e-learning enterprises. It could also create better know-how for universities. Irrespective of the involvement that has been made in e-learning, there is escalating anxiety pertaining to its diffusion in universities. Appraising academics' views and intentions, and understanding the undercurrents at play behind their condemnations of e-learning can help an institution's administration to create feasible mechanisms to endorse espousal of e-learning. Nominal investigations have been conducted in the South Pacific context to empirically determine the connection amid academics' diffusion/adoption of e-learning and factors such as perceived usefulness and perceived ease of use (Singh et al., 2007), technology, content and training (Darab and Montazer, 2011), organizational factors (Nysveen et al., 2005), human resources and finances (Liang et al., 2007), which have all been confirmed to be noteworthy stimulating variables that affect users' behavioural intentions regarding the adoption of a new system. This brings to focus the importance of investigating the aforementioned variables in-lieu of the framework.

Conceptual Underpinnings and Literature Review

E-learning diffusion/adoption is conceptualised as "how the benefits of e-learning are communicated via the social processes that influence the academics' judgment to utilise e-learning systems" (Forlani and Parthasarathy, 2003; Deffuant et al., 2005; Hafeez et al., 2006; Rogers, 2003). Diffusion relates to the processes and mechanisms employed to strengthen e-learning adoption. Adoption is principally linked with the dynamics-inducing acceptance of e-learning.

Three viewpoints: TAM, Resource-based Theory and Institutional Theory serve as the conjectural footings in this study. TAM was advocated by Davis (1989) and is grounded in the conception that a person's behavioural intention (BI) of satisfactory response and their usage of a specific technology is controlled by two concepts: perceived usefulness (PU) and perceived ease of use (PEOU). The two indicators have been proven valid to predict the user acceptance towards several new information technologies (Gao and Yang, 2016). This is a well-known model that has been used to comprehend e-learning diffusion/adoption (Gefen and Straub, 2000), supported extensively by scholars (Kim and Chang, 2007; Moon and Kim, 2001), authenticated for its vigour (Sumak et al., 2011) and reinforced by experiential enquiries (Venkatesh et al. 2003, 2007). Bhattacharyya et al. (2020) used TAM to assess the usage of e-learning as a learning medium.

The Resource-based (RB) theory (Barney, 1991) propositions the academic groundworks to discover the antecedents that affect e-learning diffusion/adoption as well. This theory advocates that organizational resources (macro-level variables) that are expensive or hard to emulate help organizations attain competitive advantage. The first viewpoint of the RB theory speculates that the applied competences of information system could serve as a source of competitive advantage (Bharadwaj, 2000), whilst the second perspective commands on how the resources are availed and exploited to sustain competitive advantage (Ravichandran and Lertwongsatien, 2005). In order to facilitate e-learning diffusion/adoption, universities must deliver acceptable and dependable technical infrastructure in the form of organizational resources (Williams and Eyo, 2011). Training which encompasses computer literacy, online training or technical skills provided by universities to academia (Aydin and Tasci, 2005) is imperative for e-learning reception and execution. Organizational factors such as top management support and governance are also prerequisites for success (Soong et al., 2001; Venkatesh et al., 2003; Venkatesh and Bala, 2008). Another fundamental resource is Human resources, and congruently deficiency of awareness and tech-savvy HR, limits e-learning diffusion/adoption (Aydin and Tasci, 2005). Oktavia et al. (2016) highlights that the two most concerned rudiments in e-learning frameworks are the content and pedagogy. Financial resources also affect e-learning progress (Chatterjee et al., 2002; Liang et al., 2007; Hamel and Valikangas, 2003).

For the assessment of e-learning diffusion/adoption, institutional theory is also relevant. The role of the social milieu and institutional forces surrounding the individual have been much spoken of. Scholars discourse on the notable acknowledgement of institutional forces as significant antecedents of the diffusion/adoption of IS products/practices (Liang et al, 2007; Orlikowski et al, 2001; Teo et al, 2003; Tingling et al. 2002).

Institutional theory can be demarcated as the three mechanisms that lead to institutional changes that will indicate the resemblance either in its structure or in process, which are coercive pressure, normative pressure, and mimetic pressure (Al-Shami et al., 2018).

Overall, two types of coercive pressures prevail: regulatory pressures arising from the Government or regulatory agencies (Harcourt et al, 2005; Zhu et al, 2004) and competitive pressures arising from the risk of losing competitive advantage (Harcourt et al, 2005).

Mimetic pressures are elucidated as voluntary and cognizant emulation of efficacious organisations or high-status actors due to their competitive proficiencies, technological know-how or belief by social actors that imitation will yield positive outcomes (DiMaggio and Powell, 1983; Haberberg and Binsardi, 2002) and can vintage first-mover advantage (Teo et al, 2003).

Jan et al. (2012) study revealed that mimetic pressure has a higher effect on the level of technology acceptance. Normative pressures narrate to professional staff from disciplines that are answerable for decisions on e-learning and explain voluntary and unconscious emulation.

Lestari (2018) study highlights that normative pressure does not affect the level of technology acceptance. The managers' decisions pertaining to e-learning are susceptible to the community of professionals that harvest either mutual learning or are part of similar social networks (Haberberg and Binsardi, 2002).

Methodology

This study follows from an inquiry-based approach that has confined itself to the conceptual underpins of three important theories and based on the review of the literature postulates an integrated framework that could be tested in future studies.

E-Learning Framework

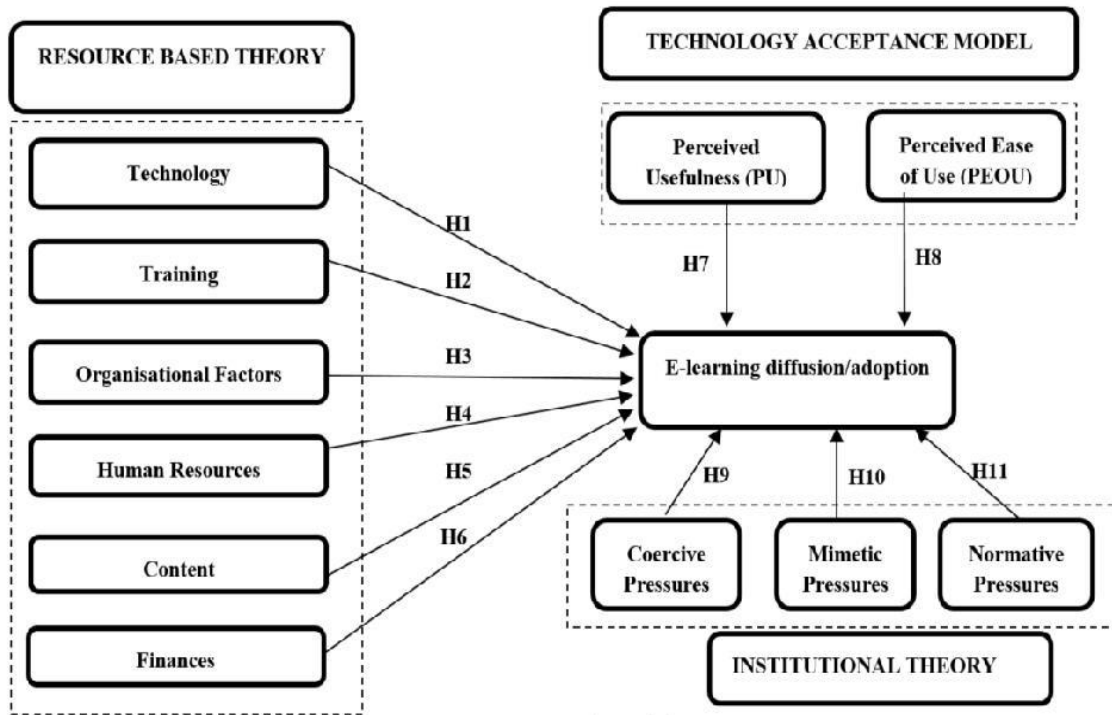
This study recommends an integrated conjectural framework incorporating academics' e-learning reception and intention to use, constructed primarily on the Technology Acceptance Model (TAM), Resource-based Theory and Institutional theory.

Research framework

Based on previous studies, a conjectural model was developed which underpinned from the researchers previous work (Singh et al., 2017).

Figure 1 presents a hypothetical model to be examined and confirmed.

Figure 1. Research Model



Discussion and Implications

In the wake of the disruption to teaching and learning due to COVID-19, most universities have shifted to e-learning, while some nations have adopted a hybrid of online and in-person instruction. Many universities have had reservations about online/digital learning/e-learning. Lack of admittance to internet facilities, absence of proper interaction and contact with learners and instructors and ineffective technology posed major challenges. The unexpected shift from traditional classrooms and face-to-face learning to virtual classrooms resulted in diverse learning experiences for learners.

E-learning cannot produce effective results in underdeveloped countries if the majority of students/learners are inept at accessing the internet due to technical and monetary issues. Stimulating a culture of learning with investments in high-quality education and skills development programs is the key to economic success in today's knowledge-driven digital economy that is rooted in resources and resourcing, providing the institutional foundation to promote successful usage. Placing inclusion first and guaranteeing strategic leadership and management, coupled with well-articulated institutional e-learning objectives, supportive organizational culture, tailor-made support for scholars, and appropriate infrastructure to support e-learning are essentially predominant elements. The intention of the study was to propose a framework that can be judiciously examined.

This study marks prominent implications for scholars and practitioners. It identifies the need for Universities to develop HR (people resources) via training, and articulates the need for social support for

innovative practices. One of the key fundamentals would be to capitalize on resources and consequently imposing competencies to surge diffusion/adoption. For scholars, investigating diffusion/adoption of e-learning, this study marks the significance and relevance of the RB theory for enabling/disabling diffusion/adoption.

For practitioners, the implications pertain to the distinction of establishing the persuasive resources and capabilities inducing diffusion/adoption in Universities. Most importantly, the framework indicates that without requisite organizational resources and institutional interventions to augment e-learning diffusion/adoption, e-learning presents no real-world usefulness.

During the COVID-19 pandemic, universities were obligated to adjust their teaching approaches (Küsel et al., 2020). E-learning was the most commonly chased solution for the learning mitigation (Widodo et al., 2020). The pandemic mandated a global transference to the e-learning platform (Hodges et al., 2020), necessitating teachers to acclimatize irrespective of their readiness (Scherer et al., 2021). The framework provides a valuable guide for examining the variables in real scenarios. The framework is supportive in signifying the e-learning readiness which is all about the University's level of preparedness for various facets of e-learning afore its implementation.

Conclusion

The familiarity and preparedness in shifting to e-learning and assessing the variables/dynamics that interplay to affect the outcomes from e-learning have significance for Universities. The empirical research to test such a framework can be added value in analysing the positive aspects, as well as accounting for the shortfalls and could map out specific, local as well as regional strategies/roadmaps to optimize the benefits from e-learning.

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