
Role of Technology in Education

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Abstract: With the advancement in technology there is a rapid change in the manner in which individuals live, associate, impart, and lead business. This change is regularly alluded to as the "digital revolution," which is the headway of innovation from simple, electronic and mechanical apparatuses to the technically advanced instruments accessible today. The utilization of digitalization in the learning procedure and training rehearses in formal instructing is exceptionally subjected to the capacity of educators to deliver it without imperiling the lavishness of the study hall condition, to be specific the consideration that understudies need to follow the progression of argumentation and to ensure the nature of the inquisitive. In this paper, a research is made on the impact of technology in the modern era and how it impact the life of the scholars, graduates and alike as yet more advancements have to be done in the implementation of digital technology in the study hall and on the performance of the educator particularly on how performing various tasks influences the educator job in-class in delivering and explaining the content in a more precise manner that is easy for the students to grab things more easily.

Keywords: Digital Technology, Education, Improved Education System, Modern Era

INTRODUCTION

The 21st century is frequently seen as innovation duration. Technology and innovation, at present, serves a remarkable job in present era. It is specifically visualized as a developmental premise of an economy. Although, effect of technology on education is important but due to lack of economy, development of technology is difficult to grow. As shown by the latest experiences with regard to how specifically today's students choose to utilize innovation and also how their training is influenced by technological developments that they are using innovation, it was found that the use of existing hardware, classroom instruction and intelligence is growing.[1]. They also claim that innovation and equipment are considerably more intuitive, as well as brimming with interesting regions, when supported by innovation. The sharing of information, much like viable, turns out to have been easy and advantageous. Including in colleges, schools and universities, the dependency and concentration of such a development, which basically makes life an easy, smooth excursion, is absolutely inevitable today.

Technology plays an important role in the educational field: As part of educational strategy, it is included as a structure for educational transport, as a technique for continuing to support rules and also as a device for upgrading the entire learning process. Training has moved from entirely innocent and responsive to intuitive and vigorous cos of instructional technology. In organizational and scholastic contexts, education is key[1]. Education develop the mind of the people thereby making them curious to know about each and everything around them. Thus, the utilization of technology can assist students with comprehension and hold ideas better. Many different ways are available to make use of technology: Some of them are:

Internet

The importance of internet has achieved heights to a greater extent in the present era. Now it is never possible to sabotage its importance in the practice scene. Despite the odds of misrepresentation and downsides, the use of the internet is close to a gift for students. Today, the web is one that is important for almost anything we are using to conduct any job, large or small[2]. The web is literally anywhere, from TV to game comforts, and even telephones. The Social media can help individuals achieve better economic strength in all instances by enhancing access to records, details and guidance, developing up the skills they and ones people groups require. Teachers need to acquire new skills for Web assets to be used.

Since the development of Internet, it has gotten a significant vehicle of correspondence where different individuals can interact and clear their doubts and enhance their skills i.e. internet provides numerous chances to numerous individuals around the globe in numerous various ways[3][4]. The Web, other newly developed technologies began taking their locations in the day about year life. The too was to these innovations enhances individuals' lives and provides amazing chances. People have started to efficiently access and use every form of content on the Web for social, educational and entertainment purposes. The Internet basically offers expert solutions, which are communication and knowledge. It can be quite well noted, on a progressively thorough

assumption, that the Web has a few capabilities, especially in coaching, but these can be filmed as I data facility, (ii) unrestricted conversations, (iii) online adaptive learning, (iv) computerized research, (v) progress in the new land, (vi) enhance learning optimism, (vii) global guidance As the Web has a variety of capabilities, it is important to understand to some of what extent it is used for scholastic activities by youngsters in higher degree. The new era is referred to as the Internet of Things (IoT), which is further related to the production of computers and connected and Internet-enabled paper systems. With the growth of the Internet, an essential mode of communication has been obtained only as an analysis and relaxation method.[5][6]. The reasoning is that, from different perspectives, it offers numerous opportunities for numerous people around the world. The Web, however, has also taken its place in day-to-day life of all the other computer based advances. The broad access to such innovations enhances the lives of people and gives amazing opportunities. People have started to efficiently access and use every form of content on the Web for social, educational and entertainment purposes. Essentially, the Internet provides two primary benefits: correspondence and information.

- i. Storage facility of data,
- ii. Correspondence without limits,
- iii. Online intelligent learning,
- iv. Electronic/online research,
- v. Development in the new world,
- vi. Improve enthusiasm for learning,
- vii. Worldwide training, and
- viii. Data inventories.

As the internet has various capacities, it is essential to consider to what degree it is utilized by the students in advanced education for scholastic purposes.

The era of computerized technology has invaded numerous parts of life and industry, yet there is small comprehension of how it may be utilized to advance student commitment, an idea accepting solid consideration in advanced education because of its relationship with various positive scholarly results.

It's not really a new issue for universities to incorporate technology into education. Since the 1900s, school personnel have been experimenting with ways to efficiently use digital advances including audio / video recordings, emails and telephony conversation to improve or replace conventional forms of teaching process. However, this problem has been even more challenging in the last two decades because of the overwhelming amount of new innovations on the marketplace. For instance, in the seven - month period (from 2009 to 2016), the number of available apps in Apple's App Store expanded from 6000 to 1.8 million. The number of applications is expected to increase by 75 percent in the next four years, totalling in 6 million. This problem is further exacerbated by the short shelf-life of modern hardware and technologies coupled with substantial internal organizational obstacles preventing institutions from quickly and effectively implementing new technology. Most organizational obstacles to the introduction of technology arise from conflicting contradictions between corporate policy and practice, and skills and capabilities. University officials, for instance, may perceive technology as a resource for attracting and keeping students, while the faculty may fail to decide how technology suits current pedagogy.

Additionally, due to lack of technological expertise about the usefulness of technology, some faculty can be reluctant to utilize technology to enhance the learning experience. Organizational obstacles to technological innovation are especially problematic considering students' growing needs and potential credibility about the use of technology for learning. Surveys show that two-thirds of students are using smart phones for learning, and agree that technology will help them reach learning objectives and best equip them after an increasing technologically based workforce.

Many prior arts researches have been done by researchers to access the use of technology in the field of education. It was noticed that as compared to previous years use of technology gadgets such as smartphones, iPads and alike has taken a surge from 2014. This surge has lead to the tremendous increase in the making of technology gadgets.

The requirement for inspecting the utilization of educational innovation in the study hall is epitomized by the Annual ECAR study with 980,000 student from 161 schools and colleges[8]. The investigation is focused on analyzing the utilization and significance of technological innovation in addition to student's desires and innovation trials.

The outcomes demonstrated that "innovation is installed in students" lives, and they commonly have positive tendencies toward innovation". While 67% of learners demonstrated that that they were set up to utilize innovation when they entered school, the utilization of innovation for improving learning stays low in the study hall. The utilization of innovation in the study hall relied upon the workforce and the decisions they made when utilizing it in the study hall. Understudies likewise demonstrated that workforce use innovation for differing reasons: to help learning the material (59%), to utilize online coordinated effort devices (58%), to look after consideration (53%), and develop learning (35%).

Wilson, Goodman, Bradbury, and Gross (2013) analyzed the utilization of an iPad with 98 basic preservice educators. The outcomes showed that the educators communicated a thankfulness that the iPad could be utilized as an information assortment apparatus, it upgraded their capacity to break down and watch science wonders, and it could replay recordings. The educators were additionally positive about the manner in which the iPad helped them team up and accepted that it was unavoidable that devices like the iPad would get standard in the 21st century study hall. Comparative outcomes on utilizing the iPad were found by various researchers.

Chickering and Gamson have distinguished seven standards of good practice in undergrad instruction that are the main impetus in improving learning in the study hall[9]. These were:

- a) iPads: That are utilized to get ready and convey introductions, take notes, speak with others, and use as a second screen;
- b) voice reader: Computer based voice that permits students to tune in to the part in the course book as well as check their papers for sentence structure botches;
- c) Videoconferencing: Used to increment correspondence among groups dealing with a specific task or recreation;
- d) Screen sharing: Provide a platform to share screen thereby making understanding of the chapter in an easy manner by collaborating virtually over on the platform; and
- e) Different screens: Provide a platform to analyze different records by using iPads and computers and can share their presentations. Table 1 represents impact of technologies on the life of students.

Table 1: Impact of Technologies on the life of Students

PRINCIPLES	IPADS	VOICE READER	VIDEO CONFERENCING	SCREEN SHARING	MULTIPLE SCREEN
Relation between educators and education seekers	Yes	Yes	Yes	Yes	Yes
State of understanding between among education seekers	Yes	Yes	Yes	Yes	Yes
Enhances smart learning	Yes	Yes	Yes	Yes	Yes
Quick clarification of doubts	Yes	-	Yes	Yes	-
Aids in achieving tasks	Yes	Yes	Yes	Yes	
Provides platform for easy discussion at any time	Yes	Yes	Yes	Yes	Yes
Values talents and mode of learning	Yes		Yes	Yes	Yes
Provides quick and easy accessibility	Yes	Yes	Yes	Yes	Yes

Studying is necessary because having a full education is crucial for an individual, and it gives students big chance to improve learning styles, organization skills, self-discipline and improve academic performance. Studying also assists in the willingness of the student to seek education and provide them with the skills they will be required for future, despite of the career direction they chose. It provides a platform to acquire information that may help to build the future. Moreover, apart from building the career the education also adds values in the individual’s life and enhance the moral values of the life. Studying strengthens personality, provides greater trust and obligations. It is vital portion of the learning curve, but different learners will have different requirements, and with different approaches each student will learn. Figure 1 represents a schematic diagram of importance of education.

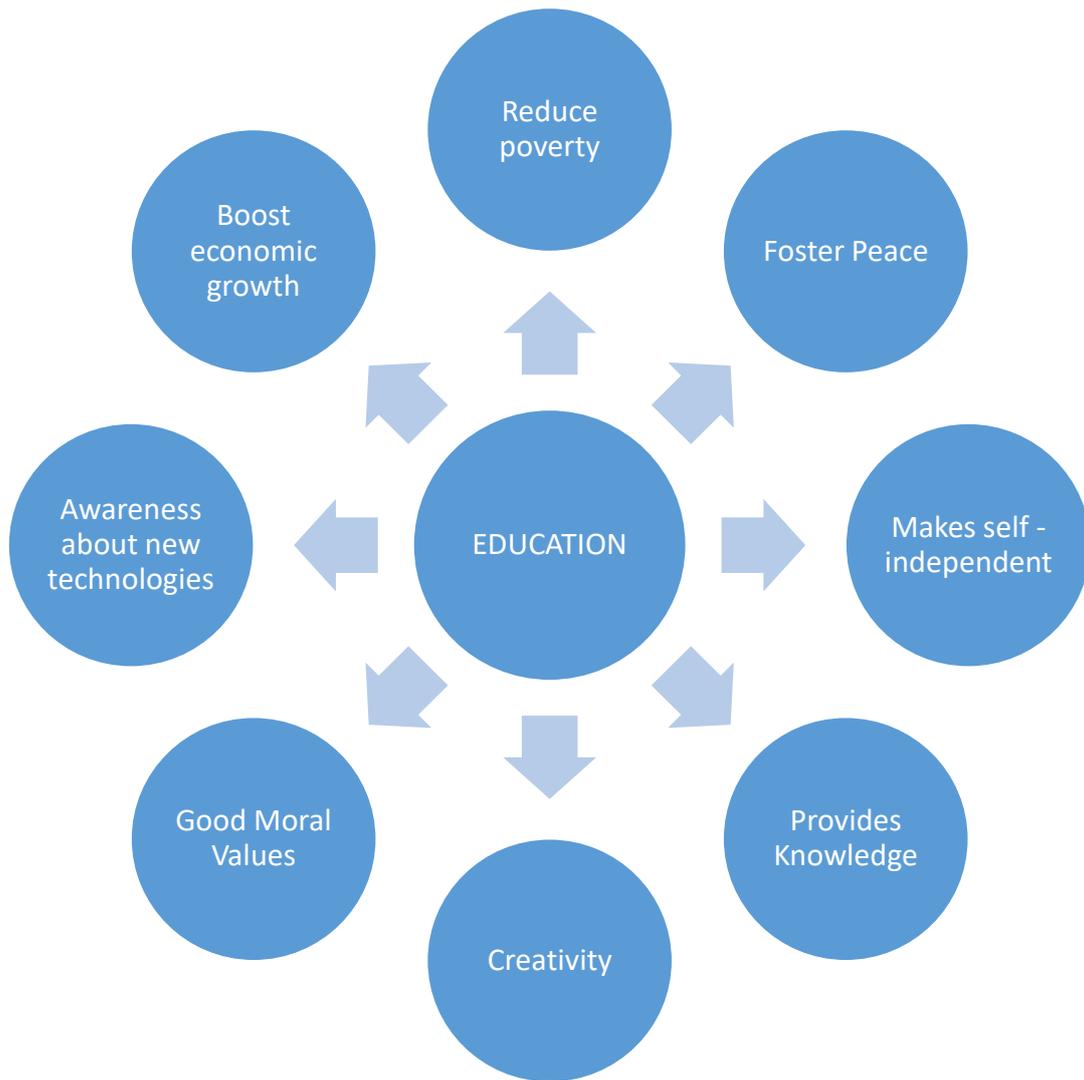


Fig.1: Schematic Representation of Importance of Education in Individuals Life

In order to analyze the use of technology in education a study was conducted considering a group of people. The students were prior informed about the intent of the study and an assurance was made about that the response provide by them would remain confidential anonymity would be maintained during the study.

METHODOLOGY

Four different domains were chosen, which comprises of 56 majors from five studyhalls from a college in the south. Total 150 students were involved in this study which includes 50 males and 50 females. There were 20 juniors, 5 high school students, 25 seniors. The selection of the students were done from different engineering domains which includes: biotechnology engg., computer science engg., electrical engg., electronics and communication engg. Students of all the domains were advised to utilize iPads to give semester exams. iPads were provided to some students who were not able to access it[10]. Utilization of voice reader, video conference, screen sharing and multitask screens were also allowed. Table 2 represents demographic information of the students.

Table 2: Demographic Information of the Students

	Biotechnology engineering	Computer science engineering	Electrical engineering	Electronics & communication engineering
Males	15	15	10	10
Females	25	10	5	10
High-school students	3	2	-	-

Senior	7	8	5	5
Junior	5	5	5	5
Mean Age	19.80	20.78	20.85	20.92
Mean GPA	3.45	3.43	3.38	3.35

Instrumentation

Surveys related to demographic details (age, gender, Academic record, classes undertaken in the entire semester, grade anticipated in the class) were considered. Additionally, instruments mentioned below were considered.

Digital technology utilization

The segment on digital technology involved students describing how frequently in a studyhall how digital technology is utilized on a 5 point scale where 1 = rarely, and 5 = very frequently.

Recognized efficacy of technology

Views of the students were taken regarding the effectiveness of the technology in their learning process. They were asked to rate the technology on the basis of their usefulness at point of scale of 5 wherein 1= highly ineffective and 5= highly effective. The mode of this review was to access which type of digital technology was beneficial for them in studyhall at the time of examinations.

RESULTS

Respondents were requested to tell whether they possessed iPad or prefer to buy one if it was involved in their studies (Table 3). The outcomes concluded that most learners (over 65 per cent) did not possess the iPad, but would prefer to buy if it is required for their studies.

Table 3: iPad ownership (%) of the students

Statement	Biotechnology engineering	Computer science engineering	Electrical engineering	Electronics & communication engineering
iPad owners				
Yes	9	32	9.5	31
No	91	69.2	91	63
Would you prefer buying an iPad if it required in studies?				
Yes	95	58	73	92
No	5	42	27	8

Digital technology utilization

Students were questioned about the type of technology they have used during the examination in the study hall. The findings in Table 4 show that most students suggested "always" and "very frequently" using iPad. During the course, over 60 percent of students reported they do not required voice reader. Also, other technologies, such as videoconferencing, screen sharing, multiple project screens and alike tended to be "only" used throughout the semester.

Table 4: Use of digital technology at the time of examination by students (%)

Number Of Times Utilization Of Technology	Biotechnology Engineering	Computer Science Engineering	Electrical Engineering	Electronics & Communication Engineering
ipad				
Never	4.1	-	-	-
Rarely	-	5.2	25.2	7.8
Occasionally	-	26.5	23.2	15.6
Often	20	45	23	10

Book Reader				
Never	65	59	60	55
Rarely	54	53	45	15
Occasionally	23	29	12	23
Often	5	4	5	5
Videoconferencing				
Never	12	15	10	10.5
Rarely	30			
Occasionally	35	34	25	20
Often	50	45	504	48
Screen Share				
Never	23	25	30	30.8
Rarely	34	43	37	25
Occasionally	15	15	26	25
Often	-	5	-	-
Multiple Screen				
Never	19	16	17	20
Rarely	23	25	30	28
Occasionally	21	24	24	21
Often	14	16	18	12

Recognized efficacy of technology

Students were instructed to state the recognition of effectiveness of digital technologies used during examination (Table 5). For iPad, more than 75% of students said it was "beneficial" or "highly beneficial." For voice(s) reader, 55% percent of electronics and communication found it to be "beneficial" or "highly beneficial" while 39% of them found it to be not effective. Among all, majority of students suggested that videoconferencing, screen sharing, and use of multiple screens for studying is found to be useful and highly useful.

Table 5: Recognition of effectivity of digital technology by students (%)

Recognized effectivity of digital technology	Biotechnology engineering	Computer science engineering	Electrical engineering	Electronics & communication engineering
iPad				
Highly not useful	-	-	-	-
Not useful	-	-	5	-
Neutral	15.5	14.9	13.5	12.9
beneficial	25	35	39	45
Highly beneficial	70	70	65	67
Voice reader				
Highly not useful	13	15	28	15
Not useful	15	12	15	15
Neutral	20	15	19	23
beneficial	25	23	31	34
Highly beneficial	30	31	35	45
Video conferencing				
Highly not useful	5	10	10.7	14.5
Not useful	7	11	13	15
Neutral	21	25	23	27
beneficial	25	25	20	18
Highly beneficial	45	35	37	39
Screen Sharing				
Highly not useful	-	-	19.3	30.2
Not useful	5.4	11	24.5	11.4

Neutral	-	-	12.4	36.4
beneficial	38.3	15.4	43.3	38.7
Highly beneficial	36.7	38.5	39.2	37.5
Multiple screens				
Highly not useful	-	-	4.5	5.5
Not useful	10.5	16.4	29.4	31.4
Neutral	-	23.1	24.3	32.4
beneficial	23.5	26.4	45.3	46.3
Highly beneficial	70.3	32.4	55	38.6

DISCUSSION

This study aimed to analyze the use and effectiveness of digital technology in the studyhall. The study yielded four exemplary findings:

1. Students preferred iPads more in comparison to other technologies.
2. Students suggested that usage of iPads were highly beneficial and none of denied its usage. Even they agreed to purchase it if it is required in their studies, while they also not completely denied the utilization of other technologies which particularly include videoconferencing, screen sharing and multiple screens.
3. Students actually agreed on the point that usage of digital technology makes the understanding of the concepts easy and develops interest in learning the things while providing better time management, novel strategies development to link the concepts that have not been thought before thereby learning and developing a better personality.
4. Students also commented that technology was not a nuisance in the classroom.

No wonder prospective students utilized iPads in studyhall "often" and "very often." But they also used them for various projects like interaction among each other and also with other(s) in various countries receiving feedback from counsellor/instructor via iPads, and secondary screen for assisting the classes. This develops a positive relationship among e-learning choice and perceived involvement and 'students who favored comprehensive utilization of e-learning technologies often registered more recognized learning and commitment.

Usage of iPad in biochemistry classes helps student to understand the structure of the peptides in an easy manner as 3D structure of the peptides provides a clear vision to students in understanding the chemistry of the structures. This increases the chances of achievements of the students and their engagement in the project, and provides positive experience for the students. Thus, it is found that iPads facilitated greater participation and collaboration in the classrooms during discussions and further activities. Furthermore they say that e-learning technology provides collaborative grasping environment where students discusses, clear doubts, debates and develop knowledge.

Thus students concluded that, digital technology has taught them time management while enabling them to create new connections and develop their learning. Also iPad would help them "share ideas," engage in course activities in ways that improved their learning," "apply course contents to solve problems," "improve the course material," "develop skills that contribute to educational career and thus professional life, "and" build trust.

CONCLUSION

The findings of this preliminary analysis of undergraduate folks provide insights the usage of emerging technology. Future work will analyze the relationship among classrooms use of digital technology, creativity, and educational achievement, and other different variables that influence effectiveness, in order to decide whether there are discrepancies when they correlate to the use of technology.

Thus it can be concluded that, the e-learning process and usage of digital technology in the field of education plays an important role in the development of the personality and also enhance the ability of thinking of the graduates to achieve success in the life.

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