Original Article

Impact Of Using Technology In Education Environment

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Abstract

Recent years have witnessed a tremendous integration of technology into daily life, to the point that huge volumes of information are now easily accessible. Today's students have grown up surrounded by an ever-increasing amount of technology. To create a successful 21st century classroom that meets students' needs, a modern teacher must consider a student's motivation to learn and the influence of technology on inclusionary education. To fulfil this expanding need, a technological technology was created. It seems to reason that in today's rapidly evolving technological environment, the modern classroom should reflect societal trends. By displaying real-world technological applications, we may instil intrinsic meaning in the learning process, hence raising interest and motivation.

Keywords: Education, Technology, Software, Communication

Introduction

In the twenty-first century, the phrase "technology" is a hot topic in a variety of disciplines, including education. This is because technology has evolved into the primary mode of knowledge transfer in the majority of countries. Nowadays, technology integration has evolved and revolutionized our society, fundamentally altering how people think, work, and live [1]. As part of this, schools and other educational institutions responsible for preparing students to live in a "knowledge society" must consider incorporating ICT into their curricula [2].

The term "Integration of Information, Communication, and Technology (ICT) in Education" refers to the incorporation of computer-based communication into the everyday educational process in the classroom. Along with educating students for the digital era, instructors are viewed as essential participants in integrating ICT into their everyday classroom activities. This is because information and communication technology allows the creation of a dynamic and proactive teaching-learning environment [3]. While ICT integration aims to improve the quality, accessibility, and cost-effectiveness of education available to students, it also refers to the benefits of networking learning communities in order to overcome the hurdles associated with modern globalization [4]. The process of ICT adoption is not a single event, but rather a series of ongoing measures that comprehensively support teaching and learning as well as information resources [5].

In general, ICT integration in education refers to a technique of teaching and learning that is heavily reliant on the use of educational technology in classrooms. Because students are already acquainted with technology and would perform better in a technology-rich environment, the issue of ICT integration in schools, particularly in the classroom, is crucial. This is because the use of technology in education benefits pedagogical aspects greatly, as ICT usage results in effective learning with the aid and support of ICT elements and components [6]. It is true that practically all subject areas, starting with mathematics, physics, languages, the arts and humanities, and other

critical disciplines, may be studied more effectively via the use of technological tools and equipment. Additionally, ICT assists and supplements both instructors and students in achieving successful learning outcomes via the use of computers as learning instruments [7]. Computers and technology are not considered as substitutes for highly competent instructors, but as necessary complements to improve teaching and learning. ICT integration is crucial in education because it enables teaching and learning to take place not just in a technical environment, but even when instructors and students are physically separated. However, ICT integration is a continuous process of learning that results in a proactive teaching-learning environment [8].

Review of Literature

In a 2015 research paper titled Increasing Student Engagement, Self-Efficacy, and Meta-Cognitive Self-Regulation in the High School Geometry Classroom: Do iPads Contribute? To begin, how does integrating iPads into geometry classroom teaching affect student engagement? Second, how does including iPads into geometry course teaching affect students' proficiency with geometry standards? Thirdly, how does incorporating iPads into geometry education affect students' self-perceived self-efficacy? Finally, what effect does introducing iPads into geometry teaching have on students' self-reported levels of metacognitive self-regulation? The study separated 110 students and two teachers into two groups. 57 students in one of these groups used the iPad in the geometry course, whereas the remaining 53 students did not. The iPad was selected as the technological integration tool because to its portability, access to the internet, and simplicity of use. Both groups were taught the same subject, but the way the material was delivered and the level of student participation with or without the iPad differentiated the groups. The iPad group's objective was to engage students in the expectation that this would result in a more in-depth understanding of the subject. Data collection methods included teacher observations, student self-reporting, and student questionnaires.

In another 2006 study, Chen-Chung Liu postulated that wireless technology may boost students' learning processes and increase studentteacher interaction. This study addressed three issues about the use of technology in the mathematics classroom, particularly with hearing-impaired students. The first question is this: Does incorporating wireless technology into the classroom promote student-teacher interaction? Second, can introducing technology into the mathematics classroom aid in the development of students' problem-solving abilities? Finally, how adaptable are students to new technology? This investigation took place in a Taiwanese middle school classroom over the course of an academic year. This research included seven hearing-impaired students and one hearing-impaired teacher. In general, the instructor would utilize a whiteboard linked to each student's tablet, allowing each student to work independently on the subject before presenting it to the teacher. The teacher may see each student's work in its entirety for the benefit of the whole class, or may just provide specific feedback to each student.

Methodology

Today's students' social lives are strongly intertwined with technology. They carry mobile phones and MP3 players in their pockets, spend their leisure time playing video games, and communicate with friends via computers. Therefore, it stands to reason that when technology tools are introduced into the classroom, these students should become more involved in the learning process. The use of technology in the classroom is beneficial because it may inspire students to participate in the lecture. As a consequence, it is critical for instructors to grasp how technology tools may help them enhance their teaching abilities as well as the learning abilities and test scores of their students. Teachers with an open mind are more likely to adopt these technologies into their curriculum with some basic staff preparation and more time to practice the new skills.

The goal of this study was to show instructors the potential benefits of using technology tools into their classroom curricula. The data collection technique utilized was questionnaires administered to students and instructors, as well as examinations of test scores before and after the introduction of technology tools in their classes.

Sample Size

The sample for this study was drawn from a group of 150 students who all had the same teachers. This sample comprised students classified as inclusion, Advancement by Individual Determination, and talented, ensuring a representative sample of the population.

This convenience sampling approach was used since the study enrolled students who shared a science instructor, which ensured the accuracy of the data. The science teacher chose to teach one of his five classes in the manner in which he has done it for the past decade: using a book, a whiteboard, and paper and pencil. He taught his final four courses in the classroom utilizing technology-based techniques. The interactive whiteboard, Internet connectivity, an LCD projector, laptop computers, and online testing were all incorporated in these instruments.

The instrument employed in this study was a survey containing a series of questions tailored to the study's objectives. Students responded to user-specific questions before and following the assessment session. The first portion of the poll inquired about kids' attitudes regarding school.

Data Collection

The researcher conducted the questionnaires and gathered data from students and teachers. The researcher compared and evaluated the responses to pre-and post-activity questions.

The data analysis demonstrated that when students integrate technology tools into the classroom curriculum, students' motivation increases regardless of whether they are average, inclusion, or gifted. The researcher compared the answers to the instruments using an Excel spreadsheet. The researcher then informed the students and instructors who completed the survey of the findings. Discussions about the results with these students and instructors were also collected and included into the original data. This method of analysis was highly advantageous since the students and instructors who completed the questionnaires were consistent throughout the testing period.

The purpose of this study was to determine if incorporating technology into the classroom increased students' motivation and exam results, as well as made teaching the topic easier and more useful for teachers. While the time required for a teacher to master a new topic may be an issue in the classroom, using technological tools may be a more efficient means of teaching.

Data Analysis and Interpretation

To obtain information, the heads of each school's institution were contacted. The principal was counseled on the purpose of the research and the methodology to be used. Following the principal's disclosure, the researcher was assigned a day and time to contact the instructors and students. On the predetermined day, instructors and students were contacted and crucial data was collected.

Demographic Profile

Table 1 Distribution of Samples

S. No	Categories	Variables	Number of Students
1	Sex	Boys	127
		Girls	123
2	Type of Management	Government School	97
		Aided School	153
3	Locality of Schools	Urban	110

		Rural	140
4	Parents Occupation	Agriculture	20
		Business	70
		Govt. Job	120
		Other	40
5	Qualification of Parents	SSLC	45
		HSC	76
		UG	89
		PG	40

The above table summarizes the sample's demographic characteristics. Boys made up n=127 of the responders, while females made up n=123. According to the preceding table, the majority of respondents came from educated families with parents who held college degrees. This is to be expected, considering that the study was conducted at institutions of higher learning where such credentials are required.

Table 2 Significance of difference between the mean scores on retention test of control and experimental groups

Groups	N	Mean	SD	t-Value	P-value
Experiment	125	90.3	1.76	22.77	0.000
Control	125	77.4	1.96		

According to Table 2, the estimated value of t was 22.77, which is statistically significant (p0.05) since it exceeds the crucial table value of t at the 0.05 level. As a result, the null hypothesis "There is no substantial difference in retention performance between control and experimental groups" is rejected. The mean score values demonstrate unequivocally that students in the experimental group performed considerably better on the retention exam than students in the control group.

Table 3 Uses of Technologies in Education

Items	Available sufficiently	Available but not sufficient	Not available
Web cam	16.66%	2.38%	83.33%
Computer Lab	(64.28%)	(35.71%)	0
Internet/Web Environment	(30.95%)	(69.04%)	0
Computers	(64.28%)	(35.71%)	0

LCD Projector	(38.10%)	(50%)	(11.90%)
Slide Projector	(4.76%)	(21.43%)	(73.80%)
Scanner	(35.71%)	(45.24%)	(19.06%)
Video camera/ PC compatible	(14.28%)	(26.19%)	(59.52%)
Overhead projection/ PC Compatible	(57.14%)	(42.86%)	0
Printer	(11.90)	(88.09%)	0
Fax/ PC compatible	(4.76%)	(66.66%)	(28.57%)
Modem	(2.38%)	(11.90)	(85.71%)
Tele/Video Conferencing Facility	0	0	42(100%)
Ethernet card	0	0	42(100%)
Digital camera	(11.90)	(54.76%)	(33.33%)

No things other than PCs, PC research facility (64.28%) and overhead projector (57.14%) accessible on satisfactory numbers in schools. Printer (88.09%), Internet (69.04%), PC good FAX (66.66%), Digital Camera (54.76%) and Television (52.38%) are accounted for to be accessible yet not in adequate numbers. Ethernet cards and tele/video offices were not accessible.

The data reveals the framework's deficiencies with regard to educational technology. The widespread availability of technology to instructors and students is insufficient in all schools, either because access to Educational Technology is restricted for extended periods of time or because there are few technology assets. In general, despite advancements in the accessibility of technology, staff, and students. These are similar to the findings in the paper, Infusing Dynamism into Teacher Education Through ICT Integration. The TE foundations should be provided with a suitable framework, both scholastic (preparation for incorporating ICT assets into their regular education) and physical, to enable them to utilize ICT effectively. PCs and other devices should be made available on a 1:1 basis to ensure that access is not restricted and is available when necessary. Laboratories require budgets and faculty to maintain and support them. Continuous lab upgrades, including additional offices, are a necessary assumption, as this is a rapidly growing profession.

Table 4 Usage of Software for Educational Purpose

Techniques/Software usage	**For educational purpose**				
	Always	**Frequently**	**Occasionally**	**Rarely**	**Never**
Presentation Software (PowerPoint etc.)	8	11	8	14	1
Word Processors (Word etc.)	10	13	17	2	0

Spreadsheets (Excel etc.)	2	2	6	7	25
Computer Aided Instruction Software	0	0	1	0	41
Databases (Access etc.)	0	0	1	3	38
Web Page Development Tools (FrontPage, dream weaver etc.)	0	0	1	1	40
Search Engines (Google, yahoo etc.)	15	23	3	1	0
Discussion Lists and Newsgroups/Social Media	0	0	0	1	41
Electronic Mail (e-mail)	3	5	9	23	2
Chat and/or Forum	3	2	14	21	2
Podcasting	0	0	0	0	42

Table 4 summarizes the frequency with which instructor instructors use various programming/techniques in sampled TEIs. Microsoft Word and Power Point, as well as Web Browsers and Search Engines, are the primary programs that instructor teachers use for pedagogical purposes. In any event, the majority of instances in which instructor teachers utilize these products/techniques for instructional purposes fall into the category of never, once in a while, or once in a while. According to the findings, instructor teachers occasionally or never use Microsoft Excel, Microsoft Access, computer-assisted instructional programming, web page development apparatuses, e-mail, social media, chat discussion, and instructional videos for educational purposes.

Table 5 usage of Educational Technology in curriculum related to Instrumental/Technological Domain

SI.No	**Items**	**Percentage**		
		Positive	**Neutral**	**Negative**

1	Distinguishing sources for extra instructional materials utilizing the technology.	61.9	16.66	21.42
2	Utilizing ICTs for profitability and managing data.	66.66	9.52	23.80
3	applying technology to solve problems	42.85	11.90	45.23
4	Using technology resources in daily routines.	78.57	7.14	14.28
5	Using computers effectively in the classroom.	35.71	23.80	40.47
6	Developing mental and cognitive capabilities.	40.47	33.33	26.19
7	Developing competencies in using Information and communication Technologies (ICTs).	54.76	16.66	28.57

The data revealed positive findings in the instrumental/mechanical area, with 61.9 percent identifying hotspots for additional instructional materials via technology and 66.66 percent utilizing ICTs for profitability and data management. Furthermore, 78.57 percent of instructor teachers include technology assets in their daily schedules.Nonetheless, 45.23 percent of instructor teachers report that they are unable to use contemporary technology to resolve difficulties, and 40.47 percent report that they are unable to properly utilize PCs in the study hall.

Table 6 usage of Educational Technology in school curriculum related to Curricular Domain

Si. No	**Items**	**Percentage**		
		Positive	Neutral	Negative
1	Broadening perspectives on technology integration.	78.57	9.52	11.90
2	Adapting the technology for learning activities.	59.52	28.57	11.90

3	Understanding pedagogical principles that orient the classroom use of technology.	38.09	23.80	38.09
4	Selecting technology that appropriate to the instruction plan.	54.76	19.04	26.19
5	Adapting the technology to objectives based on student's needs.	33.33	28.57	38.09
6	Integrating technology with teaching learning process and curriculum.	47.61	26.19	26.19
7	Mastering a range of educational paradigms with using ICTs	52.38	16.66	30.95

The findings from Table 6 revealed that 59.52 percent of educator instructors are adjusting technology for learning exercises, 78.57 percent of educator instructors are broadening their perspectives on technology integration, but 38.09 percent of educator instructors are still not adjusting technology to meet student-centered goals. 54.76 percent selecting technology that is appropriate for the guiding plan, 52.38 percent acing a variety of educational ideal models through the use of ICTs, and not knowing academic regulations governing the study hall's technology use, respectively.

Result and Discussion

Communication revolution has possibly changed idea, feeling and conduct by permitting any man, lady or youngster anyplace in the world to trade visual and sound encounters with any man, lady or kid in some other spot in the world. Correspondence implies giving data as well as bringing change. Viable correspondence is sharing of thoughts, information, abilities and attitudes till they become in the territory of both. It is seen that guidance in schools is being done on customary lines, basically through words. Words are significant as a mode of correspondence yet words alone don't get our appropriate pictures the brain of the students. Their experience is limited and henceforth education granted through words isn't comprehended by them.

In the current period, technology has become an Integral piece of our lives. Consistently there is new device or programming that makes lives simpler. Making lives simpler isn't, in any case, the main job the technology plays in our lives. Infact, it is assuming key job in improving each part of life. "Technology has opened new ways to immaculate parts of life and has enormously influenced each field of human life. The field of education isn't a special case. It is assuming an expanding job in the field of education. Technology in educational field is changing the customary job of the partners of education. New data and correspondence technology has presented numerous adjustments in the present educational framework. Intelligent advancements have influenced the very idea of

teaching and learning. Technology offers the chance to change the jobs that teachers and students have customarily played. As technology progresses, it is utilized to profit students of any age in learning process. Technology utilized in study hall causes students to assimilate the material. Projection screens connected to PC permit students to see their notes rather than essentially tuning in to an instructor who is conveying a talk.

Utilization of technology by male and female teachers is seen as comparable, therefore, it is proposed that endeavors ought to be made to keep up this circumstance." Comparative accessibility of hardware, institutional help ought to be given to both the teachers. Subsequently, no separation in the teachers ought to be made based on the gender.

The majority of the secondary school students have great attitude towards educational technology. Research supporting this is by Aytekin et. al.(2004), as indicated by whom high rates focused on that there are inspirational attitudes towards PC as a result of it being a device to sort out life productively. The secondary school students, all in all, have more ideal attitude towards PC (Mahmood, 2013).

Attitude of students is generally great towards educational media at secondary school stage. It was discovered in secondary education that the PC attitude of young ladies appear to more negative than that of young men, young ladies and young men took on various tasks when cooperating on the PC and they handled ICT tasks in an unexpected way (Volman, M., et al.,2005). Studies led by Volman(2005) and Robertson(1985) saw attitude of young men as more good than young ladies towards any educational media. As opposed to this research led by Hamid(1977), Hamzah and Ahmad(2016) and Mahmood(2013) shows female students to have good attitude towards new instructional technology.

Conclusion

The current study gives an investigation about status and extent of educational technology in instructor education curriculum. The extent of this study is restricted to a particular setting. More research is required in understanding other fundamental reasons that help educational technology usage in a school education. As the study limited into secondary level curriculum a zone for further research is to investigate the equivalent in rudimentary level education curriculum. A study can be under taken to build up a model curriculum of educational technology.

As understudy have revealed absence of proper learning chances to apply technology upgraded instructional method and techniques to help their jumpers needs, the education organizations should concentrate on sharpening them for the equivalent and giving satisfactory time and framework to fusing pragmatic/hands on encounters in the curriculum.

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