A STUDY TO ANALYSE THE EDUCATIONAL ASSESSMENT OF STUDENTS USING VIRTUAL REALITY TECHNOLOGIES

Qiu Jun, Muhantha Paramalingam

Lincoln University College, 47301 Petaling Jaya, Selangor D. E., Malaysia.

Corresponding author: Qiu Jun, Lincoln University College, 47301 Petaling Jaya, Selangor D. E., Malaysia, Email: 5778901@qq.com

ABSTRACT

The goal of this research is to conduct a review of the available literature on internet use and its impact on students' academic progress. The major goal of this study was to discover the factors that impact students' internet use patterns. This research also aims to measure the scope of students' online activity and assess the different ways in which they use the internet. The investigator read several scholarly articles. All of the factors considered are dependent on how kids utilise the internet. While fourteen research focused on how students acquired access to the Internet, nine looked at how they utilised the internet. Articles strictly related to higher education were the only ones that satisfied the inclusion criteria. Academic papers and articles that were previously difficult, if not impossible, for students to get via conventional library resources are now accessible online. Students' academic achievement increased dramatically as they accessed the internet frequently. According to the study, spending too much time on social media might distract pupils from their academic work. Consequently, it was suggested that the university administration provide some guidelines to help students cope with the challenges they face online.

Keywords: The internet, Influence, learners, Internet Technological innovation, Learning Outcomes, Positive, Negative, social media and Education.

INTRODUCTION

The goal of this study was to report on the many ways that virtual reality, or VR, is being employed in education. By showing examples of systems that were already in use in real-world applications as well as those that were still under research and development, one may better understand both the state of the art and the present moment of practice. Furthermore, this study examines instructor and academic evaluations of VR use in education to determine what

could be learnt, how significant challenges were addressed, and whether or not the equipment was beginning to reach its full potential (Aalbers2018). Many researchers and educators believe that VR technology would have significant advantages for education. For others, the main question was whether VR might help constructivist learning approaches. Some focus was placed on the possibility of alternate kinds of training that may fit various types of learners, especially those who are more visually orientated. Others believe that the ability for students and teachers to interact in a virtual learning environment that was not restricted by physical constraints was the most significant advantage. In conventional classroom environments, assimilation was often the technique of education for pupils. For example, pupils may learn about a topic after hearing a teacher or professor discuss it. According to the current educational paradigm, when students actively engage in the production of knowledge in a learning through experience context, they are better able to absorb new information, retain it, and apply it in other settings. Constructivism was a school of thought in pedagogy whose members had opposing opinions on how it should be used in the classroom. While some see it as a beneficial supplement to the more traditional telling-based teaching technique, others argue that learners should be allowed to rethink the entire curriculum via the process of gently directed exploratory learning (Diaz, 2018).

BACKGROUND OF THE STUDY

According to Nyakwende, pupils enrolled in higher education who use computer technology, or ICTs, such as the internet face a combination of benefits and drawbacks as a direct consequence of globalisation. A simple Google search may help students finish their tasks and find solutions to their schooling challenges. Despite their physical distance, they were able to converse and exchange information and ideas. This is made feasible by technology. The Internet was a critical component of communication and information technology that has caused a significant change in the foundation of the global information environment. This transformation was prompted by the internet's rapid growth. Students were able to get more insights on a subject of discussion by sharing their own learning experiences with other people within the framework of solving issues. This gives kids the chance to gain various perspectives. Mr. Siraj. According to Hsieh, the use of online education had an important moderating role in the process of boosting students' enjoyment of school. According to Akin Ademola, the internet was created to let individuals of all ages participate in a range of social activities. One of the primary goals of the internet intended to do this. Every area of people's lives has been substantially altered as a consequence of technological advancements such as web surfing and other comparable developments. According to Ngoumandjoka's results, educational institutions began utilising the internet to better their students' learning experiences in the mid-1990s. A wide spectrum of individuals utilise the internet for a variety of reasons, each of which need a certain kind of help (Barry, 2017).

PURPOSE OF THE STUDY

The major purpose of this study team was to investigate how VR technology has affected the way schools assess students' development. The study's main purpose was to determine if and how VR might enhance reliability, context-specificity, and access of student assessments in various kinds of classrooms. This research aimed to address the question, "How can VR be incorporated into assessment techniques to enhance instructional efficiency, student motivation, and learning outcomes in different instructional contexts?" by investigating a variety of potential applications.

LITERATURE REVIEW

VR in the classroom mainly consists of students using current VR applications. Students may learn about various historical periods, for instance, or get a rudimentary understanding of topics by exploring a virtual environment on their own with these applications. On the other hand, educators may allow their pupils to demonstrate their mastery of technical or non-scientific topics by creating their own virtual worlds (Godlewska, 2019). This may help students learn, comprehend, and present their work. Analysing the proportional proportions of pre-developed, student-developed, plus multiuser VR was a fascinating data visualisation project. With 40 applications currently in the works, 21 student-development initiatives, and three multiuser apps, the ratio is approximately 13:7:1. The majority of VR apps are pre-made, which is not unexpected given that they offer an appropriate place to start for pupils and teachers to learn concerning the technology and facilitate the exploration of fundamental issues about how to utilise VR in the classroom. The bulk of the activities that fall under this category are directly tied to research. Given the above information and the level of technical expertise required, the fact that learners are engaged in constructing virtual worlds in so many activities may seem unexpected at first. Actually, just two groups are in charge of the great bulk of these activities. These two groups collaborated to solve almost two-thirds of the cases. The small number of multiuser, distributed VR applications reflects the technology's general immaturity. Research into the convergence of VR, networking, and communication technologies was still in its early phases. Even though there were only three works in this particular field at the time, several developers of pre-existing VR apps claimed that they planned to create networked variants of their current software with multiple users in the future. This aim was mentioned many times during the meeting (Johnson,2022).

Research Questions

1. What are the disparities in educational evaluation results between students who participate in VR-based learning experiences and those who utilise conventional methods?

RESEARCH METHODOLOGY

Experimental Design: The efficacy of standard educational evaluation techniques should be compared with the effectiveness of VR-enhanced assessment methods. A quasi-experimental approach should be used for this comparison.

Quantitative Approach: Employ an approach to gather quantitative data.

Participants: There were 389 students who participated in the qualitative survey, and out of them, 232 (about 62%) were categorised as "light" Internet users. This classification was based on the fact that their average daily use was less than 2.45 hours.

Selection Criteria: Choose a varied group of students and teachers from various educational institutions or situations.Choose a varied group of students and teachers from various educational institutions or situations.

Sample Size: Ensure an adequate sample size of 389.

Data Collection:

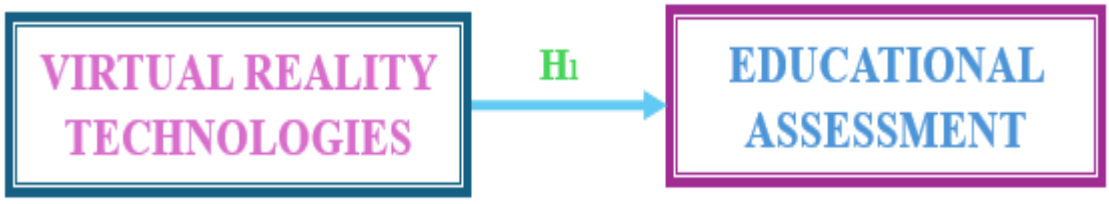
Quantitative Data: Data should be collected via pre- and post-test evaluations, utilising both standard and VR-enhanced approaches.

Selection of VR Tools: Choose appropriate VR platforms and tools suitable for educational assessment purposes.

Integration: Integrate VR technology into current assessment methods or create new assessment techniques that use VR capabilities.

Data Analysis: Analyse quantitative data using statistical techniques (e.g., t-tests and ANOVA) to compare evaluation results between conventional and VR-enhanced approaches.

CONCEPTUAL FRAMEWORK



RESULT

This portion of the chapter aimed to triangulate the findings of previous quantitative investigations. The purpose of researchers contrasting and comparing their results is to get knowledge that would be hard to obtain via individual investigations. Researchers evaluate these studies to examine whether there is a link between Internet use and academic accomplishment at Chinese colleges.

Comparing and comparing the outcomes

This portion of the chapter will examine the results of the two studies, with a focus on the three main areas that each research addressed. It is worth noting these areas:

1. Does the incidence of dependency on the internet among college students cause concern?

2. What are the most prevalent ways students access the Internet?
3. How does the Internet affect the performance of learners in the classroom?
It was evident that today's college students depend extensively on the Internet. According to the two studies, students' access to the internet on campus was fairly low. Their article's qualitative survey comprised 389 students; 232 of them, or almost 62%, were classified as "light" Internet users, with an average daily usage of less than 2.45 hours. The statistical study found that 273 students, or 76% of the 359 individual Squid gateway logs, were classed as "light" Internet users since their average usage was less than 3575MB per year, or around 10MB per day. As previously stated, they did not acquire three years' worth of Squid server logs from CNS for every one of the 359 students, therefore the findings may represent an underestimate of students' Internet usage on campus due to the inaccuracy of student self-reports. They do, however, wish to point you that Wits courses normally start at 8 a.m. and end at 4 p.m., with two-hour breaks per day for possible reasons. To back this up, Wits classrooms continue to follow the tried-and-true approach of having the professor go over the content while the students take notes, and only classes that allow students to access the Internet are tutorials. This is even though students spend an average of four hours to six hours a week on computers, mostly browsing academic websites and using search engines. The proportion of persons who used the Internet for statistical analysis was 24%, while for qualitative research it was 38%. Out of the 86 "heavy" Internet users identified in the quantitative analysis, 18 utilised more than 10 GB each year, which equates to around 27 MB per day. In contrast, 147 "heavy" users identified in the qualitative survey reported accessing the Internet for more than six hours each day. Because school years do not last 365 days and pupils do not always attend class every day, this was very "heavy" in both circumstances. Our findings, as well as those reported by Young, Scherer, Morahan-Martin and Schumacher, Anderson, Kubey et al., Metzger et al., and Fortson et al., all support the notion that third-year Chinese students depend on the Internet.

- **How Students Use the Internet**

When researchers compared the results of the two surveys, they observed that college students' intentions for accessing the Internet on campus were conflicting. According to the researcher's qualitative study, the vast majority of students (50.64%) use the Internet for educational purposes, followed by leisure (34.19%), relationship building (8.48%), and other reasons (6.68%). However, the evidence indicates that this is not the case. A poll of students revealed that the top four reasons they utilised the internet were for enjoyment (53.22%), homework (20.17%), interacting with one another (17.65%), and for no apparent reason (8.16%).

Given the inconsistent findings, the researcher has ample cause to question the students' own comments. Using quantitative research methodologies, they discovered that students often overestimate the advantages of having Internet access. The Squid proxy logs were acquired from 359 students; however, just 107 of them admitted accessing the Internet for the same purpose that the data indicated. This indicates that 70% of the students in the research had no idea why they predominantly used the Internet. They'd rather pretend that 70% of people don't know how much information they spend online than acknowledge they lied to us. The reason for this is because the survey utilised in the qualitative research was intended to be anonymous. As a consequence, the organiser may reasonably believe that the participants had no reason to give us with false findings.

According to the researchers' results, diverse student and Internet user groups utilise the worldwide web for a variety of objectives. Despite the fact that the same group of students uses the Internet primarily for educational purposes, the organizer's quantitative analysis reveals that "heavy" Internet users use it primarily for entertainment, followed by schoolwork, and finally, to build and maintain personal relationships. Using the same rationale, the quantitative study discovered that respondents valued leisure activities above other factors such as academics and relationship formation and maintenance.
The impact of students' Internet usage on their academic achievement.
In two studies comparing the impact of Internet usage on students' academic performance, extensive Internet use was linked to worse academic accomplishment. According to the researcher's qualitative study, students who were labelled as "heavy" Internet users spent fewer minutes on academic tasks and more time on recreational activities online. These students also had a more negative view of the Internet's impact on their academic performance. These results were backed by the quantitative study's statistical analysis, which revealed that "heavy" Internet users spent much more time than "light" users on non-academic activities on the Internet. As an interesting side note, they discovered that 58.20% of students whose grades were favourably influenced by the Internet utilised it, whereas 29% of students whose grades were badly affected did. This discovery is fascinating since it seems to be supported by two studies. In comparison, the quantitative study discovered that "good" students

utilised the Internet for homework far more frequently than "bad" students (22.92% vs. 17.02%), but for enjoyment much less often (39.58 per cent vs. 57.87 per cent). The above comparison lends credence to the idea that students' non-academic Internet use may hurt their academic performance in higher education.

- **Analysis of Studies Quantitative:**

In addition to determining whether or not excessive Internet use was connected with poor academic accomplishment among Chinese students, the present research sought to explore two other areas. These two pieces of study served to resolve the vast majority of critical issues. Following that, we got the following queries.

1. Can we believe statistics based on self-reports?

2. Do quantitative data provide a comprehensive view of the situation?

Regarding the first issue, it seems that the data supplied by students was not accurate due to conflicting findings from qualitative and quantitative research on topics such as the reasons underpinning students' online conduct. People are infamous for exaggerating their actions, therefore robust approaches that utilise facts are required to analyse human behaviour. People may not have noticed this, which might explain why. Many people feel that by collecting anonymous data on these activities, more precise reporting may be provided. Finally, while both studies arrived at different conclusions about the root cause of students' online behaviour, they did lend credibility to the notion that third-year Chinese University students frequently suffer from Internet dependency, which has a significant impact on their academic performance.

DISCUSSION

Even though researchers classified students as "heavy" or "light" Internet users based on the sample mean throughout the study, they found that nearly 37% of participants exhibited signs of Internet dependency when using the seven criteria for Internet dependency, indicating that college students are Internet dependent. Furthermore, their research finds that 62% of the sample population is classed as "light" Internet users, while 38% of the sample population—which represents around 62% of the sample as a whole—is classified as "heavy" Internet users since they spend more than 2.45 hours per day online. The two previously mentioned results imply that the sample mean Internet use—which has never been used to identify students as "heavy" or "light" Internet users—was just as trustworthy as the seven criteria for symptoms of Internet dependency employed in earlier research. Researchers believe that the proportion of "heavy" vs. "light"

Internet users would have been different if students had been asked to report on their daily Internet use both on and off school, rather than solely on campus. To ensure consistency in sampling approaches throughout the subsequent qualitative and quantitative investigations, students were expressly instructed to report just their Internet usage while at school.

CONCLUSION

The study's purpose was to analyse previous studies on the association between students' internet usage and academic performance. As a consequence, students should restrict their online use, and authorities should help students overcome some of the challenges they face while studying electronically over the internet. According to research, when students are connected to the internet, their learning results improve; yet, there are a number of negative repercussions that might cause students' learning outcomes to worsen. Everyone today utilises web-based social networking; since technology is so widely available and easy, people often see both individuals and organisations as reliant on it. The advent of internet networking greatly boosted students' ability to interact quickly and effectively. Online networking may help a business succeed in a variety of ways, including supporting it in meeting its objectives and increasing annual sales. Teens use media on a regular basis. Although social media has many positives, it also has several drawbacks that may hurt users. Inaccurate information can undermine a company's efforts to train its employees; poorly targeted advertisements can harm a company's profits; social media companies can violate users' privacy by abusing their power; and young people exposed to unrelated content may develop an interest in violence and other criminal activity. To profit from these cutting-edge innovations, everyone needed to utilise the beneficial features of social media while avoiding the bad ones (Mathewson,2020).

References

2. Aalbers G., McNally R. J., Heeren A., de Wit S., Fried E. I. (2018). Social media and depression symptoms: A network perspective. J. Exp. Psychol. Gen. 148 1454–1462. 10.1037/xge0000528.
3. Barry C. T., Sidoti C. L., Briggs S. M., Reiter S. R., Lindsey R. A. (2017). Adolescent social media use and mental health from adolescent and parent perspectives. J. Adolesc. 61 1–11. 10.1016/j.adolescence.2017.08.005.
4. Diaz, J.C.T., Montoliu, J. M.D., & Becerra, M. H. 2018. Plagiarism, internet and academic success at the university. Journal of new approaches in educational research. 7(2): 98- 104.

5. Fox S. Peer-to-Peer Healthcare. Pew Internet & American Life Project. 2011. [(accessed on 16 September 2021)].
6. Godlewska, A. B. 2019. Converting a lager lecture class to an active blended learning class. Journal of geography in higher education. 43(1): 115.
7. Johnson, J. (2022). Worldwide digital population as of January 2022.
8. Mathewson M. (2020). The impact of social media usage on students' mental health. J. Stud. Affairs 29 146–160.