E-LEARNING AND STUDENTS' PERFORMANCE: GENDER PERSPECTIVE

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ABSTRACT

The present research paper has been focused on one of the most critical issues in the field of education in the most recent times which is the impact of educational technology on students' performance. Our paper aim to identify if there is a significant difference between respondents' attitudes towards the impact of educational technology in Ahlia University on students' performance attributed to gender (boys' schools & Girls' schools). Exploiting technology in the education sector is not a recent issue. The real start for integrating technology in education is actually known to be two decades ago when the internet started to be part and parcel of people's lives. Government of countries that have a vision and plans to develop their economies recognized that improving education and integrating the latest technologies is a key means for achieving their strategic plans and economic visions. education development was given due attention. The sample was selected randomly with the electronic sample calculator showing that the minimum number is 380 individuals. The questionnaire was circulated electronically via school administration in the four governorates. The received responses were 342 indicating that the return rate is 90%. Finally, it was concluded that there is a significant difference for gender (boys' schools & Girls' schools) was on the respondents' attitudes towards the impact of educational technology in Ahlia University on students' performance. The implications of the findings of the research showed that the findings of the study can be used as a basis for future research about the relationship e-learning and effective educational outcomes. Also, the findings of the study can be used by MOE to enhance educational technology experiences.

KEYWORDS

Educational Technology, Students' Performance, Gender, Bahrain

1. INTRODUCTION

Writings about incorporating technology in education assure that technology do actually represent a powerful instrument through which learning is transformed. Through education-based technology relationships between educators and students are affirm and advanced. In addition, it contributes to shrinking long-standing equity and accessibility gaps. Moreover, learning experiences become more and more compliant to satisfy all the learners' requirements (King, 2017). Due to the explosive growth of computers in academia in the second half of the twentieth century; the increasing individual use in early 1980s; the introduction of the internet in mainstream education in 1990s, incorporating technology in education turned to be something a habit and an influential thing that has positive impacts on students' learning process. There are diverse views about the implementation of technology in the educational processes. While there is a worldwide agreement on the merits gained from applying and exploiting the fruits human research in the teaching and learning process, there are opposers who disagree on this. Each team has numerous reasons for the why they accept or reject the implementation of technology in educational processes. For one thing, those who are not for educational technology supposes that the increased dependence on technology in this field does actually implant forgetfulness in the souls of the students. They are expected to practice any memory exercises since they become too much dependent on what is written for them by the symbols. Also, students will seem to know a lot of things while they actually know nothing (Salavati, 2016). On the other hand, this impact has favored teaching, because numerous innovative educational projects have been created based on studies to improve student learning. This type of technological innovation enriches the teaching-learning process, and also makes modern and digital teaching possible. From Kindergarten, students have to be introduced to the technological

world so that they gradually acquire the necessary skills in computer management. In this way, technology is part of the children from the beginning of their educational process.

Bahrain is no exception from the entire world's attitude to make technology an outstanding feature in the education sector. The kingdom 2030 economic vision assures that education is the major pillar upon which development and other economic objectives are fulfilled. Various policies are adopted in order to make the education sector in the kingdom head towards more and more exploitation of the available technologies in facilitating the teaching and learning processes. This is attributed to the leadership recognition that judicious use of technology in the classroom, and e-learning generally, has the potential to raise standards. For such a purpose the kingdom's government has been working in partnership with some of the biggest names in the IT sector.

Various initiatives have been adopted in order to equip the Ahlia University with the latest technologies in the pedagogical sector first Education. These initiatives include the partnership between the Bahraini MOE and Microsoft in 2004 which was under the title of "Transformation Agreement" that was aimed at creating a central e-learning portal as well as training teachers on the usage. Another initiative was as late as the year 2015 when the Bahraini MOE got in another partnership with Microsoft for the period of five years (2015-2020). Three programs are planned to take place where schools are to be equipped with the most state of the art resources for technology education (Yung, 2016).

1.1 Research Significance and Aims

Significance of this research stems from the significance of the topic under research. Implementing technology for education purposes has become a significant issue that is paid due care by government. This is actually attributed to the fact that technology is now part and parcel of people's everyday life practices. Making use of computers. Tablets, mobile phones; the internet; smart boards; and many other facilities is considered as a must for individual and organizational success. So, using these devices at schools integrates education and life practices. Further to that, casting light on students' performance is another significant issue. This is understood in light of understanding what performance means for learners and educators. In addition, the research is significant for the ministry of education and secondary schools in particular. Since the research investigates and provides empirical evidence for the relationship between educational technology and students performance. This is also significant for the entire Bahraini society since it shows the extent to which students' academic performance gets improved in light of applying the state of art technologies brought to the students by the MOE. Moreover, the research is significant for future researcher where the findings of this research can represent a basis for their future research.

This paper aim to identify if there is a significant difference between respondents' attitudes towards the impact of technology-based education in secondary schools on students' performance attributed to gender (boys' schools & Girls' schools). From the key aim above the following questions are derived:

1. What is the impact of implementing educational technology in Ahlia University in the kingdom of Bahrain in terms of ease of use and users' perceived usefulness?
2. What is the impact of students' performance in Ahlia University in the kingdom of Bahrain?
3. How can implementing educational technology in Ahlia University impact students' performance in the kingdom of Bahrain?

The rest of the paper is organized as the following: the second part is concerned with the literature review and hypothesis development. The third part is concerned with the study sample and methodology. The fourth part presents a descriptive study. The fifth part discusses the empirical results. The final part is concerned with conclusions, implications and future studies.

2. EDUCATION AND TECHNOLOGY

It is argued that one of the most promising opportunities for improving school learning is to improve teaching materials and include the means, given their obvious relationship with teaching materials. In this theory, the means become more important in that they facilitate meaningful learning (Sung, et al., 2016).

2.1 The Influence of New Technologies

The influence of new technologies, primarily the computer and the internet, is increasing at the present time in all areas of our lives. Education of course is not exempt from this influence, so it could be said that new technologies have come to revolutionize many fundamental aspects of this. It is mentioned that the new technologies open the possibility of greater student participation in the construction and development of the curriculum (Higgins, 2012). The convergence of these two technologies requires understanding the impact and the transformation they cause in education. This provides researchers and teachers to take the best advantage of these technologies in order to achieve a greater and better teaching-learning process. They grow also more likely to address the challenges and problems that the merger causes. And this requires researchers and teachers to propose creative solutions for use in the educational process (Flanagan , 2008). Today, there is a great diversity of literature about new technologies that can be used for educational purposes. The importance of adopting the changes and technological advances in the education system is fundamental to facilitate a better understanding of the modern world where technology occupies a fundamental place in the productive system and in everyday life in general. For such a reason, this highlights the importance of always being at the forefront. Educational technology has been defined as a set of "teaching aids", such as language laboratories, projectors, fixed view, TV, radio and 16mm film. That is, it has been identified as a set of physical means of material equipment that can be used by the teacher in the teaching process (Jhurree, 2005).

2.2 Transformation of Education-based Technology

Nowadays, the use of computers and the internet in education has transformed the relationship between the elements in the teaching-learning process. They encourage the construction of new concepts and interpretations of the conception of educational work, school organization in consideration of the conditions, which these two technologies impose. They also strongly influence the presentation of new proposals enriching the educational process and the design of new products that revolve around them, such as the interactive whiteboard (Lister, 2015).

This way of conceiving the educational technology can be characterized as an "approach of hardware", since it is defined only in terms of physical means. People who conceive of it thus criticize the traditional way of teaching that consists in the mere dictation of classes by the teacher, which would lead to verbalism and academic memories in which the student does not perceive the concrete meaning of the utterances made by the Instructor. In order to overcome these barriers, they recommend the use of machines or audiovisual media as a teaching aid (Wajszczyk, 2014).

2.3 Educational Technology in Bahrain

All the government schools in the kingdom of Bahrain are now connected to the internet and have at least one IT setup. The government is easing the expansion of an e-learning environment in local schools via the King Hamad Schools of the Future Project. The project, which began in 2003, originally consists of five schools, 11,000 pupils and over 1000 teaching faculty, and included the expansion of a centralized portal for online teaching materials and training. By the year 2010 the project proved to be very fruitful as it was extended to contain every school in the Kingdom.

2.4 Students' Performance

It is assured that one of the concepts that are too much ambiguous and can be difficultly defined is the concept of "performance". This is attributed to the nature of the concept itself. Reviewers did not agree on one definition for it especially when it is related to students. Performance can be understood as "The accomplishment of a given task measured against preset known standards of accuracy, completeness, cost, and speed" (Buisness Dictionary, 2017). Nevertheless, one of the most widely accepted definitions is the one referring to students' performance as "how well the student has prepared for and performed in class and how well the student has mastered the material presented" (Al–Ammary, 2012). There are particular standards upon which students' performance can be measured. These standards are classified into three categories: class performance, essays

and papers, oral presentations. To measure students' class performance, there are particular issues that are observed about the student. For one thing, his/her preparation which refers to the readiness of the student to participate in the classroom activities. Participation here is meant to show the extent to which the student contributes to the course and the quality of his/her efforts. Another thing is the student's mastery of the subject which shows his/her understanding of the presented material. Also, his/her attitude to interact within the group. Group interaction is an indicator that reflects the student's interest and enthusiasm and his/her cooperation in working within a group. Concerning students' written performance (essays and papers), the most significant issues that show the extent which the student perform well include the content presented by him/her. This is always measured in terms of clarity in thought and expression; logic and persuasiveness; and organization and flow of the ideas. In addition to the student's ability to compose the piece of writing. This is understood in terms of his/her usage of correct grammar, spelling, and punctuation in standard written English. Finally, students' oral representation constitutes a critical pillar upon which performance is assessed. This oral representation is assessed in terms of the student's content which depends on his/her organization, persuasiveness, and clarity in the presentation of ideas topics/issues. Also, delivery of the material does matter in terms of the student's style of speaking while audio visual aids are available (Haahr , 2005).

Hypothesis 1. *There is a significant difference between respondents' attitudes towards the impact of educational technology in Ahlia University on students' performance attributed to gender (boys' & Girls').*

3. STUDY SAMPLE

The population of the present research includes all the students of the in the four governorates of the kingdom of Bahrain. In accordance to the statistics of the ministry of education in Bahrain, the calculated sample size was 380 according to Roasoft electronic sample size calculator. Thus, 380 students were targeted in the secondary stage schools in the four governorates (Manama, Muharraq, the Southern, and the Northern). The questionnaires were sent to the students by what's app on their mobile phones by the school's administrations. The returned questionnaire responses to the researcher's Google account were 342. This means that the rate of the returned questionnaires is 90%. The following table 1 shows more details about the population of the research

Table 1. Statistics about University schools in Bahrain

Gender	Number of students
Boys	15279
Girls'	16240
Total	31519

4. EMPIRICAL STUDY

4.1 Demographic Characteristics

In light of the data collected about the gender of the respondents, it is found out that more than three quarters of the respondents (78.7%) are female while less than one quarter (21.3%) are male respondents. In light of the data collected about the age areas of the respondents, it is identified that those who are more than 19 represent 42.70 %. Those who are from 16-17 represent 32.50%. The lowest percentage 24.90% is for those work is in between 18-19. In terms of the nationality of respondents, who do participate in this research, it is elicited that 71.10% of them are Bahraini people. Those who are non-Bahraini respondents constitute 28.90% of the entire sample size. In terms of the respondents' governorate, it is found out that those who live in Muharraq represent one third of the sample 33.30%. The respondents who live the Norther governorate represent 20.20%. Those who live in Manama represent 19% of the entire sample size. Regarding the type of the school in which the questionnaire forms were circulated, it is identified that respondents in girls' schools are two times more than those who are in boys' schools. The Respondents in girls' schools are 78.7% while the respondents in Boys' schools are 21.30%. (see table 2).

Table 2. Demographic characteristics

Demographic characteristics		Frequency	Percent
Gender	Male	73	21.3
	Female	269	78.7
	Total	*342*	*100*
Age	16-17	111	32.5
	18-19	85	24.9
	More than 19	146	42.7
	Total	*342*	*100*
Nationality	Bahraini	243	71.1
	Non-Bahraini	99	28.9
	Total	*342*	*100*
Governorate	Manama	65	19
	Muharraq	114	33.3
	Southern	69	20.2
	Northern	94	27.5
	Total	*342*	*100*
School type	Boys' Schools	73	21.3
	Girls' Schools	269	78.7
	Total	*342*	*100*

4.2 Impact of Technology-Based Education

In accordance to the table 3 that shows the overall results for the 24 items making up the section of status of technology-based education, the research finds out that the respondents feel neutral about this status. This means that technology-based education does exist and the students of the secondary stage schools feel there is a perceived ease of use by 61.6%. There is also perceived usefulness for educational-based technology by 72.4%. The respondents refer to the status of educational-based technology in their secondary schools' stage by 67%.

Table 3. Status of technology-based education in terms of ease of use

Technology-based education in terms of.	Number of items	Mean score	Standard deviation	Relative weight
Perceived ease of use	12	3.08	1.3	61.6%
Perceived usefulness	12	3.62	1.07	72.4%
Total	24	3.35	1.185	67%

4.3 Impact of Students' Performance

In accordance to the table 4 that shows the overall results for the 17 items making up the section of status of students' performance, the researcher finds out that the respondents agree that their performance level is good as the average mean score for the 17 items is 3.47 (69.5%).

Table 4. Impact of Students' performance

Technology-based education in terms of:	Number of items	Mean score	Standard deviation	Relative weight
Participation	7	3.17	1.21	63.4%
Oral representation	6	3.57	1.19	71.4%
Written work	4	3.69	1.19	73.8
Total	17	3.47	1.19	69.5%

4.4 One-Way ANOVA

The one-way ANOVA (table 5) is employed herein to investigate whether or gander (Boy and Girls') generates a significant impact on the respondents' attitude towards the relationship between technology-based education and students' performance in secondary schools in the kingdom of Bahrain.

Table 5. One-Way ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Perceived ease of use	Between Groups	2.428	1	2.428	2.297	.131
	Within Groups	359.383	340	1.057		
	Total	361.812	341			
Perceived usefulness	Between Groups	.709	1	.709	2.032	.155
	Within Groups	118.685	340	.349		
	Total	119.394	341			

In accordance of the outcomes of the one-way ANOVA, the researcher concludes gander (Boys' and Girls') does not create any significant difference for respondents' attitude towards the impact of perceived ease of use on students' performance in the Ahlia University in Bahrain as the sig value is 0.131 which is above 0.01 and 0.05. Likewise, type of school (Boys' and Girls') does not create any significant difference for respondents' attitude towards the impact of perceived usefulness on students' performance in the secondary school's stage in Bahrain as the sig value is 0.155 which is above 0.01 and 0.05. Gander (boys'& Girls') was found to generate no significant difference between respondents' attitudes towards the impact of technology-based education in secondary schools on students' performance. In spite of the conclusion that the demographic variables were proved to make no significant difference in the respondents' recognition of the relationship between the two variables, they are still significant for the research as demographic variables do provide data regarding research participants. Demographic variables are also necessary for the determination of whether the individuals in this particular study constitute a representative sample of the target population for generalization purposes. It is acknowledged that demographics or research participant characteristics are reported in the methods section of the research report and serve as independent variables in the research design (AlNoaimi, 2018).

5. CONCLUSION

Technology-based education has become a pivotal issue in Ahlia University in the kingdom of Bahrain. The ministry grants all University the required devices and Instructors and students are equipped with the necessary applications and programs through which teaching and learning and made easier. Classes are now equipped with overhead projectors, smartboards. There is at least one IT class in each University. More and more fund is specified for the process of bringing technology into Ahlia University. Instructors are trained to make the

best use of these technologies and facilitating such usage to the students. Teaching and learning is becoming more and more electronic while traditional means are vanishing gradually. Students are no more negative followers for what is presented within the class context since they become a positive part of the technological endeavor. They are motivated to prepare and share funny videos that are likely to add more excitement and enthusiasm to them while they are learning. More interaction is created by students and teachers within class and at home since instructors provide homework, project requirements, grades, notices, etc. MOE grow more and more interested on linking instructors, students, parents, and the ministry itself online for better educational outcomes. Secondary schools' students in Bahrain suppose that there is a good level of ease of use of technology in education in Bahrain. Implementing technology in the processes of learning and teaching in the Ahlia University in Bahrain is found to be of perceived usefulness. It contributes to enhancing students' innovativeness' specially on employing technological facilities. Students' physical attendance at University is becoming a less required issue since virtual learning is increasing gradually. Student are given more and more opportunities to employ critical thinking that they can identify creative solutions especially when there are electronic lessons. The teaching and learning process are now more exciting while traditional lessons are not as many as before. The process of assessment can now be carried out through the using internet applications including Kahoot, Flickers and Socrative where the students are provided with instant feedback about their understanding of the taught material. Being assessed online is a fantasy for the student where they feel more confident, enthusiastic and challenged. Gamification is one of the most recent issues that contribute to increasing success of the learning process since students' attention and enthusiasm grows more and more. Its numerous positive impacts on the processes of teaching and learning. There is a significant difference for gander (boys' & Girls') was on the respondents' attitudes towards the impact of technology-based education in Ahlia University on students' performance.

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