

BLENDED LEARNING AND ACCOUNTING EDUCATION IN KUWAIT: AN ANALYSIS OF SOCIAL CONSTRUCTION OF TECHNOLOGY

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ABSTRACT

Purpose

The paper was aimed at studying the prospects and challenges of blended learning as a “new” teaching and learning methodology based on the interpretive flexibility of the relevant social groups in higher educational institutions (HEIs) in Kuwait and their perception of the technological frame of blended learning with particular focus on accounting education.

Design, Methodology and Approach

This paper adopted a qualitative study and a tripartite model of social construction of technology to analyse the prospects and challenges of the introduction of blended learning in HEIs in the social context of the relevant social groups and their interpretive flexibility and the technological frame of the blended learning.

Findings

The study revealed how different social groups could draw from their interpretive flexibility of the technological frame to present the prospects and challenges of blended learning in HEIs in Kuwait. Various social groups, depending upon their interpretation of the “new” teaching and learning methods, in terms of the perceived benefits or challenges, were able to guide or constrain the adoption and usage of blended learning in teaching and learning processes.

Practical Implications

This study indicates how different groups of people, depending on their perceptions, can socially construct the “new” technology which in return could be instrumental in the success or failure of its adoption and usage in a given social context.

Originality and Value

The paper develops a tripartite model of studying the adoption and use of “new” teaching and learning methodologies by considering how various social groups, basing on their interpretive flexibility on the technological frame, can generate meanings, in terms of prospects or challenges, to influence the adoption or rejection of the “new” technologies.

Keywords: Blended Learning, Accounting Education, Social Construction of Technology, Kuwait.

INTRODUCTION

In an attempt to reduce the cost of higher education for both the learners and the providers, as well as amidst growing demand for the education, blended learning has been considered as the way to go (Chen and Jones, 2008; Ying and Yang, 2017; Delany et al., 2015; O’Keefe et al., 2014). In addition, there are several challenges of the traditional classroom-based and online learning methodologies (Poon, 2013; Jeffrey et al., 2014). Blended learning is a mixture of both classroom-based and online learning strategies (Kistow, 2011; Ying and Yang, 2017). Blended learning is intended to mediate between the challenges of the traditional classroom and online/web-based learning (Lalima and Dangwal, 2017; Du, 2011; Grabinski, et al., 2015).

A number of institutions have embraced the advancement in technologies to adopt and implement blended learning with a number of benefits and challenges (Lopez-Perez et al., 2011; Alebaikan, 2010; Grabinski et al., 2015). For instance, Lopez-Perez et al. (2011) revealed that blended learning had a positive effect of reducing drop-out rates and improved exam results of students. Likewise, Alebaikan (2010) argues that blended learning provided flexibility to Saudi female students who had to improve on their academic qualifications without having to abdicate their cultural and traditional roles as married women in an Arabic setting (Grabinski et al., 2015). Grabinski et al., (2015) revealed that blended learning provided flexible learning at any place and any time in Poland and that it saved time for students of having to commute from time to time to their institutions. They could study from anywhere, thus reducing the cost of education (Lalima and Dangwal, 2017).

The adoption and implementation of blended learning often poses challenges (Ying and Yang, 2017; Jeffrey et al., 2014). It was noted by Ying and Yang (2017) that most academics considered blended learning as new to them and they had fears that technology would eventually substitute their efforts in the learning process. Likewise, Jeffrey et al. (2014) observed that the teachers were resisting blended learning due to inadequate training and insufficient IT skills to create learning content that could be posted on the Web (Ying and Yang, 2017). Notwithstanding, there are institutions which have employed blended learning in the delivery of accounting courses, but mainly in developed countries with relatively developed infrastructure (Chen and Jones, 2008; Poon, 2013; Bowyer and Chambers, 2017). There are limited researches on the adoption and implementation of blended learning in developing countries, in general and specifically in the delivery of accounting education (Grabinski et al., 2015; Kistow, 2011; Suhail, et al., 2013).

This study therefore is intended to add to extant literature by applying a SCOT framework to study the prospects and challenges of blended learning in HEIs, with particular focus on accounting education, in Kuwait as perceived by different relevant social groups and their perception of the technological frame of blended learning. It develops a tripartite model of studying the introduction and use of blended learning as a “*new*” artifact based on the interpretive flexibility of the relevant social groups in particular those in accounting education in Kuwait and their perception of the technological frame of blended learning. The rest of the paper is divided into 4 sections. Section 2 presents the theoretical constructs of SCOT and prior studies. Section 3 provides the methodology used to collect the data for the study. Section 4 presents the findings of the study and Section 5 provides a conclusion.

Theoretical Constructs and Prior Studies

Social construction of technology (SCOT)

Social Construction of Technology (SCOT) provides a theoretical insight into the adoption and implementation of “new” technologies in a social context (Prell, 2009; Jones & Bissell, 2011; Kline & Pinch, 1996), like HEIs. SCOT is a shift from the traditional positivist view of technology, such as blended learning, as a deterministic artefact to a perspective that takes cognizance of the social interactions of different social groups and actors in defining what the “new” technologies are, their purposes and their capabilities (Jones & Bissell, 2011; Giddens, 1984; Berger and Luckmann, 1966).

In their book titled, *“The Construction of Reality”*, Berger and Luckmann (1966) argue that reality is socially constructed by people or groups of people through their social interactions with each. The central theme of Berger and Luckmann’s argument is that as people interact with each other, they create “*concepts or mental representation of each other’s action*” and these concepts are reproduced by the actors and eventually become institutionalised or diffused within the social system (Giddens, 1984; Rogers, 2003). For instance, Rogers (2003) provides an elaborate account how innovations get diffused in social systems. He argues that diffusion is the process by which an innovation is communicated over time among the relevant social groups in a social system. Thus, this study theory blended learning, as an innovation in teaching and learning, through a social construction of technology (SCOT) lens.

SCOT as a paradigm shift in thinking about technology, such as blended learning, stems from a seminal conference at Twente University of Technology in the Netherlands in 1984 by Trevor Pinch and Wiebe Bijker’s (1987) article, *“The Social Construction of Facts and Artifacts: Or How the Sociology of Science and the Sociology of Technology Might Benefit Each Other.”* (Bijker et al, 1987; Bijker & Law, 1992). According to Jones & Bissell (2011), there are specific characteristics of the SCOT framework which include the ideas of “*relevant social groups*” and “*actor*” and the “*interpretive flexibility*” which are relevant in studying the adoption and implementation of “new” technologies in a social context (p.286).

Relevant social groups

Social groups are defined as “*those groups who share a meaning in an artefact*” (Kline & Pinch, 1996). These include among others, the “*designers*” or “*users*” (Jones & Bissell, 2011). In other words, social groups can generate different meanings about artefacts in terms of their purposes and their capabilities (Prell, 2009). In the context of HEIs, the relevant social groups include, teachers, management, students, IT experts, other employees. Through their interactions, these relevant social groups can constrain or enhance the adoption and implementation of “new” technological artefacts, such as blended learning (ibid, 2009; Kline & Pinch, 1996).

Interpretive flexibility

The “*interpretive flexibility*” is concerned with how different social groups attach different meaning to artefacts (Kline & Pinch, 1996). Jones & Bissell (2011) provides an example from Edgerton (1998) in which they underscored that “*studying technology use changes our assessment of technological significance*”. They further provide evidence from Edgerton (1998) in which he observed continued dominance of “*old*” technologies, such as “*steam and*

coal power” in the society, even when “*new*” technologies had been invented (Jones & Bissell, 2011, p.286). They argue that “*innovations*” and “*use*” are more critical than the “*different phases in the life of the technology*”.

Whether technology is “*new*” or “*old*”, its usage is dependent on the “*social groups*” and their “*interpretive flexibility*” (Jones & Bissell, 2011). In a socially-constructed view, technology in use is concerned with how it is employed “*in the wild*” with the users who may consider technological innovation not as important as its cost; usability and maintenance; and durability (ibid, 2011). The adoption and implementation of the “*new*” technologies, such as blended learning, is influenced by their relevance to local needs (Prell, 2009). For instance, they draw our attention to the prevalent usage of mobile phones in most parts of Africa (and other developing countries) is motivated by the need to remit money to remote areas where the banking system is unavailable (Jones and Bissell, 2011).

In a way to improve the SCOT methodology as advanced by Pinch et al. (2009) included other concepts that are important in the study of technology-in-context. These include, in addition to the concepts of relevant social groups and interpretive flexibility; closure, stabilization, technological frame, micro political power strategies, semiotic power, semiotic structures (p.2). These concepts enhance our understanding how relevant social groups influence the use of technology and vice versa (Giddens, 1984). However, for the purpose of this paper, only three concepts are considered. These are: relevant social groups, interpretive flexibility and technological frame. This paper attempts to develop a tripartite model for studying the introduction and usage of blended learning as a technological artifact based on the interpretation of the relevant social groups and the technological frame (Prell, 2009).

Technological frame

Prell (2009) advances the concept of technological frame as how relevant social groups value the technological innovations in terms of they [artifacts] solve the perceived problem. If the relevant social groups fail to have a common interpretation of the artifacts, they are likely to detest it as a problem-solver (Prell, 2009). For instance, if lecturers fail to appreciate the potential of “*new*” artifacts, such as blended learning, then its implementation in teaching and learning processes may be challenged (Sayed & Baker, 2014). Likewise, if the learners perceive the technological innovations as solving their problems, such as enabling them to study from anywhere and anytime, they are likely to value it (Lalima and Dangwal, 2017; Poon, 2013).

SCOT and education

The application of technologies, such as blended learning, in teaching and learning has been widely studied by a number of authors (Warschauer et al., 2012). Many of these studies have been premised on a determinist perspective that it influences the actions of agency into conformity with the artefact (structure) (Giddens, 1984). This positivist strand of knowledge fails to take cognizance of the “*interpretive flexibility*” of the “*users*” or “*social groups*” (Jones and Bissell, 2011) and the technological frame (Prell, 2009). For instance, Jones and Bissell (2011) provide a case of how digital technology is assumed to transform education irrespective of the context in which it is applied (Warschauer et al., 2012).

Warschauer et al., (2012) revealed the adoption and implementation of One Laptop per Child Project in Birmingham, UK did not achieve its intended purposes. There existed low levels of

interest and use of the “*new*” technology by both the teachers and the learners. They attributed the low interest by the teachers emanating from either resistance to the project or inadequate IT skills (Jeffrey et al., 2014; Ying and Yang (2017). In addition, it was disclosed that the project provided inadequate social and technical support to teachers (Warschauer et al., 2012). Further, the teachers were provided with insufficient time to retool themselves and were hesitant to spend their free time on continued professional development to harness the “*new*” technology (Jeffrey et al., 2014). The learners, although they were fascinated with the laptops, they were slow in utilising them in the learning processes (Warschauer et al., 2012). In addition, the local authorities did not avail adequate financial support for project maintenance, internet access and retooling of teachers to reform the pedagogy to harness the “*new*” technology (ibid, 2012). This represents how the “*social groups*” (teachers and learners) displayed their “*interpretive flexibility*” to affect the adoption and implementation of One Laptop per Child Project in Birmingham (Jones and Bissell, 2011).

SCOT and accounting education

With specific reference to the accounting education, there have been variations between the intentions of “*new*” technologies, such as blended learning, and the outcomes of the learning processes (Wong, 2012; Kashora et al., 2016; Wong et al., 2017). For instance, Wong (2012) revealed that, although they implemented e-learning for first year accounting students at Victoria University, Melbourne in Australia, the students strongly preferred the traditional classroom-based learning to online learning. According to them they had an “*interpretive flexibility*” to assume that traditional learning gave them useful interactions and active participation in learning as opposed to the passive online learning (Jones and Bissell, 2011).

Kashor et al. (2016) revealed that learners rarely used online learning technologies because they believed that the content was inappropriate to their needs and that it was so costly and they had limited human resources to support the online activities (Alebaikan, 2010; Lalima and Dangwal, 2017). Online learning technologies without adequate technical support appear futile in influencing accounting education outcomes (Wong et al., 2017). For instance, Wong et al. (2017) disclosed that whereas students in Hong Kong appreciated the e-learning facilities on campus, their utilization was hampered by inadequate technical support (Warschauer et al., 2012). As a group of actors with interpretive flexibility, the students relied less on e-learning, which was intended to support blended learning and focused more on traditional classroom-based learning (Grabinski et al., 2015). As such, the implementation of blended learning in accounting education was limited to the traditional classroom-based learning (O’Keefe et al., 2014).

Prior Studies

What is blended learning?

A number of authors have defined blended learning (Lalima and Dangwal, 2017; Delany et al., 2015; Megeid, 2014). Blended learning can be defined as the mixture between online learning and face-to-face interactions with teachers (O’Keefe et al., 2014; Grabinski et al., 2015). Blended learning is a learning strategy that seeks to mitigate the challenges of traditional classroom-based learning and online learning (Lalima and Dangwal, 2017; Delany et al., 2015; Megeid, 2014; Lalima and Dangwal, 2017) highlighted the some of the challenges of traditional

classroom-based learning as lack of learning opportunities for irregular learners, especially those with employment responsibilities (Grabinski et al., 2015; Poon, 2013; Kistow, 2011). Secondly, they also argue that traditional learning cannot address the individual needs due to high numbers of learners in a classroom, especially in institutions of higher learning (Chen and Jones, 2008; Ying and Yang, 2017; Delany et al., 2015; O'Keefe et al., 2014).

Motivation for the adoption and usage of blended learning

Blended learning is supposed to mediate between the challenges of traditional classroom-based learning and online learning (Poon, 2013; Lalima and Dangwal, 2017; Delany et al., 2015; Megeid, 2014; O'Keefe et al., 2014; Grabinski et al., 2015). For instance, Poon (2013) revealed that blended learning provided various opportunities for flexibility in learning both on and off campus (Alebaikan, 2010). Using a case study of the implementation of blended learning at Nottingham Trent University, Poon (2013) argued that learners, using blended learning, were able to study even when challenged with job responsibilities, especially with upgrading students. Lalima and Dangwal (2017) posited that blended learning mediates between the challenges of traditional classroom-based learning and online learning. They revealed that traditional classroom-based learning fails to address the individual learners' needs due to high numbers of students, especially in institutions of higher learning (Delany et al., 2015; O'Keefe et al., 2014; Owston et al., 2006; Alebaikan, 2010). This learning mode does not provide opportunities for learners that are irregular, especially with the working class (Grabinski et al., 2015; Poon, 2013; Kistow, 2011).

Specifically, in relation to accounting education, a number of authors have documented benefits of blended learning (Delany et al., 2015; Megeid, 2014; O'Keefe et al., 2014; Grabinski, et al., 2015; Du, 2011; Kistow, 2011; Chen and Jones, 2008; Lam, 2015). Delany et al. (2015) observed that blended learning increased the motivation of learners to become active participants in the learning process. Using a survey both at the beginning and at the end of a semester, they examined the students' perceptions of blended learning. They revealed that blended learning enabled learners to comprehend basic accounting concepts. Likewise, Megeid (2014) observed that the interactive technologies of blended learning promoted learning of accounting. Using a study that investigated the factors that influenced the use of e-learning in Accounting at the College of Management and Technology in Egypt, Megeid (2014) observed a positive correlation of 0.68 between student's satisfaction and quality of blended learning.

O'Keefe et al. (2014) investigated blended learning of students undertaking a core course of first year introductory accounting at a University in Australia. Their results indicated that students used various resources which they blended in order to understand the course. Notwithstanding, they observed that students found face-to-face tutorials with their lecturers more useful than any other resources (Jeffrey et al., 2014). Similarly, Grabinski et al. (2015) undertook a survey among accounting students at Cracow University of Economics in Poland. Focusing on three accounting subjects of international accounting; bank accounting and controlling; and accounting computer systems, they disclosed that students reacted positively towards blended learning with males being more positive than females. They found that the students benefitted from blended learning because of its flexibility in terms of time and space (Poon, 2013). This is because they were saved time and cost of having to commute to the University on a daily basis (Kistow, 2001). Meanwhile, Alebaikan (2010) revealed that in Saudi Arabia, blended learning was adopted to address the challenge of shortage of qualified staff and increasing enrolment of students (Lalima and Dangwal (2017). Learners could study from

anywhere and anytime with minimal interactions with the few qualified staff (see also, Poon, 2013).

Du (2011) investigates whether blended learning in an accounting course enhanced students' performance as compared to traditional classroom-based learning. She revealed that after controlling for gender, transfer status, math grade, prior GPA, etc., shifting from traditional classroom-based learning to blended learning did not directly improve the students' final performance, rather they improvement was observed in the in-depth in-class activities (Keller et al., 2009). Likewise, Kistow (2011) investigated the experiences of graduate students in blended learning in Accounting and Statistics at a Graduate School of Business in Trinidad and Tobago. It was disclosed that learners, especially those who were in employment preferred blended learning due to its flexibility and convenience to learning (Grabinski et al., 2015; Poon, 2013). Further, it was revealed that age was essential factor for the successful implementation of blended learning. This is because blended learning requires self-motivation (Megeid, 2014; Grabinski et al., 2015), which is presumably comes with age (Chen and Jones, 2008 in relation to graduate students).

Chen and Jones (2008) conducted a comparative study on students' perceptions of a traditional classroom-based learning and blended learning of an MBA accounting course. They observed that blended learning was providing a good mix between classroom-based learning and online learning methodologies (Lalima and Dangwal, 2017; Delany et al., 2015; Megeid, 2014). They further argued that the learners continued to interact with their instructors even outside classrooms, using online technologies and were able to get timely feedback on their learning. Meanwhile, Lam (2015) studied students' learning experience on a blended learning course of management accounting in Hong Kong. They observed that students were motivated to harness blended learning by good academic results they received in examinations.

Challenges in the adoption and usage of blended learning

Notwithstanding the benefits of blended learning, its adoption and implementation faces a number of operating challenges (Lalima and Dangwal, 2017; Jeffrey et al., 2014; Green et al., 2009; Ying and Yang, 2017). Lalima and Dangwal (2017) argued that blended learning requires considerable amount to time and effort to prepare interactive materials and carry out online assessments. In addition, to implement blended learning, it requires substantial investment in resources (financial, infrastructure and human), which may be challenging to developing countries (Alebaikan, 2010). Finally, they agree that blended learning is pivoted on right attitudes of learners, and self-motivation of both the learners and instructors (Megeid, 2014; Grabinski et al., 2015).

Jeffrey et al., (2014) revealed resistance by the teachers in the use of technology as a challenge to blended learning (Ying and Yang (2017). They further posited that teachers valued the traditional classroom approach to learning more than online approach (Green et al., 2009). This was indirectly attributed to the lack of the requisite IT skills by the teachers to harness blended learning, especially in the development of appropriate online learning materials (Ying and Yang, 2017; Lam, 2015; Moskal et al., 2013). For instance, Lam (2015) argued that the role of teachers is critical in enhancing blended learning through the development of interactive materials to supplement traditional classroom-based learning. Similarly, Moskal et al. (2013) posited that the successful implementation of blended learning requires synchronizing the goals of the institution, lecturers and students.

Green et al. (2009: p.267) reported that “*online, the teachers’ status can easily be eroded as learners can compare teacher-designed resources with video lectures across the world on similar topics and chat directly with experts in the field through their blogs*”. Thus, if blended learning is to achieve success in influencing learning outcomes, teachers need to be retooled to redesign their courses in order to have appropriate blend between online and face-to-face teaching and learning strategies (Jeffrey et al., 2014). Ying and Yang (2017) found out that in Swinburne University of Technology, Sarawak, Malaysia, most academics argued that blended learning was new to them. They feared that eventually technology would substitute their efforts in the teaching and learning processes (Green et al., 2009; Jeffrey et al., 2014). They were of opinion that blended learning increased their work loads, yet their IT skills were found wanting (Jeffrey et al., 2014).

Although, there has been adoption and implementation of blended learning in the teaching of accounting related courses, there are some challenges (Grabinski et al., 2015; O’Keefe et al., 2014; Megeid, 2014; Chen and Jones, 2008). For instance, Grabinski et al., (2015) observed that, blended learning to be successful in influencing learning outcomes, it requires the learner to be independent with high level of motivation, discipline and high sense of responsibility (Megeid, 2014). These virtues are more likely to be with graduate students than undergraduates (Kistow, 2011; Chen and Jones, 2008).

Meanwhile, O’Keefe et al. (2014) observed that although blended learning was introduced at a University in Australia, majority of students surveyed indicated that face-to-face tutorials were heavily relied upon in studying an accounting course. This could be attributed to the first-year undergraduate learners lacked some levels of self-discipline and motivation to undertake independent study (Megeid, 2014; Grabinski et al., 2015). For example, Megeid, (2014) posited that for blended learning to improve on the learners’ performance, the learners needed to self-motivated and must have access to computers, which could be a big challenge for those in developing countries (Lalima and Dangwal, 2017).

Chen and Jones (2008) observed that the MBA learners of accounting were not very comfortable with posing questions during online meeting and would not participate actively in discussion boards. This could be attributed to the fact that these learners could have been in employment and that they had different times of interaction with the learning materials (Lalima and Dangwal, 2017; Grabinski et al., 2015; Poon, 2013; Kistow, 2011).

METHODOLOGY

The study adopts a web survey of journal articles about the adoption and implementation of blended learning in higher educational institutions in Kuwait. It is a qualitative study that is intended to investigate the benefits and challenges of the application of blended learning in Kuwait in the light of how the various concepts of the SCOT framework as proposed by Prell (2009) could extend our understanding of the adoption and implementation of “*new*” artifacts, such as blended learning in an educational context. In particular, the study evaluates the role of the relevant social groups; their interpretive flexibility of the technological frame and how they influenced the adoption and implementation of blended learning in Kuwait’s institutions of higher learning with special focus on accounting education (Prell, 2009; Bijker et al., 1987; Bijker & Law, 1992).

11 journal articles, 4 PhD theses and 4 media clippings on the introduction and implementation of blended learning in Kuwait were selected through a web survey and formed the basis for

analysis of the role of the relevant social groups; their interpretive flexibility; the technological frame in influencing the adoption and implementation of blended learning in Kuwait's institutions of higher learning (Prell, 2009; Bijker & Law, 1992). The articles and theses were analysed to identify the relevant social groups or actors; how the generated common understanding of blended learning in the light of their perception of the technological frame associated with blended learning (Prell, 2009). In particular, the interpretive flexibility of the relevant social groups/actors guided or constrained the implementation of the blended learning in HEIs in Kuwait (Kline & Pinch, 1996); and how the social groups/actors' view of the technological frame of the "new" artifact (blended learning) influenced their interpretation of blended learning (Jones & Bissell, 2011; Bijker & Law, 1992). This created tripartite interconnections between the relevant social groups/actors, interpretive flexibility and technological frame and their influence in the adoption and usage of blended learning in HEIs in Kuwait (Figure 1).

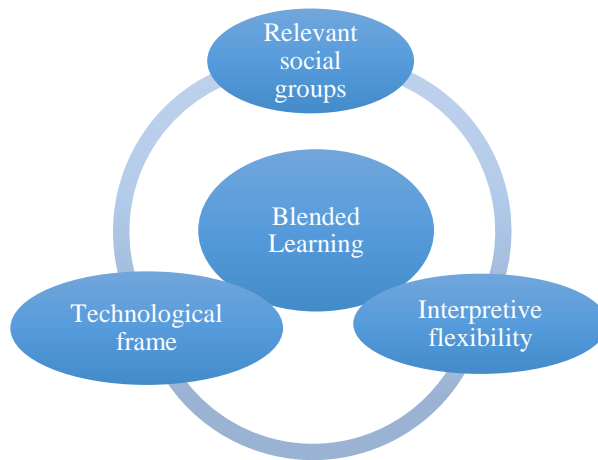
In addition, newspaper clippings and media websites were accessed and analysed to generate understanding of politicians, especially the Minister of Education and Higher Education on her perception and motivation to introduce blended learning in the educational system in Kuwait. These interpretive flexibility of politicians, particularly the Minister of Education and Higher Education of Kuwait, on the technological frame of blended learning, was important in generating understanding how it enabled or constrained the introduction and usage of blended learning in Kuwait's higher educational institutions.

Table 1
LIST OF JOURNAL ARTICLES, PHD THESES AND MEDIA CLIPPINGS THAT WERE ACCESSED FOR THE STUDY

Journal Articles		
	Author(s)	Title
1	Sharafuddin, H., & Allani, C. (2014)	Evaluation of the Blended Learning System in Higher Education: AOU – Kuwait.
2	Allani, C., & Sharafuddin, H. (2014)	The Demand and Supply Imbalances in Blended Learning at the Arab Open University–Kuwait.
3	Alruwaih, M.E. (2015)	Effect of Blended Learning on Student's Satisfaction for Students of The Public Authority for Applied Education and Training in Kuwait.
4	Sharafuddin, H., & Allani, C. (2015)	Motivating the Independent Learner at the Arab Open University, Kuwait.
5	Nehme, Z., Seakhoa-King, A., & Ali, S. (2015)	Technology Blended Learning Approaches and the Level of Student Engagement with Subject Content.
6	Alfelai, B. (2016)	Why integrating technology has been unsuccessful in Kuwait? An exploratory Study.
7	Al-Fadhli, S. (2008)	Students' Perceptions of E-learning in Arab Society: Kuwait University as a case Study.
8	Alhajri, R. (2016)	Prospects and Challenges of Mobile Learning Implementation: A Case Study.
9	Aldhafeeri, F., & Male, T. (2016)	Investigating the learning challenges presented by digital technologies to the College of Education in Kuwait University.
10	Mutawa, A.M. (2017)	Evaluation of Blended Learning in Higher Education: A Case Study.
11	Ali, N. (2017)	The Influence of Technology on the Academic and Social Lives of Students and Lecturers in Kuwaiti Higher Education (HE).
PhD Theses		
	Author	Title
1	AL-Mutairi, A. (2010)	Factors Affecting Business Students' Performance in the Arab Open

		University: The Case of Kuwait.
2	Alkandari, B. (2015)	An Investigation of the Factors Affecting Students’ Acceptance and Intention to Use E-Learning Systems at Kuwait University: Developing a Technology Acceptance Model in E-Learning Environments.
3	Alkharang, M. M. (2014)	Factors that Influence the Adoption of e-Learning: An Empirical Study in Kuwait.
4	Yousef, A. (2013)	The Cultural Context of an Educational Reform: Perceived Challenges to the Implementation of Blended Learning at the School of Basic Education in Kuwait.
Media Clippings		
1.	Kuwait News Agency [KUNA] (2009)	Kuwait introduces educational high tech.
2.	Virtual College	Kuwait hosts e-learning conference.
3.	Arab Times (2013)	Distance Learning makes education more accessible.
4.	US News (2015)	More Arab Region Universities Offer Blended Learning.

Each of the journal article, thesis, newspaper clipping was analysed to generate understanding of the interpretation of the relevant social groups about blended learning and its technological frame within HEIs in Kuwait (Prell, 2009). Emerging themes were identified through content analysis and the discussion of the findings was based on the role of relevant social groups/actors with their interpretive flexibility and their perception of the technological frame and how they influenced the introduction and usage of blended learning as “new” methodology of teaching and learning (Prell, 2009; Bijker et al., 1987; Bijker & Law, 1992).



Source: Prell, 2009

**FIGURE 1
INTERDEPENDENCE BETWEEN THREE SCOT CONCEPTS**

The study also attempts to generate a theoretical model how the tripartite model of social construction of technology enables our understanding of the dynamics of introducing and usage of blended learning in higher education institutions.

Findings

This study set out to investigate the various SCOT concepts that influenced the adoption and implementation of blended learning in educational institutions in Kuwait with particular reference to accounting education (Prell, 2009). Using a web survey of journal articles, PhD theses and media clipping and focusing on the SCOT framework, particularly the works of Prell (2009), the role of the relevant social groups in the introduction of blended learning in Kuwait's institutions of higher learning and their interpretive flexibility and their view of technological frame was analysed. According the analyses, the relevant social groups in Kuwait's HEIs that were responsible for guiding or constraining the introduction of blended learning included, politicians, management, lecturers, students, IT Specialists and other employees. Kline & Pinch (1996) and Pinch & Bijker (1987) argue that social groups are critical in the generating common meanings about certain artifacts, such as blended learning (Prell, 2009). Although the study was intended to focus on blended learning and its influence of accounting education, there were no specific journal articles, PhD theses and media clippings that provided specific evidence on accounting education. However, the evidence derived was generic and was about the perceptions of various relevant social groups, included those in relation to accounting education, about blended learning in HEIs in Kuwait. The HEIs studied provided accounting education as part of their programs of study.

Politicians

Politicians play a strategic role in the introduction and enforcement of “*best practices*”, such as blended learning. This is usually achieved through policy directions and support extended to institutions by political leaders, as a relevant social group in HIEs (Prell, 2009). In the case of Kuwait, the Ministry of Education played a key role in providing supporting environment and infrastructure for the introduction of blended learning which was believed to contribute to learning outcomes (Poon, 2013; O’Keefe et al., 2014; Grabinski et al., 2015).

The politicians in the Ministry of Education and Higher Education, through their coercive mechanisms, higher educational institutions in Kuwait were forced to adopt and implement “*best practices*”, such as blended learning, for their political interests (Yousef, 2013). For instance, Yousef (2013) revealed an influence of the ministry of education of Kuwait in enforcing a shift from traditional classroom-based learning to blended learning. The politicians in the ministry had generated an interpretation that blended learning was a panacea for improving educational outcomes and would produce creative thinking students who could fit global standards (KUNA, 20/07/2009). Through their perceived benefits of the “*new*” technologies, politicians generated and shared meanings about the potential of the “*new*” artifacts (Prell, 2009).

A survey of journal articles, theses and press clippings revealed several authors who directly and indirectly have documented evidence about the role of politicians in the adoption and usage of blended learning in Kuwait's institutions of higher learning (KUNA, 2009; Arab Times, 2013). For instance, Kuwait News Agency [KUNA] (2009) reported the Minister of Education and Higher Education, Moudhi Al-Humoud saying that her ministry was to introduce modern technological applications to support learning and teaching processes. She was quoted saying that: “*ministry’s blueprint purposed to revamp the education system with a view of creating a conscious and self-educated generation capable of keeping abreast of global technological advancement*” (KUNA, 20/07/2009).

The politicians in the Kuwait government had a perception that investing in the “new” learning artifact, blended learning would make Kuwaitis to compete favorably in the global markets. While addressing the Cabinet meeting, the Minister of Education and Higher Education argued that in order to reform the education system in Kuwait to harness blended learning, it required strategic investment in IT infrastructure. The Minister highlighted what was needed to achieve success as: *“the provision of relevant educational equipment and practical interactive materials, together with an educational portal and wireless networks in schools”* (KUNA, 20/07/2009).

However, the Minister did not pay attention to how the staff in the educational institutions would perceive of the “new” technology in schools. She did not take into account, then, the interpretive flexibility of the lecturers and teachers with regard to the technological frame of the blended learning (Prell, 2009). Her perception was that the technical technological frame of blended learning was more important than the social interpretive flexibility of the lecturers/teachers (Kline & Pinch, 1996). Thus, the introduction of blended learning in Kuwait was not smooth as it was intended. On 23rd November, 2010, The Educational Holding Group hosted a conference under the patronage of the Minister of Education and Higher Education, Dr. Moudhi Al-Humoud (Virtual College, 2010). The purpose of the conference was to examine the role of the lecturers in the blended learning mode. It was observed that the lecturer was a key and relevant social group in the management of blended learning. The Minister said: *“Human capital training and HR resources were looked at, while new prospects for learning were also touched upon”*. (Virtual College, 2010; assessed on 11/05/2018).

The Chairperson of the Education Holding Group, Dr AbdulRahman Al-Muhailan, in support of investment in the human resource with regard to blended learning, observed that: *“We believe that the e-learning concept [part of blended learning] will only succeed if our human assets are fully prepared and motivated to apply the new ICT skills and abilities in the teaching and learning environment”* Virtual College, 2010; assessed on 11/05/2018.

The Arab Times of 26th November 2013 quoted the Minister of Education, Dr Nayef Al-Hajraf describing open learning (blended learning) as: *“We are now very keen as information shared with other countries as well as the open learning will help highlight many programs in the Arab world as also in the development of our society”*.

In order to entrench blended learning in higher education, the Ministry of Education and Higher Education strategically made the local conditions for accreditation of programs that require between 25% to 50% of each of the courses to be face-to-face and the rest 50% to 75% to be online. Thus, blended learning is encouraged in higher educational institutions in Kuwait (Arab Times, 2013). Further to underscore blended learning, it has been noted that the ministries of higher education in the Arab countries that fully online qualifications without blending with face-to-face are not recognised in these countries, including Kuwait (US News, November, 10, 2015: accessed on 10th May 2018).

Management

Management is a social group whose composition is critical in generating common understanding about an artifact, such as blended learning (Prell, 2009). Management is a key social group that is capable of generating and share meanings which can influence others into adopting and usage of the “new” technology (Alkharang, 2014; Sayed & Baker, 2014). Through their interpretive flexibility, especially on the technological frame, management’s decisions and actions can guide or constrain the adoption and implementation on “new” technological

innovations (Prell, 2009). If management perceive the “*new*” artifact as panacea for improving their operational efficiency and effectiveness, they are likely to marshal resources into investments in the innovation (Alkharang, 2014). On the other hand, if management is not convinced about the potential of new technological innovations, they are likely to constrain the usage of the new technology (Sayed & Baker, 2014). Through their interpretation of the technological frame of blended learning management can deploy their resources into enabling or otherwise the introduction of “*new*” technologies (Prell, 2009).

A number of authors have evidence of the role of management in the introduction and enforcement of blended learning in Kuwait’s institutions of higher learning (Alkharang, 2014; Sayed & Baker, 2014). Alkharang (2014) studied the factors that influenced the adoption of e-learning (part of blended learning) in both public and private higher education institutions in Kuwait. Alkharang (2014) revealed lack of management awareness and support of blended learning as one of the factors that failed the usage of blended learning. This indicates that in any adoption and implementation of a “*new*” artifact, such blended learning, and management is critical as a buy-in of the technology through the technological frame attached to it (Prell, 2009).

However, in the case of Kuwait, various authors have observed minimal or no management support to tap the potential of blended learning (Sayed & Baker, 2014). For instance, Sayed & Baker (2014) highlighted the importance of management in constraining the institutionalisation of blended learning in Kuwait. Their study revealed that management was not willing to harness the potential of blended learning and that they were reluctant to invest into it (Alkharang, 2014).

Lecturers

The usage of new technological advancements, such as blended learning, in the pursuit of educational outcomes, is highly influenced by the lecturers or tutors (Ying and Yang, 2017; Jeffrey et al., 2014). This social group is critical in the design of relevant curriculum, delivery of teaching, supporting the learning processes and undertaking effective assessments (Alfelaij, 2016; Sharafuddin & Allani, 2012; Sayed & Baker, 2014; Al-Fadhli, 2008). A shift from the traditional classroom-based teaching and learning to a blended learning approach requires full support from the lecturers and tutors (Virtual College, 2010). Their acceptance or rejection of the “*new*” teaching methodologies will depend entirely on their interpretation of the “*new*” artifact (Prell, 2009).

The analysis of various journal articles and theses has indicated divergent views of lecturers and tutors about blended learning the pursuit of learning outcomes (Sharafuddin & Allani, 2012; Sayed & Baker, 2014; Al-Fadhli, 2008). Indeed, the analysis has revealed two main categories of this relevant social group: techno-ready and technophobic lecturers as elaborated below:

Techno-ready lecturers

Techno-ready lecturers are considered as social groups within the educational setting, whose belief about the blended learning is that its benefits are critical for the success of learning outcomes (Virtual College, 2010). These groups possess relevant IT skills to enable them appreciate and harness “*new*” and “*modern*” technologies, such as blended learning in their teaching processes (Alfelaij, 2016). Their perception of the technological frame of blended learning is that it empowers learners to become critical and independent thinkers and above all it

has inherent properties to reduce the cost of education (ibid, 2016). Thus, this group is like to adopt and use blended learning in their teaching processes. For instance, Alfelaj (2016) observed that blended learning was seen by some lecturers as a panacea to cope with growing numbers of students. He provided that in 2014 Kuwait University admitted about 6,900 students who were beyond the carrying capacity of the university.

Technophobic lecturers

As opposed to the preceding social group, technophobic lecturers are those with insufficient IT skills to support them in designing curriculum and content that can enhance blended learning (Sayed & Baker, 2014; Sharafuddin & Allani, 2012). In addition, it includes those lecturers who view blended learning as disempowering them as providers of learning and teaching; and view the “*new*” technologies as privileging other social groups than them (Sharafuddin & Allani, 2014).

Drawing from their interpretive flexibility on the technological frame as provided by the “*new*” technology, this social group is likely to constrain the adoption and usage of blended learning (Sayed & Baker, 2014; Sharafuddin & Allani, 2012; Al-Fadhli, 2008). For instance, Sayed & Baker (2014) revealed that lecturers were not willing to use blended learning approach because they did not believe it as a solution to learning and teaching (Sharafuddin & Allani, 2014). The major reason for their disbelief in blended learning was that they did not have sufficient IT skills and that their institution was not well-prepared in terms of infrastructure to support blended learning.

Technophobic lecturers generated a common meaning that technology in education was not possible to produce appropriate learning outcomes and preferred the traditional classroom-based learning approach (Sharafuddin & Allani, 2012). For instance, Sharafuddin & Allani (2012) revealed that lecturers in Kuwait had a belief that tutorials which supplemented online learning were insufficient to cover the subject content. They opted for the class interactions as the best mode of delivery of learning outcomes (Sayed & Baker, 2014). Their perception of the technological frame in relation to blended learning was that it was not providing enough support for the learners to acquire the relevant skills; knowledge and attitudes, which invariably are critical for the learning outcomes of any educational undertaking (Prell, 2009).

Furthermore, technophobic lecturers perceive of blended learning as requiring more time to prepare relevant materials for the learners to interact on, which they were not willing to provide (Sayed & Baker, 2014). Their interpretation of the blended learning is that it would take most of their time in preparing learning content that has to be uploaded on online learning platforms (Sharafuddin & Allani, 2012). Their take on blended learning in respect to the social technological frame is that it would deprive them of their time for their social interactions as they have to engage with the blended learning and its real time feedback mechanism that is time consuming (Al-Fadhli, 2008).

Students and learners

Students are one of the most crucial social groups that affect and are affected by blended learning. Their interpretation of the technical, social and economic possibilities of blended learning is critical for its success or failure (Al-Fadhli, 2008; Sayed & Baker, 2014). Based on their perception of the “*new*” learning mode, students may acknowledge or reject the “*new*” artifact, such as blended learning (Poon, 2013). For instance, young learners may appreciate

“new” learning technologies and may be motivated to harness them in their learning processes (Al-Fadhli, 2008). Likewise, the working learners may easily accept flexible learning methodologies, such as blended learning because they enable them to balance various socio-economic commitments (Allani & Sharafuddin, 2014; Alruwaih, 2015; Alkandari, 2015). Generally, the students who perceived blended learning as useful were seen to use it in their learning (Alkandari, 2015). This is because blended learning provided them with flexibility to learn from anywhere and anytime (Lalima and Dangwal, 2017, Poon, 2013). For instance, a study carried out by Alkandari (2015) on the students’ attitudes towards blended learning, revealed that majority of them considered blended learning as useful to their learning. The specific subgroups within this social setting are analysed below:

Female students

Within the social group of students are female students whose gender and Arabic cultural dimensions restrict their social interactions in a traditional classroom-setting (Al-Fadhli, 2008). According to Arabic cultural, for instance, males and females do not physically interact in a classroom-setting. However, with blended learning, the social interactions can be made possible because of technology (Poon, 2013). Authors have revealed that female students are willing to take on blended learning because of its potential to interact with other students, irrespective of gender (Al-Fadhli, 2008). For instance, Al-Fadhli (2008) revealed that blended learning was mitigating the restrictions on social interactions imposed onto female students by the Arab culture and norms which segregate students by gender and thus study separately. Males are not supposed to study with females in “*brick*” institutions. However, in the “*click*” institutions, males can easily collaborate with females online which, according to Al-Fadhli (2008), was observed as improving learning outcomes in the Arab state of Kuwait (Poon, 2013; O’Keefe et al., 2014; Grabinski et al., 2015).

In addition, female students have to balance their social obligations with the intentions of improving their academic careers while studying at home (Al-Fadhli, 2008). According to Al-Fadhli (2008), blended learning was seen as facilitating the balance between academic progression and social commitments of female students in the Arabic setting.

Working students

Working students face a lot of challenges, especially when they want to upgrade their skills and knowledge. It is an uphill task to balance the work commitments and academic progression. However, with blended learning, working students can cope with the challenges through online learning and other learning methodologies which do not necessarily require them to travel to their institutions (Poon, 2013; O’Keefe et al., 2014). Many working students have embraced blended learning as a technological frame that enables them to study without disrupting their job commitments (Allani & Sharafuddin, 2014; Alruwaih, 2015).

In their study, Allani & Sharafuddin (2014) observed that at Arab Open University, Kuwait, a number of students, especially of the working class, particularly full-time mothers, embraced blended learning as learning methodology. This helped them to balance their social commitments with academic achievements. Notwithstanding, Alruwaih (2015) revealed that even though blended learning was introduced in HEIs in Kuwait, the working-class learners preferred face-to-face interactions with the lecturers was more effective (Jeffrey et al., 2014; O’Keefe et al., 2014; Grabinski et al., 2015).

Technophobic students

Notwithstanding all the above, there are students whose technological skills are wanting. Their perception of the “*new*” artifacts, such as blended learning, is that they cannot benefit from new technological advancements for which they lack skills (Sayed & Baker, 2014; Aldhafeeri & Male, 2016). For instance, Sayed & Baker (2014) revealed that learners shunned blended learning because they were technophobic and they were not motivated to harness its potential for the advancement of learning outcomes (Warschauer et al., 2012; Grabinski et al., 2015). Similarly, Aldhafeeri & Male (2016) observed that due to the technophobic tendencies, students believed that more learning was taking place in traditional classrooms rather than online and were likely not to use blended learning.

IT specialists

With “*new*” technologies in place and its integration in teaching and learning processes, IT professionals strategically positioned themselves in higher educational institutions in Kuwait (Ying and Yang, 2017; Lam, 2015; Moskal et al., 2013). This relevel social group as far as the adoption and implementation of blended learning is concerned took up a center stage as IT-enabled curriculum designers rather than merely providing technical support (Sharafuddin & Allani, 2014). Their interpretive flexibility with regard to the technological frame of blended learning is that its introduction and usage in the teaching and learning processes does not only improve the learning outcomes, but also privileges them as indispensable relevant social group in higher institutions of learning (Alkharang, 2014). For instance, Alkharang (2014) revealed that IT professionals were strategically placed as enablers of blended learning in Kuwait. Given the technophobic tendencies of some faculty members, especially the mature lecturers, these IT professionals assumed the enabling role in the design and implementation of blended learning in Kuwait (ibid, 2014).

Other employees

Whereas blended learning was mainly introduced in Kuwait to support teaching and learning processes, the administrative functions of higher education institutions reaped big from the benefits of the “*new*” teaching and learning methodology (Alkharang, 2014). Alkharang (2014) revealed that due to increasing students in higher education institutions in Kuwait, employees in the Academic Registrar’s departments benefitted greatly from the peripheral services of blended learning, such as quick and easy registration of students, which could easily be done online as opposed to the physical presence of students. Further, blended learning enabled the easy publication of student results online rather than physical displays on notice boards (Poon, 2013; Lalima & Dangwal, 2017; Delany et al, 2015). The interpretive flexibility of the administrative staff with regard to blended learning was that it made their work very easy and less laborious as students could easily do most of their [administrative staff] work due to automation provided by the “*new*” technological advancement (Prell, 2009). Thus, this social group generated shared meaning that blended learning had embedded capabilities to support the functions of the academic registrars, which invariably enhanced the efficiency and effectiveness of their administrative chores (Poon, 2013; Delany et al., 2015).

CONCLUSION

This paper was aimed at applying a tripartite model of social construction of technology in studying the prospects and challenges of blended learning in HEIs in Kuwait, with specific reference to accounting education. The tripartite model is made of the relevant social groups; their interpretive flexibility and the technological frame. Thus, this study analysed the relevant social groups in the adoption and usage of blended learning in HEIs in Kuwait focusing on their interpretive flexibility and the technological frame of the blended learning in general, and how it affects accounting education in particular (Prell, 2009; Poon, 2013). The study revealed that the relevant social groups were majorly categorized into two:

1. Those who interpreted blended learning as panacea for improving learning outcomes. These included politicians, female and working students, IT professionals and other administrative staff (Delany et al., 2015; Megeid, 2014; O'Keefe et al., 2014; Grabinski et al., 2015; Du, 2011; Kistow, 2011; Chen and Jones, 2008; Lam, 2015). For instance, the IT professionals wanted to position themselves strategically as indispensable social group in higher education through the usage of blended learning. This is an indication of one social group that used technology to secure a privileged position in society (Prell, 2009).
2. Those who perceived blended learning as challenging. These included management, technophobic lecturers and students (Lalima and Dangwal, 2017; Jeffrey et al., 2014; Green et al., 2009; Ying and Yang, 2017). For instance, it was revealed that technophobic lecturers, particularly the mature ones, lacked requisite IT skills to support blended learning (Ying and Yang, 2017; Jeffrey et al., 2014). Thus, in order to have a successful implementation of blended learning, staff development is a prerequisite (Ying and Yang, 2017; Jeffrey et al., 2014). For any innovation to be accepted by users and to succeed in its implementation, the users need to be equipped with appropriate skills and knowledge (Lam, 2015; Moskal et al., 2013). This may help in reducing on the technophobia (Warschauer et al., 2012; Jeffrey et al., 2014).

This study has revealed that different social groups had different interpretation of the technological frame of blended learning (Prell, 2009; Jones & Bissell, 2011; Kline & Pinch, 1996). This had serious consequences of guiding or constraining the introduction and usage of blended learning in HEIs in Kuwait, in general and in particular, accounting education (Jones & Bissell, 2011; Bijker & Law, 1992).

This paper makes a contribution to the study of technology by adopting a tripartite model of social construction of technology to study blended learning, as a “new” technology being applied in HEIs in Kuwait. Although the paper was based on general findings about the introduction and usage of blended learning in HEIs, it can be applied to accounting education (Grabinski et al., 2015; Kistow, 2011; Suhail et al., 2013; Wong, 2012; Kashora et al., 2016; Wong et al., 2017). This is mainly because blended learning was introduced and used across all disciplines in HEIs in Kuwait, including accounting education.

More studies are needed to incorporate all SCOT concepts as advanced by Prell (2009) in understanding the application of blended learning, specifically with regard to accounting education in Kuwait.

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