BLENDED LEARNING IN THE UNITED ARAB EMIRATES: DEVELOPMENT OF AN ADAPTABILITY MODEL

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Abstract

This Research in progress presents a gap in the current literature and a project which will explore the adaptation of undergraduate students to blended learning environments within tertiary education in the UAE. Blended learning environments are becoming increasingly common in global higher education and this trend has spread to the UAE. This study will focus on students who have been exposed to a highly traditional school education and examine individual, social and cultural factors that influence the adaptation to a novel blended learning environment.

Keywords: Blended learning, Academic caring, Social interaction, Self-efficacy, Academic achievement.

1. Introduction

The United Arab Emirates (UAE) is the Middle East regional hub for quality higher education. There are 103,431 students enrolled in 75 public and private higher education institutes, many of which are branches to world-renowned universities and colleges (CAA, 2011). It is worth mentioning that in the Middle East, a region known for high unemployment because of the "low productivity of education" (Isfahani, 2010), the UAE has taken the lead in educational evolution.

This evolution is eminently underlined in the country's 2021 vision initiative. The UAE government promises first rate education built around innovation, research, science and technology. Students' achievement is at the core of this vision and preparing them to lead the country into the global digital economy is the ultimate goal of this initiative (Vision 2021, 2011). UAE educational bodies such as ministry of higher education and scientific research (MOHSER) and ministry of education (MOE) are the prime targets of the UAE education vision. In particular, universities are the key players in preparing students for the digital economy. Under MOE, UAE public education is still largely a traditional face-to-face, teacher centric education system (ADEC, 2009). However, MOHSER have driven the changes in higher education and forced public higher education institutes (PHEI) to re-align their strategies to accomplish the vision (HBMEU, 2011). As the vision's success depends on proper implementation, UAE PHEI has undergone changes to re-align their strategies to accommodate this ambitious vision. A shift in accreditation requirement has driven these institutes to adopt Learning Management Systems (LMS). Colleges have either established in-house LMS, or purchased a Blackboard solution to leverage the benefits of active learning to their students (HBMEU, 2011). This step was deemed necessary to create a technology assisted educational environment, better known as blended learning (Randeree & Narwani, 2009).

MacDonald (2008) defines blended learning as a mixture of synchronous technology (video, audio) and asynchronous media (like emails, blogs) of information and communication delivery. MacDonald (2008) also relate it to a way where both online and on campus methods are used to

conduct and deliver instructions for courses. Blended learning is a learning environment where an on campus study mode is augmented with an online study mode. In this environment students interact with course content, communicate with other students and instructors through discussion form threads, emails and chats to learn the course material, do their assignment, receive feedback and check their academic results. Blended learning is built around web 2.0 technologies, such as wikis, social networks, podcasts and virtual environment (Cakir, Karadeniz, & Uluyol, 2009). Blended courses mix both online and traditional modes of instruction delivery and carry 31-79% of course content online, with frequent online discussions and less on-campus interactions (Allen & Seaman, 2010).

However, in contrast to the merits of the UAE education initiative, some practices within UAE PHEI have had a major impact on many UAE undergraduate students, which has led them to academic failure. As many as 40% of UAE male undergraduates drop out of college within their first year (Swan, 2012). Some experts in the field link the weak performance of UAE students to their social environment where students feel that if their academic standing is not satisfactory, they can leave and join the military or police or "work in the business field or some other socio-cultural reasons" (Fayed, 2010).

Other studies link weak student achievement to academic support. Alrawi et al. 2012 conducted research on the barriers of LMS adaptation amongst UAE HEI academics. The interviews included 31 UAE HEI academics. They concluded that lack of motivation and induction programs are the main barriers to fruitful extraction of knowledge management in LMS required for the facilitation of student blended learning experiences. Not surprisingly, a study done by Qashoa (2006) on UAE students has revealed that poor instructor support has a negative impact on the student learning experience and academic standing. However, instead of looking into the social factors that impact students' academic standing in blended learning, some UAE PHEI raised the entry bar requirements, filtering out 3,250 students a year labelled as 'low-achieving school leavers'[15]. Understanding what impacts students' academic standings in these environments is an issue that has to be addressed (Swan, 2012).

As UAE students enter PHEI, they move from teacher-centric education to learner-centric education where challenges of adaptability arise (Burt, 2004) . In active learning, students are socially and academically engaged in the college learning community. An inability to adapt to this environment has challenging effects on students, leading to unsatisfactory academic achievement. A scientific approach is needed to understand the academic standing effect of the UAE student social learning experience. Which of these social factors do students consider as challenges and which are considered as conducive to their studies and academic achievement? Student perceptions of their social learning engagement in blended environments needs further insight to understand more effectively what affects UAE undergraduate student academic achievement in this context. This insight will help enrich the understanding of all stakeholders and customize the blended learning environment to encourage student academic success. This in turn will help align higher education reforms to student needs to realize the country's vision of a UAE future workforce equipped with the necessary knowledge to enter the digital economy.

2. Literature Review
2.1 Social Constructivist Theory

In constructivist theory, a branch of the psychology of learning, learners engage in mental activities to construct knowledge about the world internally (Pritchard, 2008). In social constructivist pedagogy, learning is considered to be a product of social interactions (Anderson

& Dron, 2010) where students play an active role in fostering this product. In this form of learning, one builds one's knowledge through interaction with the surrounding environment Challenges and people are important to students who become active learners (Murphy, 1997). They interpret the learning experience, meaning and social context to mentally extract knowledge (Jordan, 2008). Technology plays an active role in leveraging social-constructive learning environments. Distance education theorists (Garrison, 2008; Nipper, 2010) and researchers (Borokhovski et al., 2012; Holt & Thompson, 1998; Saba, 2005) have considered earlier generations of distance education as technology-based education. This consideration helped define subsequent generations of distance education as technology progressed. As technologies like social networks and web 2.0 became available, later generations of distance education were being viewed from a dual perspective. Blended learning, which encapsulates a distance education component, can be looked at as technology driven education in one part, while the other part is a socially driven development embedded within the pedagogy design in which a student's learning experience evolves (Moore & Kearsley, 2011; Selwyn, 2011).

Social constructivism learning builds on blended learning's synchronous and asynchronous interactions. As knowledge is socially validated, blended learning can be viewed as a social activity where learning is developed through context and interactions (Greenhow, Robelia, & Hughes, 2009). In this society, the focus is on the richness and openness of the learning environment where learners find, interact and relate content to reality (Dam, 2011). Technology adaptation, such as LMS or blackboard systems, has been viewed as a mainstream approach to leverage a constructivist learning environment in higher education where learners become active agents of knowledge (Radcliffe et al., 2008). Within this scheme, learners who take an active social role and engage in the learning environment are more likely to have better self-efficacy, motivation and academic achievement (Flores, 2011; Komarraju et al., 2011; Winne & Nesbit, 2010). This metacognitive behavior relates to students' views about learning and the degree of awareness they possess of the methods they use to learn most effectively [34, 35]. There are key factors that play an important role in a blended environment constructivist learning society. Firstly, social interaction in the form of student-to-student and student-to-instructor interactions are vital for discussion, validation and application of current knowledge to foster new knowledge [18]. Secondly, the instructor plays multiple roles as a 'guide, helper, and partner, where the content is secondary to the learning process; the source of knowledge lies primarily in experiences" (Anderson & Kanuka, 1999). This instructor role is best gauged through the academic care students use to rate his or her interest in their academic progress (Jones, 2010). Thirdly, the individual student's self-efficacy is "responsive to social (constructivist) structural influences' (Gecas, 1989). The development of self-efficacy is related to socialization outcomes that play significant role towards active social engagement in blended learning. These outcomes include self-esteem, academic achievement (Caprara et al., 2008), pro social behavior and the relationship between self-regulatory efficacy and perception of the e-Learning environment (Lee & Lee, 2008).

In this research, student-related motivation categorization stems from (Wigfield, Cambria, & Eccles, 2012) classification of motivational constructs in education. As depicted in Two groups of motivation constructs are distinguished; the individual sense of competence and control and the individuals' intrinsic motivation, interests, values and goals (Wigfield, Cambria, & Eccles, 2012). Individual sense of competence relates to students beliefs about their abilities and efficacy to perform given tasks; it's a perception about the ability and outcome control. Example constructs of this category are competence, self-efficacy and locus of control. On the other hand, the constructs of intrinsic motivation, interest, values and goals look behind the reasons of why students decide to engage in a task. Constructs like interest, task value, achievement goals and extrinsic and intrinsic motivation fall under this category of motivation research. Student who

reflect behavior related to higher motivation show better academic progress than their peers (Jones, 2009) as motivation is the most important driver to student success (Bennett & Monds, 2008). Usually, Academic underachievement is associated with lower levels of intrinsic motivation|(Gottfried, 1985; Kohn, 1993; Dev; 1997), it is important not to overlook extrinsic motivation because both modes of motivation coexist can increase intrinsic motivation. On the other hand, lower intrinsic motivation coupled with high levels of a motivation have negative impact on students and could lead them to drop out of college (Vallerand et al., 1993) . The next sections will discuss the three factors that are important in blended environment social learning: academic caring, self-efficacy, and social interactions.

2.2 Academic Caring

Caring has been referred to by researchers using different terms like belongingness, relatedness, and connectedness (Jones, 2009). For example, belongingness in a social environment, in general, has two main characteristics (Baumeister & Leary, 2000). The first characteristic is that there are frequent interactions between individuals. The second is that an individual feels that others care about his or her wellbeing. It can be stated that "a community exists when its members experience a sense of belonging or personal relatedness" (Osterman, 2000). From a student perspective, the willingness of instructors to be available and attend to their academic well-being with a level of interest in their achievement and social bonding constitutes the elements of instructor academic caring (Schiefele, 2009). There are many instructor-related factors that affect academic caring in blended learning. These factors include instructors feedback, support through e-mails, chat, and discussion groups which constitute the major elements of online academic caring (Wentzel, 2009).

[Literature gap] Academic caring influences students motivation and engagement in learning and leads to "the development of students' emotional well-being and positive sense of self, motivational orientations for social and academic outcomes, and actual social and academic skills" (Wentzel, 2009). Although there is a positive correlation between academic caring and sense of relatedness to instructor and student satisfaction, further scientific research is required. (Mason, 2012; Huan et al., 2012).

2.3 Self-Efficacy

Self-efficacy refers to the "beliefs in one's capabilities to organize and execute the courses of action required to produce given attainments" (Bandura, 1986). Self-efficacy is the foundation of human motivation and accomplishment (Bandura, 2003). In social cognitive theory, Bandura (Bandura, 1997) suggested that self-efficacy affects, and is affected by, student behaviour and environment. In an academic sense, Student self-efficacy is linked to their likely study actions, effort needed, and the duration of their persistence in challenging situations (Bandura, 1986). Students with high self-efficacy choose strategies, set up a facilitating environment, and weigh their goals to achieve desired learning objectives. Conversely, elements of behaviour and environment like feedback, academic progress and peer comparison do have an effect on self-efficacy (Bandura, 1997; Bandura, 2003; Bandura, 1986). Self-efficacy is related to a person's confidence and ability and can be measured for "different types of behaviour and for different types of domains and situations" (Hoyle, 2010).

High self-perception of competence is at the heart of self-efficacy and in education, it has an important positive impact, amongst other constructs like persistence, interest, learning, self-regulation and motivation, on student academic achievement (Knowles & Kerkman, 2007; Relich, Debus, & Walker, 1986; Schack, 1989; Schunk & Gunn, 1986; Zimmerman 7 Bandura,

1994) . In fact, self-perceptions of competence have been the core of many motivation theories like self-worth theory, self-concept and expectancy-value theories (Jones, 2009).

Students with high self-efficacy are likely to choose tasks with challenges that match their ability and be more resilient and persuasive than students with low self-efficacy (Jones, 2009). However, while Jones (2010) concluded that self-efficacy has accurately predicted student achievement, Joo et al. 2012 have found that self-efficacy failed to predict achievement. This inconclusiveness regarding the role of self-efficacy on student achievement requires further investigation.

 [Literature gap] Dittmar, Helbing-Tietze and Hasselhorn (2004) conducted a study to compare the work of Zimmerman et al. (1992) and that of Schiefele and Urhahne (2000) on self-efficacy, interest and achievement. His findings supported Schiefele and Urhahne (2000). According to Schiefele and Urhahne (2000), self-efficacy is related indirectly to goal attainment and achievement through interest as a mediator. Dittmar, Helbing-Tietze and Hasselhorn (2004) called on further confirmation research to examine Zimmerman et al. (1992) finding of the relationship between self-efficacy and goal attainment.
In addition, further understanding of the effects that cultural dimensions, individualism and collectivism have on self-efficacy is needed by means of further investigations (Wigfield et al., 2009). More cross-cultural research on the role of self-efficacy is still needed to understand the effect of different cultural values on students' perceptions of learning (Jones, 2010; Joo, Lim, & Kim, 2012; klassen, 2004; Schunk & Pajares, 2009.

2.4 Social Interaction

Human-computer communication in which the person can control some or most of the information disseminated can be defined as system interactivity. In blended learning, Online learning with good design "inspires creative productive and efficient learning" (MCEETYA, 2008). Interactivity allows students to communicate with their peers, teachers, and information both on-campus and on-line (Vaughan, 2007).   This communication can be further divided into two major types of interactions: individual and social interaction. Dougherty, Butler, & Hyde (2011) suggest that blended learning unites classroom and active learning student socialization. The learner is continuously engaged in peer-to-peer collaboration on the construction of knowledge and self-paced learning choices. Thus, social interaction in blended environment is an important element of social-constructivist learning (Anderson & Dron, 2010) that effectuates students' learning. In social interaction, students interact with peers and instructors. Van Dam (2011) noted that, as the instructor highlights the course outline and makes content available online, students play an active role reading course content, participating in online discussions, searching for referenced information, submitting assignments and taking online quizzes or tests. Students gain knowledge from their peers through social networks, forum discussions and other online interaction available within online course offerings (Smith, 2010). The effects of social interaction extend to students motivation, encouragement, feedback and responses to leverage knowledge retention, social engagement (Mahle, 2011), and academic results (Hofmann & Eaton, 2009) For the purpose of this research, social interaction will be defined as the level of online interaction between students, their peers and course instructors.

[Literature gap] There is a growing concern that the online component of blended learning is being used as an information source rather than a medium of interaction with content and social interaction with peers and instructors to foster the students' learning experience (Heirdsfield et al., 2011; Davis et al., 2007; Herrington, Reeves & Oliver, 2005; Malikowski,

Thompson, & Theis, 2007; Norton & Hathaway, 2008). Reushle (2011) emphasizes that the learning experience in blended environments "needs to be explored". Further research is required on the impact of online interactivity on academic achievement and the student education experience (Cakir et al., 2008; Keppell, Souter, & Riddle, 2011; Kim, 2012; Sheard, 2010).

2.5 Academic Achievement

The course grade is the one of the major indicators of student achievement (Galy, Downey, & Johnson, 2011). Students who choose to engage in collaborative projects and discussion questions that are challenging are said to be persistent. Persistence is linked to higher self-efficacy (Schiefele, 2009). Student achievement is a reflection of student efforts, and research has shown that students who showed higher interest than their peers have in turn achieved better results (Silivia, 2005; Briley & Tucker-Drob, 2012).

3. Research Methodology

The research study will focus on the adaptation of UAE undergraduate students to blended learning environments. Given that cultural determinants are so significant, the model will be developed after a series of in-depth interviews. From a theoretical perspective, the model will focus on individual and societal determinants which will be isolated and quantified during the analysis of qualitative data.

3.1 Objectives, Purpose, Scope and Research Questions

Table 1 summarizes the research characteristic, including the problem, questions, objectives and research guidelines

Table 1: Research Characteristics

Research Characteristics	
Area	**Description**
Research Problem	Student's perception of blended environment needs a further insight to understand what affects UAE undergraduate student's academic motivation in this context.
Research Question	"What are the determinants for academic motivation in blended learning environment in UAE?"
Research Objective	▪ To understand the factors that impact UAE undergraduate student motivation socially, culturally and from a psychological and technological perspective. ▪ To develop a framework for the factors that impact UAE undergraduate student's motivation in blended learning.

	▪ To confirm the framework by generalizing it to the student population using an instrument reference model.
Research Guideline	Exploration, prediction

Source: Developed by the researcher for the purpose of this study

There are several objectives of this research. First, this study will be pursued to understand social learning determinants in blended learning environments. Built on this understanding, a second objective will be to construct a frame work of these factors. The third objective is to confirm this framework and be able to generalize the results to the intended population.
The purpose of this study is to develop a framework for social learning determinants that influences UAE undergraduate students' academic achievement in a blended environment. Identifying the determinants affecting UAE undergraduate students in blended environments will form the scope boundaries of this research. This research will involve only the UAE public universities. Students within the vicinities of these establishments are to be the participants in the study. UAE blended learning literature is reviewed to identify gaps to support this study. This research is bound to the geographical region of the UAE and its higher education.

Figure 1depicts the research boundary layers that set the scope context of this study.
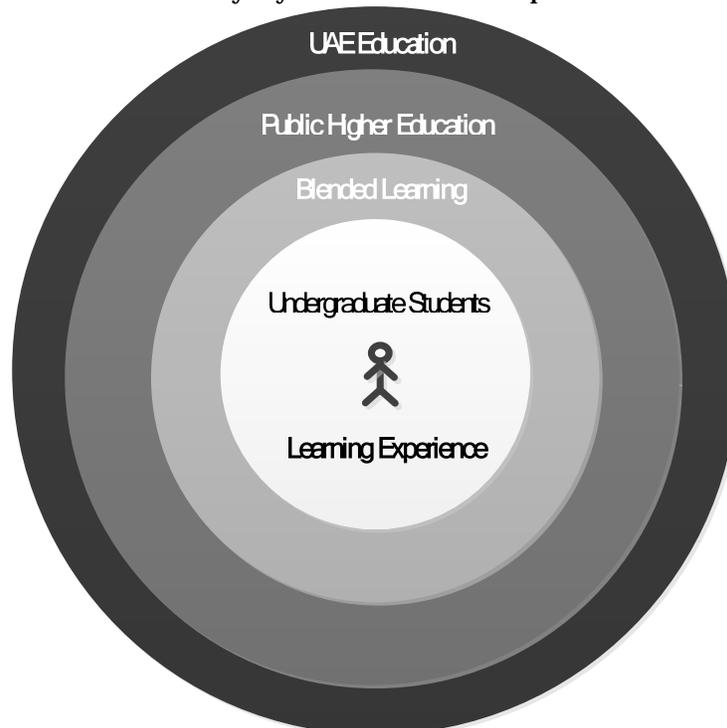
Figure 1: Research Boundaries
Source: Developed for this study.

3.2 Design

This study will comprise a two-phase mixed-method design. It is not uncommon for educational research to follow a pragmatism approach and design their research in a mixed method fashion (Ary et al., 2009; Dunn & Hansford, 1997; Lebec & Luft, 2007; Frechtling, Sharp, & Sharp, 1997).

3.2.1   Study Phase1: Qualitative study

To clarify our understandings of UAE-specific factors that impact student academic achievement, an initial exploratory phase is to be conducted to answer research sub question 1. Exploratory studies have been used in educational research to identify various phenomena or gain more insights into factors that have an effect on student learning and achievement outcomes (Ertmer et al., 2007; Dabbagh & Kitsantas, 2005). This phase will help gain a better understanding of what social issues affect student academic achievement, and acquire first-hand knowledge. The factors that will emerge from the themes and analysis of results from this phase will feed into phase 2 of the framework of the study: the quantitative part.

3.2.2   Study Phase 2: Quantitative Study

The quantitative study is conducted to confirm and refine the determinants developed in the qualitative phase. Relationships and causal effects between the determinants will be extracted in this phase. Further, the measurements in this phase will generalize the findings for the whole student population. In this phase, the research design will incorporate data collection and statistical analysis to confirm the impact of the factors at hand and including results from the qualitative phase. The researcher intends to test a measurement instrument that has been developed by integrating themes collected from the qualitative phase of the study.

However, on the basis of the findings of the quantitative study, the model obtained will be reviewed and an updated framework is most likely to emerge as a result. The approach, in which a phase builds on the previous phase results, adheres to the development purpose in Greene et al. (1989) Mixed method framework objectives. Two important elements have been considered in the research design decision: paradigm and time emphasis (Johnson & Christensen, 2012) From a paradigm emphasis, the researcher is opting for equal status of quantitative and qualitative phases. From a time order emphasis, a sequential phase implementation is to be carried out for the quantitative phase to build on the results from the qualitative phase. This means that the qualitative phase will be conducted prior to the quantitative phase.

3.3   Design Process

Multiple data sources and analyses are needed to understand complex phenomena such as understanding student's social factors and multifaceted realities (Teddlie & Tashakkori, 2003). In a multi method research, two data collection procedures or research methods from qualitative and quantitative researches are used to answer the research question. The current study uses mixed methods design in which qualitative data collection procedure, focus groups, and quantitative data collection procedure, survey questionnaires are used to answer the research questions (Teddlie & Tashakkori, 2003).

Table 2: Current Study's Mixed Method Design Typology

Typology Dimension	Details
(1) Number of strands	• multi-strand (Qualitative/Quantitative phases) • Each strand will have conceptualization, methodological, analytical and inferential stages.
(2) Type of implementation process	• The implementation process is sequential where both phases are carried in chronological order.
(3) Stage of integration between phases	• Multi-strand mixed method design
(4) Type of multi-strand design	• Sequential mixed design • The quantitative strand is designed to confirm the qualitative strand's results.

Source: Adopted from Tashakkori & Teddlie [98]

The Typology of the research design can be explained further using the three typology dimensions suggested by Tashakkori and Teddlie (2009). As can be seen in **Error! Reference source not found.**, the number of strands, or phases, the type of implementation process and stage of integration between qualitative and quantitative strands constitute the three dimensions of mixed method typology design. The result of following this process gives a sequential exploratory design. After defining the typology, the characteristics of the relationship between qualitative and quantitative phases of this research are explained further by the design cycle. This design is characterized by a qualitative phase of data collection and analysis, and then a quantitative phase of data collection and analysis (Creswell et al., 2003) A second characteristic is that the aim of having a qualitative followed by quantitative design is to be able to generalize qualitative findings about student experience to a larger sample (Morgan, 1998; Morse, 1991). These characteristics help an easy straightforward implementation and reporting. The sequential exploratory design is useful for the research to achieve its main purpose of exploring the social determinants that affects students and expanding this finding to the general population (Creswell et al., 2003).

3.4   Data Collection

3.4.1   Qualitative Focus Groups

Focus group techniques will be adopted by the researcher for the purpose of obtaining general background information (Stewart, Rook, & Shamdasani, 2007) about student perceptions in higher education in a blended learning environment. More specifically, the goal is to explore and stimulate undergraduate students to debate a particular topic; the social characteristics that are of impact on their academic achievement in blended learning contexts. This method is deemed suitable because UAE female students are more comfortable talking in a group than alone (Leedy & Ormrod, 2009). The researcher will be the facilitator or moderator (Stewart, Rook, & Shamdasani, 2007) of the discussion.   Furthermore, student interaction patterns will be of importance to the researcher for this type of unstructured interview (Morgan, 1997).These interactions will help the researcher to understand the causes behind student behavior towards their social indulgence and the effects of these participations on their academic achievement by letting them "probe each other's reasons for holding certain views" (Hobson & Townsend, 2010). While some criticize mixed methods for being comparatively more expensive than other methods, focus groups have been used in education research to save time and expenses (Hobson & Townsend, 2010; Saunders, Lewis, & Thornhill, 2009). Mixed mode methodology will help to explore the real issues associated with student social learning behavior that impact their achievement in a blended learning environment. Although having male and female students in the same focus group is normal in a western culture, it might be difficult in an Arabic culture because of physical separation of male and female campuses. It is also prohibited for males to enter female's campuses and vice versa. The researcher, being from the same culture, feels that even if males and females were jointly present in such groups, both will not be open about their experience in blended learning. Due to cultural barriers, females most probably would not open up and will feel intimidated describing their feelings or point of views in the presence of males. The researcher feels that more benefit will come from separate groups, and then the themes can be compared during data analysis. However, If the chance arises that a mixed focus group session can be setup where males and females can jointly express, share and discuss their opinions, then it will be included in the research collection methods. Otherwise, if the separation leads to varying point of views that might affect the resulting themes, it would most likely be pointed out in the study limitations.

3.4.2   Quantitative Data Collection

Questionnaires as data collection instrument forms, to be administered through face-to-face settings (Greasley, 2008). This data set will be for the student sample of the population. Prior to designing the research instrument, the following have to be determined with detailed attention: research objectives, the hypothesis, the required research information, the population and sampling technique (Nardi, 2003). The pencil-and-paper survey is the most common survey method, for it is familiar to the respondents and allows them more time to think before they write their answers (Muijs, 2004). Although an online questionnaire would be less time consuming in normal cases, the physical presence of the researcher is needed for the culture still sees that emails are inferior to face-to-face interaction.

3.5   Data Analysis

3.5.1 Qualitative Data Analysis

All focus group proceedings and semi-structured interviews will be audio recorded for later analysis. First, data entry and storage will be done through transcription (Hobson & Townsend, 2010). In this process, assistance will be employed to type all audio recordings in Arabic into written documents without any language, syntax, and grammar correction. Data analysis will follow the interim analysis techniques in which data is interpreted at different analysis phases such as segmenting, coding, identifying relationships, constructing diagrams and results corroboration (Johnson & Christensen, 2003). In the data analysis phase, NVIVO software will be used to import, code, query, take memos, visualize, reflect, and explore interview data for themes of interest (Andrew, Salamonson, & Halcomb, 2008; Cumming, Kim, & Eouanzoui, 2007; Glynn et al., 2006; Taylor & Mander, 2007; Pittam et al., 2009; Williams, Colles, & Allen, 2010). This will assist the research to use segmenting (Cohen, Manion, & Morrison, 2007), to divide data into meaningful units for analysis, and to code categorise the segment with meaningful symbols and words and create a master list of all codes used in the research study (Johnson & Christensen, 2012). With this software, the researcher will be able to work with the transcribed Arabic text to create nodes, key points, test theories, display connection, ideas and findings as tools, charts, maps and models (NVIVO, 2012).

3.5.2 Quantitative Data Analysis

IBM SPSS statistical software will be used for data analysis. This will help identify theme impacts on students. SPSS will be utilized for different tests. Multiple linear regressions will be used to assess the relation between one dependant variable and many independent variables in the research. Variables like self-efficacy and interest are independent variables (Cramer, 2003). Also, the frequency distribution of the variables will give us an insight into how many people have answered in a certain manner, or how female or male students have answered in a certain way (Cramer, 2003). Cross tabulation will be used to compare two groups: male and female student responses (Nardi, 2003). Then, Chi square will be utilized to check the significance of any possible data relationship from cross tabulation. In addition, factor analysis will be used to determine the correlation between test items such as questionnaires, measurement scales validity and relationship comparison with regression analysis (Cassady & Johnson, 2002; Cassidy & Eachus, 2000; Diseth & Martinsen, 2003; Fazey & Fazey, 2001).

3.6   Ethics

Ethics are the "principles and guidelines that help us uphold the things we value" (Johnson & Christensen, 2012). Research ethics dictates and guides the conduct of the researcher towards the research participants' rights and any other personnel affected by the research (Saunders, Lewis, & Thornhill, 2009). There are three different ethical philosophies that researchers consider when judging ethical acceptability of their studies. The first philosophy is deontological approach, in which a universal code is assumed for guiding ethical issues. The second approach is ethical scepticism where the individual's conscience decides what is right or wrong. The third approach is utilitarianism where ethical decisions are weighed to compare between the research's benefits and consequences for the participants (Johnson & Christensen, 2012). This study will follow utilitarianism approach towards ethical issues. There are three primary areas of

ethical concern for the research: the relationship between science and society, professional issues and treatment of the research participants (Johnson & Christensen, 2012). Firstly, in this study, there is a relationship between science and society in which the challenges facing students in blended learning are at the focal exploration phase of study. Secondly, from a professional point of view, the researcher is value oriented and is under no pressure from a sponsorship organization, a grant agency or the university to publish results to receive positive evaluation or promotion. This kind of pressure has led some field researchers to engage in fraudulent activities and has altered their research results (Johnson & Christensen, 2012). Thirdly, the researcher will follow strict guidelines to ensure that there is no physical or psychological harm to the participants.

There are three main ethical guidelines for this research, informed consent, deception, and protection from mental and professional risks. In Informed Consent Before any student, academic or managerial staff is to take part in the study, an informed consent will be obtained. The researcher will prepare a form containing the purpose of the research and the time it will take the participant to finish the procedures of the study. It will also include any potential research benefits, risks, results confidentiality and statements that give the potential participant the freedom to leave at any time without any penalties or consequences. The second ethical concern is deception. Deception is hiding information to misleading the participants towards actions that they might not conduct had they been told the truth (Johnson & Christensen, 2012). Although sometimes it is necessary to use deception (Butler & Neuman, 1995), this research will not implement this technique. The participants will be debriefed at the end of the study to explain all aspects of the study. It is in this debrief that all participants' questions will be answered and desensitizing (Holmes, 1976) will be implemented to help participants overcome any discomfort or distress caused by the study. The third ethical concern in educational research is protection from mental and physical harm. The researcher does not foresee any risk involved with regard to the participants of the study. In general, education research "poses minimal risk to participants" (Johnson & Christensen, 2012). Another addressed issue is confidentiality and anonymity. No information that could be used to identify participants' identity will be revealed by the researcher. In fact, in the quantitative phase, the participants' names will not be required and the researcher will end up with data that preserves the anonymity of the participants.

3.7   Contribution to Theory

To the best knowledge of the researcher, there is limited research that has been undertaken on undergraduate student's social learning experience in blended environments within UAE higher education. There is a need to fill the void in this body of knowledge. This research will contribute to the body of knowledge by uncovering the social learning elements of UAE blended environment. From a theoretical perspective, the development of a blended learning social factors model that measures student achievement will contribute to the academic achievement body of knowledge. The model will also be tested in the study. This model will be a basis for further scientific research to confirm, compare and enhance the model in general and specifically within the Gulf countries which share almost the same culture and tradition with the UAE like Saudi Arabia, Oman, Qatar, Bahrain and Kuwait.

3.8   To Practice

The researcher hopes that the finding of this research will provide further insight in the domain of blended learning for higher education sector stakeholders as follows: The understanding and results from this research will assist UAE HEI policy makers to incorporate important

stakeholder viewpoints relating to learning experiences within these institutes in their strategic planning. This will align strategies, policies and practices, by understanding what motivates students to learn. This study will give instructors, blended environment system designers and pedagogy specialists feedback on how best to design pedagogies that leverage social opportunities to realize the true potential of constructivist learning while adapting undergraduate students' needs in their learning endeavour.

4. Conclusion

UAE educational reforms have instigated public higher institutes to adapt educational technologies in order to achieve the country's vision of preparing its population for the digital economy. In an effort to mitigate the effects these technologies have on student attrition, some public universities have raised their entry requirement so as to filter students with weaker skills outside their blended learning environment. The scene is set for a scientific expedition to understand what factors affect UAE students' achievement in this blended learning environment. This paper presents a work in progress on the blended learning factors that affect UAE students as they strive to adapt to a novel learning situation. Once data collection is complete, analysis and discussion of results, alongside recommendation for both theory and practice will be made available in subsequent papers. The study seeks to discover factors that are universal as well as those that are specific to the UAE. The second phase will incorporate those factors that are identified in the interviews and present a model for testing. The research also has significant cross-cultural implications and, in the longer-term, it is envisaged that the model will be tested in other cultures.

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