

The Relation between Cultural Learning Framework and Blackboard System Acceptance: Case Study Blended Learning University-United Arab Emirate

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Abstract

Many Electronic learning (E-learning) universities have recently appeared. Students of these universities are from various cultures, and need different requirements in their studies. This study covers the Arabic learner's needs and requirements, through examines the relationship between cultural learning framework and system acceptance using Collaboration Blackboard System in online learning environment. This study used a survey to evaluate this relation using represented sample of blended learning university students in United Arab Emirate. The result shows that culture has a significant relation with acceptance in learning framework using Blackboard System. This relation between culture and acceptance differ according to cultural dimensions that have been considered in this study.

Keywords: Culture, Technology Acceptance Model (TAM), Blackboard System.

1. Introduction

Today users can get new information in science, art, management, and other knowledge, through Electronic learning systems based on website. "E-learning offers flexibility of time and place which allows higher education institutions and their student to deliver or receive learning materials in a more flexible manner" (Al-Adwan, Ahmad and Jo, 2013). The users of e-learning systems come from different cultures, age, and have different computer knowledge; as a result they should have suitable technology and easier system to use different programs that introduce to them. Also, E-learning system needs a lecture design suitable to users from different cultures. The interactive learning gets from instructor clarify the importance of learning framework that comes from the continuous communication between users and teachers.

2. Theoretical background

Researchers from different countries study different aspects online learning such as technology acceptance, cultural diversion and learning framework. Many researchers study E-learning with Blackboard system from different viewpoints. (Ransdell, 2013) study E-learning in Blackboard system; this study presented that students with more meaningful supports lectures better learning than those with less meaningful support lectures and more correlated with online materials. This study shows that "A significant percentage of online learning is predicted by meaningful posts and homework performance while total online activity does not uniquely predict learning outcomes" (Ransdell, 2013). Other researchers like (Lansari, Tubaishat and Al-Rawi, 2010) work with survey based on study institution located in the Gulf region. The study aims to know about the students' attitude toward using a Learning Management System (LMS) in Blackboard learn to assess the awareness of the students about the learning outcomes used in the university IT programs. The results show that taking online exams, assessments and check their grades online to follow up with their academic development preferred from highly percentage of students.

Most of cultural online and blended learning universities researches focus on the student from

Different cultures and few of them study the needs, requirements and suitable learning framework for students from the same culture. Number of researches introduces learning quality, (Tella, 2011) study adapting Delone and Mclean (1992, 2003) model factors and add to it, identification of educational oriented factors (teaching and learning quality, students' self-regulated learning).

This study find out these dimensions are important for measuring Blackboard System success. Other researches introduce the effect of cultural dimensions in learning framework. (Parrish & Linder-VanBerschoot, 2010) *examine Cultural Dimensions of Learning Framework (CDLF) and various favorites existing among learners; by formulate questionnaire based on CDLF. This study examines eight cultural dimensions displayed in instructional conditions. Today learning links to different educational sites become easier because of available hardware and software technology, but still there are some challenges like cultural diversions. According to Tickner, Sue & Tony Hunt, "supporting productive learning communities that span diverse cultural backgrounds remains a challenge. Online pedagogies often rely on socio-cultural methods, which require understanding and sharing"* (Tickner, Sue & Tony Hunt, 2012).

3. Culture

Lately, culture takes a significant role in different computer fields. According to Hamoodi, 2007 “Diversity of cultures may lead to many differences between peoples in their communication, exchange of information, and relationship that’s may impact on cooperation and performance” (Hamoodi, 2007).

Researcher use different culture models to examine user interface, web design, technology cultural acceptance, and culture impact on education. Plocher et al., 2002 present a few different methods to evaluate the Monochronicity or Polychronicity (M-P) in designing task environments and user interfaces for cross-cultural audiences. They introduce the results that gain from 181 respondents to show the differences among different countries (Plocher et al., 2002).

3.1 Cultural Models

3.1.1 Hofstede Cultural Dimensions (Rau et. al., 2008):

- 1- Power Distance
- 2- Individualism vs. collectivism
- 3- Uncertainty Avoidance
- 4- Masculinity vs. Femininity
- 5- Long Term vs. Short term

According to Hofstede 1991, 1994 Individualism/Collectivism refer to the degree which the ties between individuals are loose or tight (Rau et. al., 2008).

- Power Distance: the extent which the less powerful members of groups or categories expect and accept that power is distributed unequally. Some countries are regarded as High Power Distance (HPD); where less powerful people accept the inequity between people. The power is unequal between managers and subordinates, parents and children and between teachers and students. The differences in HPD countries between managers and employees are accepted in everything such as in status, income and in all other benefits. In Low Power Distance countries (LPD) people are treated equally (Ewe, 2005), (William H., 1999). According to Hofstede, societies in the USA, UK, and Germany (LPD countries) apply a lot of efforts in order to achieve power equalization. Rau et. al. (2008) explains other Hofsted dimensions from survey as follows:

-Individualism/Collectivism: The extents to which the ties between individuals are loose/ tight; Hofsted survey considers Arab countries as one group, Obeidat explain that “many researchers have investigated Arab culture and its significance. As mentioned earlier, Hofstede (1991) studied the national culture of seven Arab countries. He referred to them as the ‘Arab Group’” (Obeidat, 2012).

Hofstede characterized Arab countries (Egypt, Saudi Arabia, Iraq, Jordan and UAE) having a large power distance, relatively strongly uncertainty avoidance, high collectivism, and a moderate Masculinity / Femininity.

Other researchers consider there are some differences between Arabic countries from the same culture. (Alkaline, 2012) points that Egypt, Saudi Arabia, Iraq and UAE are similar to Jordan in terms of some important aspects like language, but these countries are still far from each other regarding of social life, educational institutions and level of literacy.

3.1.2 Trompenaars and Hampden-Turner’s seven dimensions of culture

Most important Trompenaar’s dimensions in research papers presented as follows:

- Universalism vs. Particularism

(Reis, Manuel and Joao, 2011) introduce Universalism vs. Particularism as a dimension, focus on the relation between people of a group with rules and laws (Trompenaars & Hampden-Turner, 1993). This dimension also presented by (Nawojczyk, 2006) as follows : “The process of setting and using rules and standards to regulate economic activities on the macro-social level (economy), as well as on the micro-social level (individual enter-prise), is very important”.

(Nawojczyk, 2006) also presented other dimensions as follows:

- Analysis versus synthesis: progress in any range depends on the facility to learn.
- Individualism versus collectivism: activities depend on individual initiative, entrepreneurship and individual who drive to achieve certain goals.
- Internal versus external control: individual or group must make decisions in order to accomplish goals.
- Time sequential versus synchronic: depending on the decisions in the right time for being successful in the market.
- Ascribed status versus achieved status: activity is hold by economic institutions that have a hierarchical structure.

3.1.3 Hall model

One of the important cultural models that take a significant role in computer researches is Hall model.

(Zhang at all, 2004) introduce Hall models as follows:

Hall (1989) proposed three concepts for cultural differences among people: time, context, and space.

4. System Acceptance

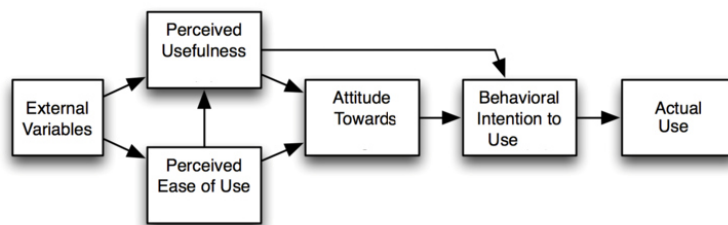
The researchers confirmed the importance of system acceptance in E-learning process to achieve the desired success. Al- Adwan, Ahmad and Jo, emphasis on their research “students’ involvement and acceptance must be considered; otherwise advanced systems will most likely fail” (Al- Adwan, Ahmad and Jo, 2013). The researchers” (Al- Adwan, Ahmad and Jo ,2013), provides an indicator of students’ acceptance of E-learning using Technology Acceptance Model as well as identifying the important factors that would contribute to its successful use.

4.1 Technology Acceptance Model (TAM)

Hamoodi, Sundus, introduce TAM model from survey, In 1989 Davis works on TAM information system theory which could define as user centered approach that measures a technology acceptance. Many factors affect when and how users use the technology.

The most important factors are according to Davis,1989:

- Perceived usefulness
- Perceived Ease of use



4.1.1 User Satisfaction

Shroff, Christopher and Eugenia, 2011, study the TAM model to examine students’ behavioral intention to use an electronic portfolio system. An Electronic-Portfolio questionnaire was made by using TAM instruments and modified where appropriate. The results of the study point to that students’ perceived ease of use (PEOU) had a significant influence on attitude towards usage (ATU), and ease of use (PEOU) had the strongest significant influence on perceived usefulness (PU) (Shroff, Christopher and Eugenia, 2011). Researchers study satisfaction as one of factors that related to use Blackboard System. Tella, 2012 examined student’s satisfaction levels with the Blackboard Learning System. The analyses in this study show the fundamental relationships between the known factors (User Satisfaction, System Quality, Content Quality, Service Quality, Teaching/Learning, Quality and Net Benefits) and the users’ satisfaction with the Blackboard Learning System (Tella, 2012).

5. Blackboard System

Today E-learning depends on different models and systems to facilitate learning process, Blackboard System considers as one of the famous system in E-learning and distance learning.

Many universities use this system to transfer knowledge to their students.” The Blackboard Learning System should inspire, motivate and guide the students to develop self- regulated learning cognitive skills (Tella, 2012). According to Bradford, Porciello, Balkon and Backus (2007), Blackboard System can be accessed from the internet at anytime and anywhere. Student can retrieve their assignments, course materials with assignments, lecture notes, slides, internet hyperlinks, and audio/visual supports.

Through Blackboard System students can make discussion, share information and knowledge, “Because the purpose of interacting in asynchronous Blackboard discussions lay in the creation and inculcation of knowledge of students into valued ways of knowing, thinking, and being, students’ epistemic stance appeared to be particularly salient (Ha, and Hyun-chul , 2014).

6. Problem study

E-learning students and learners face difficulties in learning framework that not appropriate to their culture, needs and requirements. These difficulties may lead to lose benefits from using E-learning software and make students feel annoying toward dealing with the system, that consider a challenge for students to complete their work and obtaining information to finish a specific task.

Number of studies comparing the effect of different cultures in the e-learning education type, but few of them was able to recognize the relation between culture learning framework and system acceptance (using Collaboration Blackboard System) for Arabic students. Course Management Systems (CMS) are components of

E-learning and their implementation for web-based instruction go on to extend, Blackboard is one of the Course Management Systems (Tella, 2011). According to Bradford et al, "Blackboard system allows the instructor to easily meet the needs of the students and lecture notes, audio recordings, animations, learning activities, case studies and video clips can be added very easily to the system" (Bradford et al. , 2007).

7. Research model

This research measures the relation between cultural dimensions from different cultural models and TAM model in E-learning environment using Collaborative Blackboard System.

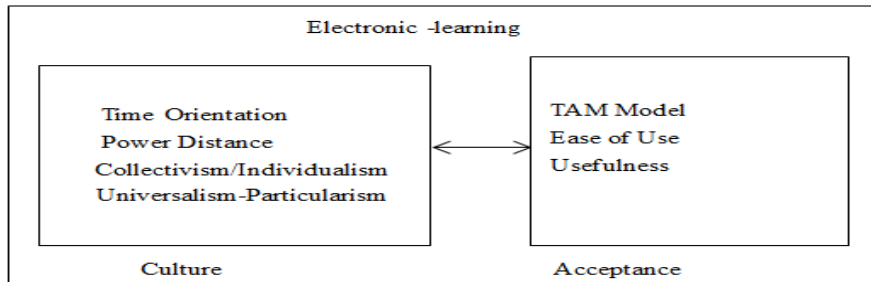


Figure 2: Research Model

8. Assumptions

H0: There is no significant relation between culture dimensions of learning framework and Acceptance in collaborative Blackboard system.

H0.1: There is no significant relation between Culture_ power distance of learning framework and Acceptance in Collaborative Blackboard System

H0.2: There is no significant relation between Culture_ time orientation of learning framework and Acceptance in Collaborative Blackboard System

H0.3: There is no significant relation between Culture_ Individual of learning framework and Acceptance in Collaborative Blackboard System

H0.4: There is no significant relation between Culture_ particularism learning framework and Acceptance in Collaborative Blackboard System

H1: There is no significant relation between culture dimensions of learning framework and usefulness in Collaborative Blackboard System.

H2: There is no significant relation between culture dimensions of learning framework and Ease of use in Collaborative Blackboard System.

9. Research Methodology

This study depends on literature review and using questionnaire

1- Investigating of existing literature related to cultural effect in website acceptance and E- learning.

2- Distributing online questionnaire.

3- Data will be analyzed and treated using SPSS program

This questionnaire takes into account dimensions from: Hall cultural dimensions- Time orientation; highly monochronic person, Hofsted cultural dimensions; Power distance, individual, Trompenaars' cultural dimensions; Universalism-Particularism.

9.1 Research Variable

The variables used in this study introduce in Table 1.

Table 1. Research variable

Cultural Variable (X)	Acceptance Dimension (y)
- Hall cultural dimensions <i>X1: Time Orientation</i>	TAM Model
- Hofsted cultural dimensions <i>X2: Power distance</i> <i>X3: Collectivism/Individualism</i>	<i>Y1: Ease of Use</i> <i>Y2: Usefulness</i>
- Trompenaars' cultural dimensions <i>X4: Universalism-Particularism</i>	

9.2 Data Collection and Statistics

The researcher collected the data using survey questionnaire method. 124 students from both undergraduate and

graduate levels in University of Creative Science (UCS) participate in this survey.

Our questionnaire consists of three sections; section one: contains demographical information (like age, gender and education. Section two: included questions about cultural dimensions from Hofstede model (Power distance, Individual), Hall model (Time Orientation) and Trompenaars' cultural model (Universalism-Particularism) adopted basically from (Parrish and Jennifer, 2010), (Tickner, Sue and Tony Hunt, 2012), (Tickner and Tony Hunt, 2012) and (Plocher, Tom, et al, 2002). The final section participates to estimate the acceptance of cultural learning framework according to two attributes of TAM model (Ease of use and Usefulness). Those two attributes measured by using USE Questionnaire (Measuring Usability with the USE Questionnaire) (Lund, Arnold M., 2001) and, IBM (Davis, 1989), using five likert scale ranging from strongly disagrees to strongly agree.

10. Results and Statistical Analysis

Students from graduate and undergraduate levels share in this survey, figure 3, shows the percentage of sharing in different levels.

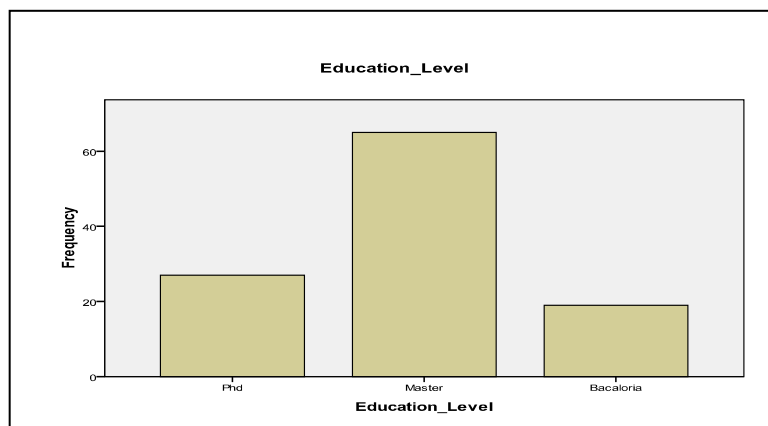


Figure 3: Descriptive analysis chart of student's educational levels

The result of data analysis found there is a relation between culture dimensions of learning framework and acceptance in Collaborative Blackboard System as follows:

- There is a positive relation between culture dimensions of learning framework and Acceptance in Collaborative Blackboard System (equal = .252)
 - There is a positive relation between culture_ time orientation of learning framework and acceptance in Collaborative Blackboard System (equal .250)
 - There is a no positive relation between culture_ power distance of learning framework and acceptance in Collaborative Blackboard System.
 - There is a positive relation between culture_ Individual of learning framework and acceptance in Collaborative Blackboard System (equal .219)
 - There is a positive relation between culture_ particularism learning framework and acceptance in Collaborative Blackboard System (equal .255)
- There is a positive relation between culture dimensions of learning framework and usefulness in Collaborative Blackboard System (equal = .234)
- There is a positive relation between culture dimensions of learning framework and Ease of use in Collaborative Blackboard System (equal .215)

11. Conclusion

This study shows, the relation of cultural learning framework and system acceptance (using Collaborative Blackboard System). The study examines different Arabic students opinions were they enroll in E-learning opportunities available for them in the UCS University in United Arab Emirate. Students share in this survey belongs to different Arab countries. As a result; cultural learning framework has a positive relation in user framework acceptance in E-learning environment using Collaborative Blackboard System. According to data analysis the researcher found that culture has a positive relation with ease of use and usefulness; most of cultural dimensions have positive relations with acceptance. The result of this study also found that power distance have no relation with learning framework acceptance while Hofstede, (Hofstede and Gert, 2005) describe Arabic culture has more power distance than the United States of America (USA) and less power distance than Malaysia. That may give a good chance for researchers to make more researches in cultural impact in E-learning

environment. According to this study, the educational institute, teachers and company which interest in educational software should take cultural aspect into account in learning framework and teaching process to improve learning task and enhance the desire outcome.

12. Future study

The researcher will explore this study to include more universities used the same type of learning (Blended Learning) to have extra comprehensive results. The researcher moving towards finding the relations between Cultural Learning Framework and user acceptance using Collaborative Blackboard System, according to education level, age and computer experience.

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