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RESEARCH ARTICLE

IMPACT OF TECHNOLOGY IN THE LEARNING SYSTEM AMONG THE STUDENT'S COMMUNITY IN SAUDI ARABIA

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Abstract: Technology is becoming more and more prevalent in academic settings, as seen by the rapid development of the field and the expanding practice of employing innovative technology to support teachers' education and learning. Furthermore, professional development for teachers has a major impact on improving the quality of instruction, particularly the caliber of in-class learning activities. The study aimed to understand the role of technology among the student's community in their classroom. A sample of 100 students was chosen for study in Saudi Arabia. Online Questionnaire was prepared and circulated among the students for data collection. The study found that students are satisfied with the current technology and also felt the improvement in the same. The Results also showed that students also are interested in further advancements in technology that supports their learning and education activities.

Keywords: *Technology, student, Academic, education, classroom.*

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INTRODUCTION

Our lives revolve around technology in most settings, and the classroom is no different. Students in today's schools have grown up in a technologically-rich environment. They have never lived without televisions, computers, smartphones, or other everyday technological devices.

Even with this comfort level with technology, educational settings could be hesitant to include it into the classroom. In instructional design, a lot of schools still make use of analog resources including books, notebooks, whiteboards, and posters. Lack of funds may be the cause of this.

Nonetheless, some school districts have made investments in educational technology for the classroom through grants or gifts from local businesses and organizations. This involves using smart boards in place of antiquated projectors personal digital devices such as iPads or Chromebooks.

In many respects, technology has the ability to simplify and improve equity in many areas of education. Let's investigate the advantages that more technology in the classroom can provide for both educators and learners.

LITERATURE REVIEWS

Daily living has been significantly impacted by the digital revolution, as seen by the widespread use of mobile devices and the easy integration of technology into routine activities like reading, shopping, and finding (Anderson, 2016; Smith & Anderson, 2016; Zickuhr & Raine, 2014).

The amount of time spent on computers, mobile devices, and the Internet is at an all-time high and is predicted to rise as technology becomes more widely available, especially in developing countries (Poushter, 2016). In addition, there is a growing number

of people who are smartphone dependent, relying solely on smartphones for Internet access (Anderson & Horrigan, 2016) rather than more expensive devices such as laptops and tablets. Greater access to and demand for technology has presented unique opportunities and challenges for many industries, some of which have thrived by effectively digitizing their operations and services (e.g., finance, media) and others that have struggled to keep up with the pace of technological innovation (e.g., education, healthcare) (Gandhi, Khanna, & Ramaswamy, 2016).

For universities, incorporating technology into instruction is not a novel challenge. Educators and administrators have struggled since the 1900s to determine the best ways to complement or replace conventional teaching methods with technological innovations like email, teleconferencing, and audio and video recordings instructional delivery methods (Kaware & Sain, 2015; Westera, 2015).

Within the past two decades, however, this challenge has been much more difficult due to the sheer volume of new technologies on the market. For instance, there were 1.75 million active apps in Apple's App Store in 2015, up from 5000 in just 7 years (2008-2015). Over the next 4 years, the number of apps is projected to rise by 73%, totaling over 5 million (Nelson, 2016).

The short lifespan of new hardware and software, along with major organizational obstacles within universities, make it even more difficult for them to successfully and efficiently integrate new technologies. (Amirault, 2012; Kinchin, 2012; Linder-Van Berschot & Summers 2015; Westera, 2015).

The competing tensions between faculty beliefs and abilities and institutional policy and practice give rise to many organizational barriers to technology integration. For instance, while faculty may find it difficult to reconcile technology with current pedagogy, university administrators may see it as a tool for drawing in and keeping students (Lawrence & Lentle-Keenan, 2013; Lin, Singer & Ha, 2010).

Furthermore, some teachers might be reluctant to employ technology because they lack the necessary technical skills or because they don't believe it can significantly enhance student learning outcomes (Ashrafzadeh & Sayadian, 2015; Buchanan, Sainter & Saunders, 2013; Hauptman, 2015; Johnson, 2013; Kidd, Davis & Larke, 2016; Kopcha, Rieber & Walker, 2016; Lawrence & Lentle-Keenan, 2013; Lewis, Fretwell, Ryan, & Parham, 2013; Reid, 2014).

Organizational obstacles to technology adoption are especially troublesome in light of students' increasing expectations and perceptions of the advantages of using technology in the classroom (Amirault, 2012; Cassidy *et. al.,* 2014; Gikas & Grant, 2013; Paul & Cochran, 2013). According to surveys, two-thirds of students use mobile devices for education and think that technology can improve their performance in the classroom and better prepare them for a workforce that will rely more and more on technology (Chen, Seilhamer, Bennett & Bauer, 2015; Dahlstrom, 2012).

Academic institutions that do not successfully incorporate technology into their teaching and learning processes are losing out on chances to enhance student performance and satisfy a student population that has become accustomed to technology being a part of everything (Amirault, 2012; Cook & Sonnenberg, 2014; Revere & Kovach, 2011; Sun & Chen, 2016; Westera, 2015).

RESEARCH METHODOLOGY

Aims of the Study: This research is directed towards understand the impact of technology in learning system among the Saudi students in Saudi Arabia. After the COVID the e-learning platforms have enabled the student's community to engage in the usage of electronic gadgets for their learning purposes. This study aims to understand the influence of technology in the current learning systems.

Study Objective: The objective of this research is to explore the usage of technology in the learning system for their educational purposes.

Hypotheses: The hypotheses address the primary research issue, which is to gain insights into the influence of technology in learning among the student's community. They are as follows:

H01: There is a significant difference among the Student's community based on their age,

working group, Level of course and satisfaction level on the level of technology in the classroom.

H02: There is a significant difference between impact of technology in educational experience based on gender, age, working group of students and course level.

Sample Unit: The study's sample unit consists of students from different colleges in Saudi Arabia. Data collection was conducted through online forms, making the sample representative of students from different regions in Saudi Arabia.

Sample Size: A sample of 100 students from varied colleges and universities were chosen for the study.

Statistical tools used for the Study: Chi-Square tests were used for the analysis.

Research questions

- To understand the impact of technology in the classroom
- To know whether the student's community benefit from the advancement of technology in educational experience.

DATA ANALYSIS

Table 1: Gender and satisfaction of current technology in the classroom

		How satisfied are you with the current technology in your classroom?										Total	
		Highly dissatisfied		Dissatisfied		Neutral		Satisfied		Highly satisfied		No.	%
		No.	%	No.	%	No.	%	No.	%	No.	%		
Gender	Male	10	14.9	11	16.4	21	31.3	14	20.9	11	16.4	67	100.0
	Female	3	9.1			11	33.3	13	39.4	6	18.2	33	100.0
Total		13	13.0	11	11.0	32	32.0	27	27.0	17	17.0	100	100.0

Table 2: Chi-Square Test

	Value	df	Prob.	Sig.
Chi-Square	8.867	4	.065	Ns

Critical value: 9.488
Ns – Not Significant
0.05 – Significant at 5% level
0.01 – Significant at 1% level

Inference: Table 2 infers that the calculated value 8.867 is less than the table value of 9.488 and hence the Null hypothesis stating "There is no relation between the variables Gender and Technology in classroom" is accepted.

Table 3 : Gender and Satisfaction of Current technology in the classroom

		How satisfied are you with the current technology in your classroom?										Total	
		Highly dissatisfied		Dissatisfied		Neutral		Satisfied		Highly satisfied		No.	%
		No.	%	No.	%	No.	%	No.	%	No.	%		
Are you working ?	Not working	5	11.6	2	4.7	18	41.9	15	34.9	3	7.0	43	100.0
	Part time	3	25.0	5	41.7	1	8.3			3	25.0	12	100.0
	Full time	5	11.1	4	8.9	13	28.9	12	26.7	11	24.4	45	100.0
Total		13	13.0	11	11.0	32	32.0	27	27.0	17	17.0	100	100.0

Table 4: Chi-Square Test

	Value	df	Prob.	Sig.
Chi-Square	25.767	8	.001	0.05

Critical value: 20.090

Inference: Table 4 infers that the calculated value 25.767 is greater than the table value of 20.090 and hence the Null hypothesis stating "There is no relation between the variables employed and current Technology in classroom" is rejected.

Table 5 : Gender and satisfaction of current technology in the classroom

		How satisfied are you with the current technology in your classroom?										Total	
		Highly dissatisfied		Dissatisfied		Neutral		Satisfied		Highly satisfied		No.	%
		No.	%	No.	%	No.	%	No.	%	No.	%		
Age	18-25 yrs	4	10.5	4	10.5	16	42.1	13	34.2	1	2.6	38	100.0
	26-35 yrs	9	17.3	5	9.6	15	28.8	10	19.2	13	25.0	52	100.0
	36-45 yrs			2	20.0	1	10.0	4	40.0	3	30.0	10	100.0
Total		13	13.0	11	11.0	32	32.0	27	27.0	17	17.0	100	100.0

Table 6: Chi-Square Test

	Value	df	Prob.	Sig.
Chi-Square	16.029	8	.042	0.01

Critical value: 15.507

Inference: Table 6 infers that the calculated value 16.029 is greater than the table value of 15.507 and hence the Null hypothesis stating "There is no relation between the variables Age and Current technology in classroom" is rejected.

Table 7: Gender and satisfaction of current technology in the classroom

		How satisfied are you with the current technology in your classroom?										Total	
		Highly dissatisfied		Dissatisfied		Neutral		Satisfied		Highly satisfied		No.	%
		No.	%	No.	%	No.	%	No.	%	No.	%		
What level of course are you taking?	Under graduate	6	12.0	8	16.0	19	38.0	11	22.0	6	12.0	50	100.0
	Post graduate	7	14.0	3	6.0	13	26.0	16	32.0	11	22.0	50	100.0
Total		13	13.0	11	11.0	32	32.0	27	27.0	17	17.0	100	100.0

Table 8: Chi-Square Test

	Value	df	Prob.	Sig.
Chi-Square	5.871	4	.209	Ns

Critical value: 9.488

Inference: Table 8 infers that the calculated value 5.871 is less than the table value of 9.488 and hence the Null hypothesis stating "There is no relation between the variables Level of course and Technology in classroom" is accepted.

Table 9 : Gender and impact of use of technology in education

		Impact of use of Technology on educational experience								Total	
		No improvement		Little improvement		Good improvement		Excellent improvement		No.	%
		No.	%	No.	%	No.	%	No.	%		
Gender	Male	11	16.4	18	26.9	26	38.8	12	17.9	67	100.0
	Female	3	9.1	5	15.2	17	51.5	8	24.2	33	100.0
Total		14	14.0	23	23.0	43	43.0	20	20.0	100	100.0

Table 10: Chi-Square Test

	Value	df	Prob.	Sig.
Chi-Square	3.441	3	.329	Ns

Critical value: 7.815

Inference: Table 10 infers that the calculated value 3.441 is less than the table value of 7.815 and hence the Null hypothesis stating "There is no relation between the variables Gender and Impact of use of Technology in education" is accepted.

Table 11: Gender and impact of use of technology in education

		Impact of use of technology on educational experience								Total	
		No improvement		Little improvement		Good improvement		Excellent improvement		No.	%
		No.	%	No.	%	No.	%	No.	%		
Are you working?	Not working	5	11.6	12	27.9	19	44.2	7	16.3	43	100.0
	Part time	5	41.7	5	41.7	1	8.3	1	8.3	12	100.0
	Full time	4	8.9	6	13.3	23	51.1	12	26.7	45	100.0
Total		14	14.0	23	23.0	43	43.0	20	20.0	100	100.0

Table 12: Chi-Square Test

	Value	df	Prob.	Sig.
Chi-Square	17.841	6	.007	0.05

Critical value:16.812

Inference: Table 12 infers that the calculated value 17.841 is greater than the table value of 16.812 and hence the Null hypothesis stating "There is no relation between the variables Employed and Impact of use of Technology in education" is rejected.

Table 13: Gender and impact of use of technology in education

		Impact of use of technology on educational experience								Total	
		No improvement		Little improvement		Good improvement		Excellent improvement		No.	%
		No.	%	No.	%	No.	%	No.	%		
Age	18-25 yrs	6	15.8	8	21.1	22	57.9	2	5.3	38	100.0
	26-35 yrs	6	11.5	14	26.9	17	32.7	15	28.8	52	100.0
	36-45 yrs	2	20.0	1	10.0	4	40.0	3	30.0	10	100.0
Total		14	14.0	23	23.0	43	43.0	20	20.0	100	100.0

Table 14 : Chi-Square Test

	Value	df	Prob.	Sig.
Chi-Square	11.642	6	.070	Ns

Critical value: 15.592

Inference: Table 14 infers that the calculated value 11.642 is less than the table value of 15.592 and hence the Null hypothesis stating "There is no relation between the variables Age and Impact of use of Technology in education" is accepted.

Table 15 : Gender and impact of use of technology in education

		Impact of use of technology on educational experience								Total	
		No improvement		Little improvement		Good improvement		Excellent improvement		No.	%
		No.	%	No.	%	No.	%	No.	%		
What level of course are you taking?	Under graduate	9	18.0	15	30.0	20	40.0	6	12.0	50	100.0
	Post graduate	5	10.0	8	16.0	23	46.0	14	28.0	50	100.0
Total		14	14.0	23	23.0	43	43.0	20	20.0	100	100.0

Table 16 : Chi-Square Test

	Value	df	Prob.	Sig.
Chi-Square	6.683	3	.083	Ns

Critical value: 7.815

Inference: Table 16 infers that the calculated value 6.683 is less than the table value of 7.815 and hence the Null hypothesis stating "There is no relation between the variables Level of course and Impact of use of Technology in education" is accepted.

Findings

- It was found from the study that students are satisfied with the technology used in the classroom irrespective of any gender. The research also shows that Female students hold higher satisfaction than the male students.
- The study also found that majority of the students taken for sample are not working. Very few samples are working. Hence it is inferred that students not working are satisfied with the technology used in their classroom.

- Nearly 52% of the sample students are aged between 26-35 years and this group feel Neutral about the Technology used in the classroom.
- The sample students taken for study comprises of 50% Undergraduate and 50% Post graduate students and the Post graduate students are highly satisfied with the Technology used in the classroom.
- The students especially the female students feel that the impact of technology in their learning experience has a good improvement from the past years. They feel that technology has helped them to better understand the concepts taught in the classroom.
- Today due to the emergence of various online courses students are able to get educated with their degree courses through Online learning platforms. This has helped a number of students who are Full-time working employees. They feel technology is a boon for them to continue their studies without compromising their career.
- Majority of the students irrespective of their age feel that there is high improvement in the usage of technology in the classroom atmosphere.

CONCLUSION

Research indicates that technology positively affects student engagement. It can assist teachers in developing dynamic, captivating, and unforgettable classes. It goes without saying that increased engagement increases student motivation and improves the quality of instruction for both teachers and students. Hence the study enables the researcher to understand that technology has helped the students to improve the quality of learning in education and has always been a support in their learning activities.

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