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THE IMPACT OF TECHNOLOGY AND ONLINE SKILLS & RELATIONSHIP ON THE READINESS OF THE LIBYAN STUDENTS FOR USING MOOC

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ABSTRACT

This study followed the quantitative research approach. Quantitative study methods seek to increase the objectivity of the discoveries and are appealed to prognosis. Anticipation is an important method that a researcher will share his or her practices, understanding, and preconception to ensure objectivity in the implementation of the study. The total study population of this study is the Libyan students in the University of Tripoli city. The total students at Tripoli University are 90,043 students. Based on Krejcie and Morgan (1970) sample size tables, the study sample of this study is 377 students. This study questionnaire is adopted from the previous study by the Ministry of Education in Malaysia under the National Higher Education Strategic Plan. The SPSS version 23 proposes detailed analysis options that view the data thoroughly and determine trends that have not been recognized. The correlation test is assigned to test the relationship significant and directions among the study constructs, while the regression test was used to determine the impact of each assigned factors within the construct on the dependent variable of the study. The study has found out that there are significant and positive relationships between technology skills and online skills & relationships, and readiness of Libyan students for learning by using MOOC.

1. INTRODUCTION

The higher education outcome in Libya is having serious issues (Elkaseh, Wong, & Fung, 2016). In this regard, according to the higher education ministry of Libya; the graduation rate from the Libyan university has declined sharply over the period 2011-2016, which can be sourced from the internal conflicts and lead to lower the attendance of the higher education students. This issue has formed a real challenge for the higher education system to figure out an alternative or complementary solution for this obstacle. Online courses are considered as one of the good choices for the students to fill their weakness. Elkaseh, et al. (2016) have highlighted a new learning preference by the higher education students toward employing the technology in learning.

Smith (2013) finds that students achieve high performance for information technology subject, when they spent more time learning the information technology subjects outside the classrooms. The outside classes formed an interactive environment for students rather than inside classrooms. Massive Open Online Course (MOOC) is considered as an additional step into the new era of knowledge, which works to break the constraints of limited scope of course knowledge. University students are obliged to follow their teachers and books contain, it forms a limitation of knowledge that unable to cross it. Educational institutes need to improve their strength to keep positive images with their various constituents, and the way to do this is to take full advantage of the opportunities the website provides (Caglar & Mentes, 2012). The importance of MOOC has received more attention during the last eight years, which is the age of MOOC concept. Researchers have shown that MOOC can contribute to student learning and improve their academic results in all areas (Chauhan, 2015; Follis, 2015; Zou, 2016).

Assessing the quality of education becomes one of the main pillars of ranking nations development, several global institutions have adopted different methodologies for evaluating the higher education system around the world. In this context, the Libyan higher education is out of the ranking of many assessment organizations such as the Organization for Economic Co-operation and Development (OECD, 2016). The higher education system in Libya suffers from many challenges, the lack of meeting the international standard of higher education is considered as one of the main challenges, which faces by the Libyan education system due to the unsteady situation within the country (Alzain, Clark, & Ireson, 2014; lmabruk Abdelsadeq, Ismail, & Abdullah, 2014). Several previous studies such as

(Barba, Kennedy, & Ainley, 2016; Freitas, Morgan, & Gibson, 2015; Yuan, Powell, & CETIS, 2013) find an improvement in student achievement post the implementation of the MOOC. In this regard, this study tries to fill the gap of the lack of the higher education outputs achievement in Libya by adopting the MOOCs. In addition, Brinton et al. (2014) conducted a study about the correlation between MOOC students' behavior and drop-out rates. Although the findings of this study considered discussion forum activities to understand the students' behavior, this study did not explore the impact of readiness factors of MOOC students on the completion of the course.

Based on the ministry of higher education reports; the higher education outputs over the period 2011 to 2016 is suffered a sharp declining, which is due to the higher absent percentage of students that resulted from the internal conflicts, besides the breadth of the geographical area within the country, and the lack of online libraries and open learning sources as well. This study considers this issue as an obstacle to the higher education system in Libya, as it isn't expecting to keep up with the advanced learning technology under the current situation. For this purpose, providing an integrated solution for this obstacle, the MOOCs are considered as one of the best choices for improving the students' skills and close up the resulted gap of the technology differences.

This study aims to discuss the readiness of Libyan students to use the MOOC in their processes of studies. For that matter, this article will discuss two major factors that affect the readiness of students to use the MOOC, which are technology skills and online skills & relationships.

2. LITERATURE REVIEW

The need for access to higher education in most countries has meant that traditional education adapts to the new challenges involved in the integration of information and communication technologies (ICT) in its spaces and, in addition, has forced emergence of new educational modalities such as online education and combined (or mixed) education, which are constantly evolving to meet the requirements of today's society (Cabero, 2006, Villasana & Dorrego, 2007).

In this research, the concepts used in the Technological Acceptance Model (TAM) and those of various researches (Davis, 1989a, Venkatesh, 1999, Castells, Tubella, Sancho, Díaz, & Wellman, 2002, Silvio, 2003, Rodríguez-Conde, Martínez-Abad, & Olmos-Miguelánez, 2013, Ramírez-Martinell, Casillas, & Ojeda, 2013), since the TAM since its inception has helped explain the adoption of the information systems used in small, medium and large companies and in various educational institutions. This in order to have a unified vision of the technological skills possessed by university students.

The goals to achieve to dispel the technological gap have become unattainable for many nations, so it is important to facilitate access to digital devices and the Internet, and also to take actions to reduce the knowledge gap. Now, we are also facing inequality in terms of the technology knowledge of the citizens of the countries. Tello (2007) reinforces the idea that knowledge opens the doors for the design, production, import and export of technologies that meet the needs of each place.

To base the data shown in this study, the models and theories that have been used to explain the acceptance of technology by users were examined and a link was made between the variables of the Technology Acceptance Model (Davis , 1989b) and proposals in the project "Digital divide between students and professors of the Universidad Veracruzana: cultural capital, school trajectories and academic performance, and degree of technological appropriation" (Ramírez-Martinell, Casillas & Ojeda, 2013).

The results obtained by the students of the USAC that participate in the mixed modality provide valuable data for higher education institutions, because it is corroborated that the combination of face-to-face education and online education generates a robust modality that offers excellent opportunities for society and that has been called: mixed or combined education.

The integration of the different educational modalities in higher education has forced the strengthening of the technological infrastructure and expansion of connectivity to the Internet, which has also involved extensive work in terms of training of teachers and students in the use of technology. TIC.

To successfully assume its incorporation into the intelligent organizations of 21st century society, professionals in different areas of knowledge inserted within the Western world must, inexorably, obtain competences in the use of information and communication technologies (ICTs) in their Education University or extra-university. Both public and private university have assumed, within their possibilities, this challenge by installing a techno structure in their spaces that enables their students to reach the level of technological competitiveness demanded by the so-called knowledge society or info society. Noting that 100% of them offer free access to the Internet in order for their students to explore the largest library dreamed by man. Likewise, the Venezuelan State has also responded to the call of the third millennium with the decree of Internet No. 825 issued in 2000 under the government of Hugo Chávez Frías where it is estimated:

"That the National Telecommunications Plan aims to insert the nation within the concept of the knowledge society and interrelation processes, taking into account that, for the development of these processes, the global network called the Internet, currently represents and in the years to come, a means to interrelate with the rest of the countries and an invaluable tool for the access and dissemination of ideas. For which it establishes within its articles: Article 7: "The Ministry of Education, Culture and Sports, in coordination with the Ministries of Infrastructure, Planning and Development, and of Science and Technology, will present annually the plan for the provision of access to the Internet in schools and public libraries, establishing a goal to that effect ".

The aforementioned demands university as organizations that permanently seek academic excellence, be pioneers in offering telematics services in support of their academic activities aimed at the development of technological skills that allow the new graduate to enter the socio-productive sector and meet the demands of your work environment. (National Telecommunications Plan, 2000).

According to the studies of Monroy (2002) the use of the internet in a massive way is recent (1995). However, it is essential to know the impact and use of the different segments that make up our society. Today, public and private university have a substantial investment in infrastructure for interconnectivity and the obligatory question is, are their students giving adequate academic use to the Internet? Are the university preparing their students for access to the Internet? the information available on the Internet?

The impact of the Internet in today's Venezuela is addressed in some studies, among which stand out: the Digital Trends, whose objective is focused on market research, technology and the Internet, to enable decision making in all aspects related to the online world such as advertising, content and electronic commerce, among others. (Digital Trends, 2006). In the results of his latest study on "penetration and use of the Internet in Venezuela" it is asserted that currently the number of users is located by the end of 2005 in two million people, while Venezuelans who have ever used Internet amount to three million four hundred and seventy-five thousand.

Of this population, 62% have higher education while 32% have only secondary education, with these users concentrating in D and E strata by 81%. On the other hand, the favorite place of connection is through cybercafés, while only 10% indicate their preference for study centers and 20% at home. Situation that allows us to interpret that university do not have enough techno structure to meet the information needs of their students. Aspect that we will return later to discuss the results obtained in the present investigation.

Another study on this topic was made by Portillo (2000) who determined the use of telematics services for teaching and study purposes by professors from the Faculties of Humanities and Education and Architecture of the University of Zulia. Likewise, the incidence of some factors was verified with the use or not of said services, namely: user characteristics (age, sex, level of education, user category, geographical location), level of training, level of information satisfaction, availability of access, and benefits obtained.

3. METHODOLOGY

This study experienced the quantitative methodology of research. The methodology incorporates four parts such as study design, measurement, the process of data collection and data analysis method. All of these parts are described in this study. The methodology of study provides the important method that collects, gauges and analyzed the information. There are different means and instruments that can be exercised by researchers for grasping essential information.

Quantitative study methods seek to increase objectivity of the discoveries, and are appealed to prognosis. Anticipation is important method that a researcher will share his or her practices, understanding, and preconception to ensure objectivity in the implementation of the study. The important methods of several quantitative studies are the utilization of tools like surveys to gather data, and improve on feasible theory to analyze the statistical hypotheses that respond to the questions of research.

Total study population of this study is the Libyan students in the university of Tripoli city. Identifying the proper sample size for a study is that able to give a wide perception toward answering the study question. Several previous studies have paid attention toward determining the optimal sample size for research. Krejcie and Morgan (1970) come out with an equation that takes into consideration the clusters proportion within the population and the needed accuracy level. The total students at Tripoli University are 90,043 students. Based on Krejcie and Morgan (1970) sample size tables, the study sample of this study is 377 students.

This study questionnaire is adopted from previous study by the Ministry of Education in Malaysia under the National Higher Education Strategic Plan, which has conducted for the purpose of assessing the readiness of the high education students for MOOCs.

Collecting the primary data of this study was hand by hand from the respondents in the study location in Tripoli city. Before proceeding to the data collection, a permission request was sent to each university management to get the approval to collect the data. The expected time for collecting the primary data was one month.

The whole data was mainly entered into Microsoft Excel and then analyzed with SPSS software. The SPSS version 23 proposes detailed analysis options that view the data thoroughly and determine trends that have not been recognized.
The correlation test is assigned to test the relationship significant and directions among the study constructs, while the regression test was used to determine the impact of each assigned factors within the construct on the dependent variable of the study.

4. DATA ANALYSIS AND RESULTS

This study has used a random sampling method in terms of distributing the questionnaires and selecting the samples for the study. Using this type of technique requires analyzing the respondents' profiles. The respondents' profiles test aims to identify and recognize each sample that was selected to participate in the research. The main reason for the respondents' profiles test is to make sure that all the samples were chosen and selected randomly. This test has several classifications to identify the respondents, which are gender, age, educational level, and experience of using Internet.
The male category possessed 51.8 % of the total number of respondents, with n = 192. The female category possessed 48.2 % of the total number of respondents, with n = 179. The age category was including from 18 – 25 years old category possessed 49.3 % of the total number of respondents, with n = 183. From 26 – 35 years old category possessed 39.6 % of the total number of respondents, with n = 147. From 36 – 45 years old category possessed 8.4 % of the total number of respondents, with n = 31. From 46 and above years old category possessed 2.7 % of the total number of respondents, with n = 10. While the educational level category was containing, the diploma category possessed 28.8 % of the total number of respondents, with n = 107. The bachelor category possessed 63.6 % of the total number of respondents, with n = 236. The master category possessed 7.5 % of the total number of respondents, with n = 28.
Lastly, the experience with internet category contained, From 1 – 3 years of experience category possessed 40.4 % of the total number of respondents, with n = 150. From 4 – 6 years of experience category possessed 29.6 % of the total number of respondents, with n = 110. From 7 – 8 years of experience category possessed 25.3 % of the total number of respondents, with n = 49. From 9 and above years of experience category possessed 4.6 % of the total number of respondents, with n = 17.

Table 1: Respondents profile

	Frequency	%		Frequency	%
Gender			**Educational Level**	55	45.1
Male	192	51.8	Diploma	107	28.8
Female	179	48.2	Bachelor	236	63.6
			Master	28	7.5
Age					
18 - 25 years old	183	49.3	**Experience of Using Internet**		
26 - 35 years old	147	39.6	From 1 – 3 years	150	40.4
36 - 45 years old	31	8.4	From 4 – 6 years	110	29.6
46 years old & Above	10	2.7	From 7 – 8 years	94	25.3
			From 9 and above years	17	4.6

The reliability test of the technical skills and online skills & relationships and readiness of Libyan students for learning by using MOOC variables show that there is a great internal consistency for all the variable's items. According to Table 2, the Chronbach Alpha values of the technical skills and online skills & relationships, and readiness of Libyan students for learning by using MOOC variables are equal to 0.760, 0.794, and 0.894 respectively.

Table 2 Reliability test

No	Variable	Items	Cronbach Alpha
1	Technology Skills	3	0.760
2	Online Skills & Relationships	9	0.794
3	The Readiness of Libyan Students for Learning by using MOOC	14	0.894

For the purpose of identifying the relationship between technical skills and online skills & relationships, and the readiness of Libyan students for learning by using MOOC, the correlation test is employed. Table 3 shows significant and positive relationships between technology skills and online skills & relationships, and readiness of Libyan students for learning by using MOOC.

Table 3 Correlations Test Analysis

Independent variables		The Readiness of Libyan Students for Learning by using MOOC
Technology Skills	Pearson Correlation Sig. (2-tailed)	. 191 .000
Online Skills & Relationships	Pearson Correlation Sig. (2-tailed)	**.295** .000

The regression test for this study was implemented to find out the future contribution of the dependent variable based on the independent variables. The multiple linear regression shows that the two variables (technology skills and online skills & relationships) have significant values less than 0.05 (0.006 and 0.003) which means The Readiness of Libyan Students for Learning by using MOOC is influenced by these three variables in the multiple linear regression model.

Table 4 Regression test for the first dependent variable adequacy feature

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	3.890	.232		16.558	.000
Technology Skills	.003	.060	.004	4.055	.006
Online Skills & Relationships	.216	.071	.197	3.025	.003

According to the current research, it was found that there are significant and positive relationships between technology skills and online skills & relationships, and readiness of Libyan students for learning by using MOOC. Stating that Pearson correlation values for the variables were (0.191, and 0.295).

In several researches, the concepts used in the Technological Acceptance Model (TAM) and those of various researches (Davis, 1989a, Venkatesh, 1999, Castells, Tubella, Sancho, Díaz, & Wellman, 2002, Silvio, 2003, Rodríguez-Conde, Martínez-Abad, & Olmos-Miguelánez, 2013, Ramírez-Martinell, Casillas, & Ojeda, 2013), since the TAM since its inception has helped explain the adoption of the information systems used in small, medium and large companies and in various educational institutions. This in order to have a unified vision of the technological skills possessed by university students.

The goals to achieve to dispel the technological gap have become unattainable for many nations, so it is important to facilitate access to digital devices and the Internet, and also to take actions to reduce the knowledge gap. Now, we are also facing inequality in terms of the technology knowledge of the citizens of the countries. Tello (2007) reinforces the idea that knowledge opens the doors for the design, production, import and export of technologies that meet the needs of each place.

To base the data shown in this study, the models and theories that have been used to explain the acceptance of technology by users were examined and a link was made between the variables of the Technology Acceptance Model (Davis , 1989b) and proposals in the project "Digital divide between students and professors of the Universidad Veracruzana: cultural capital, school trajectories and academic performance, and degree of technological appropriation" (Ramírez-Martinell, Casillas & Ojeda, 2013).

The results obtained by the students of the USAC that participate in the mixed modality provide valuable data for higher education institutions, because it is corroborated that the combination of face-to-face education and online education generates a robust modality that offers excellent opportunities for society and that has been called: mixed or combined education.

The integration of the different educational modalities in higher education has forced the strengthening of the technological infrastructure and expansion of connectivity to the Internet, which has also involved extensive work in terms of training of teachers and students in the use of technology (TIC).

In accordance to the current study results and based on the correlation test, it was found that the technology skills has a positive and significant influence on the readiness of Libyan students for learning by using MOOC, where correlation (P≤0.01), noting that (r=0. 191) and (p=0.000). Also based on the regression test, technology skills factor has a significant and negative influence on the claims in construction projects in Malaysia (β= 0. 004, t=4.055, p=0.006).

In accordance to the current study results and based on the correlation test, it was found that the online skills & relationships have a positive and significant influence on the readiness of Libyan students for learning by using MOOC, where correlation (P≤0.01), noting that (r=0. 295) and (p=0.000). Also based on the regression test, online skills & relationships factor has a significant and positive impact on the readiness of Libyan students for learning by using MOOC (β=0.197, t=3.025, p=0.003).

5. CONCLUSION

The field of learning and studying in educational institutions by using technology is a very important field because technology provides more advantages to the learning process than the traditional way of learning. Technologies provide more knowledge and almost comprehensive level of understanding for students. The application of massive open online course (MOOC) is considered as a way of the use of technology and Internet in the learning process. According to the literature, MOOC is a very good tool to increase the knowledge of students and to motivate them more towards their studies.

This research was developed for the purpose of finding out the impact of technology skills and online skills & relationships on the readiness of Libyan students for the use of MOOC in their process of studies. The research has developed a literature review in the field of MOOC and its factors for success. After that, the methodology of the research was also developed. The data was collected from 377 Libyan students. The results showed that there are positive and significant relationships between technology skills, online skills & relationships and the readiness of Libyan students for the use of MOOC.

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