IMPACT OF MODERN TECHNOLOGIES IN THE FIELD OF EDUCATION

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ABSTRACT

Technology is a gift of God. After the gift of life it is perhaps the greatest of God's gifts. It is the mother of civilizations, of arts and of sciences. Technology has certainly changed the way we live. It has impacted different facets of life and redefined living. Undoubtedly, technology plays an important role in every sphere of life. Several manual tasks can be automated, thanks to technology. Also, many complex and critical processes can be carried out with ease and greater efficiency with the help of modern technology. Thanks to the application of technology, living has changed and it has changed for better. Technology has revolutionized the field of education. The importance of technology in schools cannot be ignored. In fact, with the onset of computers in education, it has become easier for teachers to impart knowledge and for students to acquire it.

The use of technology has made the process of teaching and learning all the more enjoyable. There is a constant development of new technologies happening in the world. A handful of these are deemed to have the potential of truly revolutionizing the way we do things. The field of education is one of the oldest fields that continue to be present even today and has time and time again come to make use of new technologies that streamlines and improves upon its core concept. The research we put forward covers the case of virtual reality as an improvement into the field of education. We research how students at the University of Boras perceive the introduction of this novel technology as an aid in their studies. We utilize questionnaires in order to receive this information and received a total of 143 respondents' answers. We conclude that the general attitude of the students is positive, while maintaining skepticism in terms of this result as a piece of document for proving the results as facts.

KEYWORDS: *Education, modern technology, teaching*

INTRODUCTION

The era of 21st century is often regarded as an era of technology. Technology, today, plays a very important role in our life. It is seen as a basis of growth of an economy. An economy which is poor in technology can never grow in work much easier and less time consuming. The impact of technology can be felt in every possible field one such field is Education. Educational technology, sometimes shortened to EduTech or EdTech, is a wide field. Therefore, one can find many definitions, some of which are conflicting. Educational technology as an academic field can be considered either as a design science or as a collection of different research interests addressing fundamental issues of learning, teaching and social organization. Educational technology as practice refers to any form of teaching and learning that makes use of technology. Educational technology in way could be traced back to the emergence of very early tools, e.g., paintings on cave walls. But usually its history is made to start with educational film (1900's) or Sidney Plessey's mechanical teaching machines in the 1920'.First large scale usage of new technologies can be traced to US WWII training of soldiers through training films and other mediated materials. Today, presentation-based technology, based on the idea that people can learn contents trough aural and visual reception, exists in many forms, e.g., streaming audio and video, PowerPoint presentations + voice-over. Another interesting invention of the 1940's was hypertext, i.e.,. The 1950's led to two major still popular designs. Skinners work led to

"programmed instruction" focusing on the formulation of behavioral objectives, breaking instructional content into small units and rewarding correct responses early and often. Advocating a mastery approach to learning based on his taxonomy of intellectual behaviors, Bloom endorsed instructional techniques that varied both instruction and time according to learner requirements. Models based on these designs were usually referred to as computer-based training" (CBT), Computer-aided instruction or computer-assisted instruction (CAI) in the 1970's through the 1990's. In a more simplified form they correspond to today's "e-contents" that often form the core of "e-learning" set-ups, sometimes also referred to as web-based training (WBT) or e-instruction. The course designer divides learning contents into smaller chunks of text augmented with graphics and multimedia presentation. Frequent Multiple Choice questions with immediate feedback are added for self-assessment and guidance. Such e-contents can rely on standards defined by IMS, ADL/Scorm and IEEE.The 1980's and 1990's produced a variety of schools that can be put under the umbrella of the label Computer-based learning (CBL). Frequently based on constructivist and cognitive learning theories, these environments focused on teaching both abstract and domain-specific problem solving. Preferred technologies were micro-worlds (computer environments were learners could explore and build), simulations (computer environments where learner can play with parameters of dynamic systems) and hypertext. Digitized communication and networking in education started in the mid 80s and became popular by the mid-90, in particular through the World-Wide Web (WWW), email and Forums. There is a difference between two major forms of online learning. The earlier type, based on either *Computer Based Training* (CBT) or Computer-based learning (CBL), focused on the interaction between the student and computer drills plus tutorials on one hand or micro-worlds and simulations on the other. Both can be delivered today over the WWW. Today, the prevailing paradigm in the regular school system is Computer-mediated communication (CMC), where the primary form of interaction is between students and instructors, mediated by the computer. CBT/CBL usually means individualized (self-study) learning, while CMC involves teacher/tutor facilitation and requires schematization of flexible learning activities. In addition, modern ICT provides education with tools for sustaining learning communities and associated knowledge management tasks. It also provides tools for student and curriculum management. Helping people and children learn in ways that are easier, faster, more accurate, or less expensive can be traced back to the emergence of very early tools, such as paintings on cave walls. Various types of abacus have been used. Writing slates and blackboards have been used for at least a millennium From their introduction, books and pamphlets have held a prominent role in education. From the early twentieth century, duplicating machines such as the mimeograph and Gestetner stencil devices were used to produce short copy runs (typically 10–50 copies) for classroom or home use. The use of media for instructional purposes is generally traced back to the first decade of the 20th century with the introduction of educational films (1900s) and Sidney Plessey's mechanical teaching machines (1920s). The first all multiple choice, large-scale assessment was the Army Alpha, used to assess the intelligence and more specifically the aptitudes of World War I military recruits. Further large-scale use of technologies was employed in training soldiers during and after WWII using films and other mediated materials, such as overhead projectors. The concept of hypertext is traced to the description by Bush in 1945.

EDUCATION AND MODERN TECHNOLOGIES

According to the latest insights as to how exactly modern students of today prefer to use technology and how does their learning get an impact if they use technology, it was revealed that the use of modern equipment technology and tools, the learning and interactivity of students increases. They also find it much more interactive, as well as full of interesting areas, when aided by technology. The transfer of knowledge becomes very easy and convenient, as well as effective. What this means is, that our minds now tend to work faster when assisted with the use of modern technology, be it any part of life, here we talk about education. The reliance and dependence of such an innovation, that simply makes life an easy, smooth journey is completely unavoidable these days even in schools, universities and colleges. Students today can make use of technology in the following ways:

Internet connection and round the clock connectivity

The internet has grown in importance by many folds, over the process of decade. Its importance in the education world can now never be undermined. Despite the chances offraudand drawbacks, the use of the internet is like a blessing for students. Today, the internet is something that is present in almost everything we use. From television to gaming consoles, and our phones, the internet is literally everywhere. The use of the internet allows students to find amazing convenience, they can find various kinds of help, tutorials and other kinds of assisting material which could be used to academically improve and enhance their learning.

Digital footprint in the education sector

If we talk about digital and education, then the penetration of digital media within the education sector has now grown. This penetration has resulted in round the clock connectivity with students and different forums that are available for different kinds of assignments or help. As the power of digital increases, there are and there will be more applications that will assist students in development and learning.

POSITIVE IMPACT

1. Enhanced Teaching and Learning:
    - Projectors, mind training software, computers, Power point presentations, 3D visualization tools; all these have become great sources for teachers to help students grasp a concept easily.
    - It has to be understood that visual explanation of concepts makes learning fun and enjoyable for classroom and even teachers get a chance to make their classes more interactive and interesting.
2. Globalization:
    - When school in different parts of the state, students can be "meet" their counterparts through video conferencing without leaving the classroom.
    - Some sites, such as www.glovico.com are used to help students learn foreign languages online by pairing a group of students with a teacher from another country.
3. No Geographical Limitations:
    - With the introduction of online degree programs there is hardly any need of being present physically in the classroom. Even several foreign universities have started online degree courses that student can join.
    - Distance learning and online education have become very important part of the education system now a day.

NEGATIVE IMPACT

1. Declining Writing Skills:
   - Due to the excessive usage of online chatting and shortcuts, the writing skills of today's young generation have declined quite tremendously.
   - These days, children are relying more and more on digital communication that they have totally forgot about improving their writing skills.
   - They don't know the spelling of different words, how to use grammar properly or how to do cursive writing.
2. Increasing Incidents of Cheating:
   - Technological developments like graphical calculators, high tech watches, mini cameras and similar equipment have become great sources to cheat in exams.
   - It is easier for students to write formulas and notes on graphing calculators, with least chances of being caught.
3. Lack of Focus:
   - SMS or text messaging has become a favorite pastime of many students. Students are seen playing with their cell phone, iPhones day and night or driving and very often even between lectures.
   - Being ever-connected to the online world has resulted in lack of focus and concentration in academics and to some extent, even in sports and extracurricular activities.

RESULT & ANALYSIS

All the data collected from the respondents were gathered together to be analyzed using Statistical Package for the Social Sciences (SPSS) version 21. The analysis includes both descriptive and inferential analysis. The researchers used descriptive analysis to analyze the frequency and percentage of the overall population in the demographic background. Besides, it is also used to determine the mean, standard deviation, frequency and percentage to identify the effectiveness of ICT integration for students in learning as well as the effective elements of ICT integration in teaching in public schools in Kuala Lumpur. The findings of this research will give the output needed by the researchers to answer the research questions. The findings are done according to the sections in the questionnaire and some inferential analysis that includes reliability testing and Mann-Whitney U testing is also conducted towards the overall data.

Table 1. Demographic background of respondents

Factors	Frequency	Percentage (%)
Gender		
Female	82	81.19
Male	19	18.81
Race		
Malay	36	35.64
Indian	22	21.78
Chinese	39	38.61
Others	4	3.96
Teaching Experience		
<1 year	20	19.8
1-5 years	36	35.64
6-10 ears	34	33.66
>10 years	11	10.89
Type of School		
Primary	37	36.63
Secondary	64	63.37
School Area		
Urban	79	78.22
Rural	22	21.78
Preference of Teaching Style		
Conventional/Traditional	42	41.58
Modern/Contemporary (Use of ICT)	59	58.42
Highest Academic Qualification		
Diploma	10	9.9
Degree	63	62.38
KPLI	19	18.81
Master	9	8.91
The Ability of Handling ICT in Teaching		
High	25	24.75
Medium	67	66.34
Low	9	8.91

From the overall population (n=101) based on gender, there are 82 female respondents with a percentage of 81.19% as compared to only 19 male respondents with 18.81%. From the overall population based on race, the highest frequency of respondents are Chinese with a total 39 (38.61%) followed by Malay with 36 (35.64%), then Indian with 22 (21.78%) and also others with 4 (3.96) specified as 1 Dusun, 2 Iban and 1 Melanau whom referred as an Ethnic race in Sarawak. From the overall population based on teaching experience, most of the respondents have 1-5 years of teaching experience with 36 (35.64) followed by 6-10 years of experience with 34 (33.66%), then < 1 year of teaching experience with 20 (19.8%) and 11 respondents with > 10 years of teaching experience with 11 (10.89%). From the overall population based on type of school, there are 64 respondents who are teaching in secondary school with 64 (63.37%) as compared to primary school with 37 (36.63%).From the overall population based on school area,

there are more respondents who are teaching in city school area with 79 (78.22%) as compared to respondents who are teaching in rural school area with 22 (21.78%). From the overall population based on preference of teaching style, more respondents preferred modern/contemporary teaching style with 59 (58.42%) as compared to respondents who preferred conventional/traditional method of teaching with 42 (41.58%). From the overall population based on highest academic qualification, most of the respondents come with degree qualification with 63 (62.38%), followed by KPLI (Post-Degree Teacher's Training) with 19 (18.81%), then diploma qualification with 10 (9.9%) and respondents with master qualification with 9 (8.91%). From the overall population based on the ability of handling ICT in teaching, most of the respondents believe it that they possess medium ability with 67 (66.34%) followed by high ability in handling ICT with 25 (24.75%) and low ability with 9 (8.91%).

CONCLUSION

Technology has a positive impact on education and at the same time may also pose negative effects. Teachers and students should take advantage of this in the good light and eliminate the drawbacks which are pulling back many of students as well as schools from achieving excellence. It is thus time for every country to introduce a more technologically equipped education sector in the future. Our findings this year reflect students who are serious about the work of being students and who continue to leverage personal and campus technology for their academic success. Personal technologies remain reliably prevalent; other technologies with potential impact to enhance student learning are emerging among our students. Meanwhile, campus technology infrastructure continues to influence students' overall tech experiences. This year we also determined that student demographics play an important role in the types of technology that are viewed as critical to their success as well as to their experiences of technology. We are also optimistic that this year's report can foster important dialogues among campus stakeholders regarding technology, diversity, equity, and inclusion, as well as accessibility. Although reporting that "change is occurring" while some things "remain the same" doesn't constitute a game-changing proclamation, we are confident this report provides strong insights into why these trends are occurring, as well as actionable recommendations for institutional stakeholders. The more evidence that can be collected to understand students' technological preferences for and relations to technology, the better equipped faculty and IT organizations will be to address current needs and anticipate future student needs. In 2018, students continue to see technology as essential to their academic success. What is crucial now is identifying how best to leverage it for student success, based on institutional goals, costs, pedagogical approaches, and evidence of impact. This report supports these conversations by providing empirical evidence for addressing these goals rather than relying on anecdotal-based assumptions about students and technology or single studies that confirm our preconceived biases. We hope that this report will serve as the starting point of those conversations. Technology is a necessity in today's world and we must be ready for it. Parents want their children to graduate with skills that prepare them to either get a job in today's marketplace or advance to higher levels of education and training. Employers hire employees who are reliable, literate, and able to reason, communicate, make decisions, and learn. The Department of

Education and other federal agencies recognize the essential role of technology in 21st century education

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