

Impact of online tools on the learning experience of students in higher education

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Abstract

The evolution of teaching and learning has come across various significant phases over the past hundreds of years. History has witnessed tremendous and revolutionary changes in teaching & learning, from Education 1.0 to Education 4.0 and beyond. Overall experts may have a difference of opinion on various aspects of teaching and learning and their evolution however one thing we all agree on is that the modern classroom has changed to an extent that we have witnessed revolutionary innovations happening in the way the modern classroom is managed, lecture delivery, learning environment, and collaboration. Activity-based learning and the use of tools and web applications have significantly increased over the past one and a half to two decades. Numerous applications and tools are utilized to boost student participation, interest, motivation, and concentration levels. Moreover, revision and repetition of topics are also being done innovatively. This research study is based on the evaluation of a teaching and learning tool Socrative. This research study comprehensively analyses the effectiveness of this tool and its impact on the learning experience of the students. The study has been conducted in one of the premier higher education institutions in the Sultanate of Oman.

Keywords: - *Online tools, technology-assisted learning, use of Socrative, impact of online tools.*

1. Introduction

There are numerous tools used for the enhancement of student experience and many of these tools are based on the technology. With the improvement in information and communications technology, there is a significant impact of technology on the teaching and learning practices. As the use of technology has drastically increased during past one to one and a half decade and numerous technological aids are available with different characteristics and properties (Automation & 2021, n.d.; Sciences & 2013, n.d.; Selwyn, 2007). There are various teaching and learning models and pedagogies that have been proposed in the past to enhance learning experience of students (and & 2012, n.d.; Technologies & 2014, n.d.; Tobias et al., 2014). Many of these models reiterate the importance of technological aids, tools, software applications and the use of technology in teaching. It is important for a facilitator to analyse the benefits of a particular type of application/tool or technological aid to study the appropriateness in a specific learning environment and the kind of benefits a particular performance of the students. This research study is based on the premise of understanding the effectiveness and benefits yielded from the use of Socrative (an online teaching & learning tool). The research study has been conducted in the higher Education institution in the Sultanate of Oman. The research study takes into

consideration different cohorts of various modules in the

department of business administration. A survey is conducted from as many as 500 students belonging to two different modules of the management studies. The two modules in which the survey study was conducted related to the effectiveness of a technological aid are logistics management and supply chain. Maintaining the attention span of students is huge challenge for the facilitators and following a conventional method of teaching does not result in comprehensive learning taking place besides conventional methods result in least attention span of students and the students easily get distracted. It is therefore a prime responsibility of the facilitators to study the effectiveness of these tools and estimate the impact of these tools on the learning experience of the students.

The primary benefit of utilizing Socrative is that it facilitates the development of a variety of question kinds and offers tools for team collaboration (Dakka, 2015). Additionally, unlike clickers, Socrative is a web-based Student Response System (SRS) that doesn't need to be set up or require any software to be downloaded; all you need is a smartphone with a web browser and connection to the Internet. Additionally, Socrative is accessible for free, making it economical for both students and universities touse (Green, 2014). Running smoothly on tablets, desktops, and smartphones, Socrative is very easy to use and log into. Different activities can be set up by instructors, and quizzes can be administered as needed. All pupils in the classroom are engaged since the quiz or exam results may be seen on the projection screen. This is a simple method for evaluating the understanding of students in class. The learners can also be evaluated using SRS that is based on socrative. It is possible to grade students' work and save their replies if students write their names while logging into the instructors' virtual classroom. This option is highly beneficial for teachers who are accustomed to routinely evaluating the knowledge of their students by using brief tests. The result reports for the students are available online as a spreadsheet file.

Direct feedback offers significant benefits for learners' language acquisition, according to numerous studies (Jawah et al., 2004). For instance, it has been demonstrated that feedback can improve learner achievement. Additionally, real-time feedback is crucial, and Socrative offers students the option to get it. Studies have proven that this type of feedback is effective (Molloy and Boud, 2014). The authors also draw the conclusion that there is a notion, backed by instructors, that there are a variety of typical feedback examples that, if given all at once, have excellent effects on post-task engagement.

The applications utilized in this study's tools, Socrative, are perfectly suited for the kind of teaching approach including prompt-response questions, in which students can access the teacher's questions by entering the "room or contest number." The site administrator can create or

import multiple-choice tests, arrange the correct order for the answers, ask true-false questions, ask questions requiring only a short response, and more. (Romero-Ramos et al., 2022)(Figure 1).

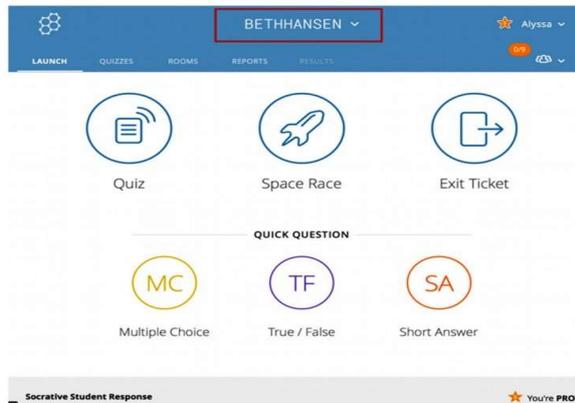


Fig 1. Types of Questions in Socrative tool

Socrative is a free online assessment tool that allows instructors to administer in-class quizzes, view responses in real time, and generate reports to monitor and visualize student learning (Nawalaniec 2015). It was first incorporated in 2011. Nowadays due to the use of phones, it is difficult to engage students in class. Therefore, the use of mobile devices in aiding learning experience has been noted as part of e-learning in a digital world (Ning Lim 2017). Research have been done prior on impact of Socrative on improving the learning experience and the findings were astounding (Tirlea et al, 2018; Farrag, 2020). Some of the advantages found when engaging in Socrative learning are that students are more engaged, and they pay attention. Socrative has also been used as a captivating way of learning for students. There has been dearth in the knowledge of Socrative aiding students in the field of Supply Chain and Logistics Management for revision purposes for tests and examinations, thus the thrust of the research paper (Tirlea et al, 2018). Student engagement is a problem in a digital era. The subject in place is on enhancing students' performance in the Supply chain management module. This was done through revision of a part assessment in the module. Student quality performance if key in this study as well. Some subject areas have been researched on how Socrative has impacted however in the Supply Chain and Logistics Management field it has not been looked at.

Thus, this research will investigate the subject offered by a college in the Middle East called Supply Chain and Logistics management.

The main goal of this paper is to explore the impact of Socrative as a revision tool in the Supply Chain and Logistics management module. This research is important as it can clearly show the perception of the participants in relation to their experience on how Socrative impacted their revision. This goes without say that as Supply Chain Management is gaining dominance in the industry, the quality of work students achieve might impact their employability due to nature of scores they would have attained cumulatively.

The results of a formative evaluation conducted in a regular classroom may occasionally be initially superior to those of a BYOD (bring your own device) class (Chou et al.,

2017). According to them, this is due to the possibility that some pupils are unfamiliar with these electronic platforms. Later, however, in the area of knowledge consumed and remembered, the BYOD group outperformed the traditional class group in terms of grades.

2. Literature review

Firstly, E-learning is defined as delivery of education in a flexible an easy way through the use of internet to support individual learning or organizational performance goals (Clark and Mayer, 2011; Maqable et al.,2015). Student is able to access this platform as long as they can connect to the internet. According to Arasteh et al (2014), Dragmhiciet al. (2014), and Mustea et-al,(2014), say that e-learning is the method which allows people especially students to take courses from home or anywhere as he/she can accessthe internet, among other platforms such as peer-to-peer , client-server, and web services. This includes use of laptops, mobile phones so long they can have access to the internet. This enables students to access and interact with courses online via such technologies.

E-learning technologies evolution. Many research encourage learning courses under e-learning system as it saves time and energy for those students staying at any foroff distant regions from universities or colleges they have enrolled (Hubuckova and Golkova,2014; Alenezi et al,2015). E-learning adoption is increasing in most universities and instructions of higher learning all around the world (Kattoria, Al-lozi, Alrowwad 2016).

With this concept in mind, soft wares have been developed to enhance the learning experience using digital technologies. The examples include Edmodo, Socrative,Projeqt, Thinglink,TED-Ed,ck-12, ClassDojo, Educlipper, Storybird, Animato, Kahoot (Chauhan 2018).These were ranked as the top used tools in the learning environment. Sammy (2018) concurred that Socrative is one of the top ten tools used for the digital classroom. Thelearning software in this topic relates to Socrative. More so, some prior investigations were carried out showing how engagement with digitalization enhances the learningexperience of the student. Socrative has been widely used

in subject improvements which include Statistics (); English (Kayla,Bolta;2016); Introductory Biology and Molecular service courses (Lin and Taylor;2013); Computer architecture (Awedn,Mueen Zafar; 2015) and Digitalization and Learning(Mazoor; 2015). However, there has not been any research on how Socrative can assist in revision for tests in the Supply Chain and Logistics Management course. The purpose of this research extends the credibility of using Socrative to enhance learning experience for exam revision purposes for the Supply Chain and Logistics Management Module.

3. Methodology

The Research approach adopted is quantitative in nature (Creswell and Clark 2006; Nulty, 2008). The quantitative approach implies analysis of the survey findings. This approach was chosen so as to show clearly how many students benefited from using Socrative as a revision tool

for preparation for their examination. The method of data collection used in this study was a questionnaire in the form of a google form. A QR code linking to this questionnaire was also generated to enhance ease of data collection. Questionnaires in real time (online) serve as a better method of data collection because they allow the respondent to respond at the time, they are comfortable with. The sample size was 32 with, confidence interval is 16.61 and 99% confidence level. The data analysis tool used was content analysis. This tool was used because it is flexible and it can be used to analyse naturally occurring data (Rose, Spinks and Conhoto ; 2015).

4. Findings and discussion

The qualitative responses were analysed Each theme will be discussed in the following sections

The results showed that Socrative assisted the students in revision , getting a parity of 93.8% despite the technical problems others faced when the revision was administered. An astounding 87.5% requested more revision using this tool. Neutral sentiments were recorded of 21% on the impact of this tool in the revision. 4% of the students strongly disagreed which can be the book worms of the class.

Did you find it helpful for the revision of your test

32 responses

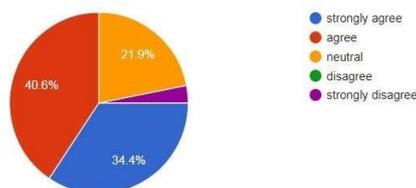


Figure 2: student' feedback on usefulness Socrative in revision

93.8% of the students found it helpful in their revision work. This reiterates the percentage pass rate which was 100%. Using this information, students need more revision using this tool. A small percentage of 12.5% claimed they did not need more revision using Socrative. Reasons were not mentioned, but looking at the results, these could be the students who got a low percentage in the exam which was taken. Since most of the students showed keenness,

Socrative was effective in preparing for the test

32 responses



this shows that Socrative helped in their revision.

Figure 3: student' feedback on usefulness Socrative in preparing for test

These show that the students appreciated the use of Socrative. This is elucidated by the cumulated percentage of 75%. Only 3.1% out rightly said they strongly disagree.

This can be due to the technical challenges which were faced during the Revision exercise as depicted by the chart below. This totaled 25%. This could be due to the network challenges faced when they were off campus. During the class session all students joined without facing challenges.

Please suggest any other ways to enhance teaching and learning experience in your future classes.

5 responses

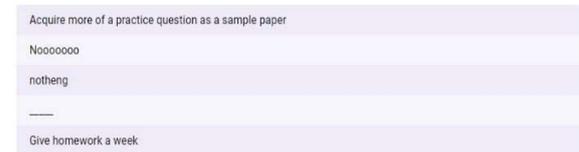


Figure 4: student' suggestion to improve T&L.

5. Conclusion

The results of using the Socrative apps in the classroom indicate that using mobile-based learning tools may improve student engagement, motivation, and participation in class as well as their ability to retain important learning materials. All of these factors are, in our opinion, essential for producing meaningful learning in the classroom. Our study's findings lead us to the conclusion that using Socrative in the classroom has been beneficial to learning and aids in the acquisition of new knowledge. These two apps could be used to execute group tactics and tasks in order to enhance social characteristics including student cooperation, teacher interaction, and group accountability, which were all the least rated ones in our survey. We believe that designing and conducting several longitudinal studies with the goal of evaluating the impact of the apps over the course of a degree and its relationship to the credentials attained (academic performance) in various courses would be very beneficial for the advancement of the subject matter addressed here.

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