

Implementation and evaluation of the online learning initiative: Towards a paperless classroom

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Abstract: Online academic platforms like Edmodo; Kahoot and Google forms are free and secure educational tools used to provide a simple way for teachers to connect with students as well as for classmates to join each other and makes teaching and learning fun and straightforward. The purpose of the study was to evaluate student's experience in using three online platforms Edmodo; Kahoot and Google forms as academic networking sites in facilitating teaching and learning activities.

Methods: The study participants were 125 Diploma in nursing students. The applications were mainly used in the classroom teaching of Anatomy. Three online applications namely Edmodo, Kahoot, and Google forms were used for classroom teaching and learning activities like quiz, assignment and course evaluations. The survey question was developed based on RASE (Resources; Activity; Support and Evaluation) instrument. The survey tool was designed using Google forms, and the researcher shared the link was among students using Whats App social message services.

Results: The findings of the study revealed that 77% of the study participants were satisfied with the resources used by the lecturer for online teaching and learning. Also, 82% of participants actively participated in online learning initiatives. About 70% of participants had no problem in installation and using these online learning platforms with no support or minimal support from friends and lecturer. On an average, 84% of participants rated these online learning platforms as a right way for teaching-learning activities.

Conclusion: Online applications are very timely and appropriate strategies to enhance teaching and learning strategies in the classroom. Teachers may adopt these technologies to strengthen student-centered and outcome-based education for the Y-generations.

1. INTRODUCTION

New technologies have changed teaching, and learning in some ways from graphics calculators to online lesson plans to virtual field trips and simulated dissections. The use of technology in education has grown appreciably in the last decade and today's college students—who are part of what is often labeled the "Net Generation"—are particularly classy in its use. Growing up with technology, they often anticipate that their educational experience will integrate non-traditional teaching tools grounded in electronic media(1)

Educational technologies can help students' access content in new and often exciting ways. The advance of technology use in schools has paralleled the advance of technology in our society. From the first clay fired 'brick' mobile phones to the contemporary generation of smartphones, today's students have seen technology become a larger part of their lives every day. As these technological advances have made their way into our classrooms, the students have changed as well. The current group of students is unable to survive without their phones. It is a constant struggle in the classroom to have them put their phones away until the lesson or activity of the day is over. Despite this nearly ubiquitous access to computer technology, there is a significant gap between the presence of technology and its usage in the classroom(2). While many teachers still feel uncomfortable using technology in their teaching practice, it is also likely that teachers feel new

technologies are unproven in the classroom(3). Students today have a different profile of cognitive skills that resonate with digital tools. They expect multimedia, and they become quickly bored without it. Learning occurs based on students' engagement levels, and no doubt, students today are fascinated by digital devices. Leading educators agree that multisensory and multidimensional teaching methods are what engage student's today and is easily achieved with digital programs.

The principal advantage of such technology is that multiple areas of students' brains is activated at one time. Neuroscientists believe such brain activity vastly increases long-term learning potential. Technology in classrooms setting offers many different advantages including lowering the costs of teaching per student, allowing the student to have a more in-depth understanding of the material and allowing the teacher to fulfil the duties when there are a copious number of students to teach. Facebook has brought us closer to our friends, LinkedIn has provided us with invaluable business tools, and Twitter has brought the world to our fingertips (4). Edmodo has been bringing the power of the web and mobile to students and has become the largest social learning network in the world of education. Edmodo was created with the teacher at the center and has continued to empower teachers with valuable tools to help students reach their full potential. In its short five-year history, Edmodo's network already reaches more than 35 million teachers and students in over 220,000 schools, and the network effect is driving continued exponential adoption. Edmodo is a free tool for both the teachers and students. It is not "sold" to schools, but adopted organically by teachers.

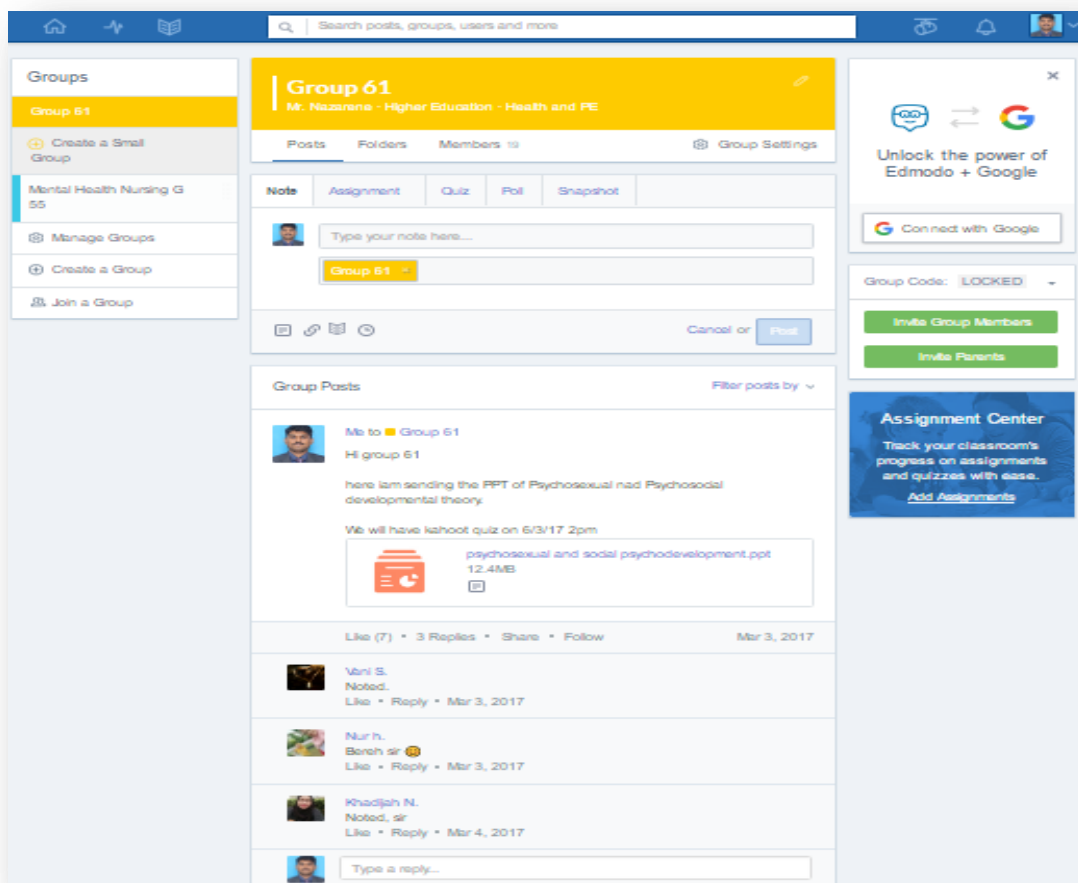


Fig: 1 Edmodo account interface

Another application is Kahoot! .Three components have come together to make **Kahoot!** More than just a concept. First is the experience of 'We Are Human' focuses on "how using the heart hand and mind can achieve a much better experience of any product" and members of the team. The second element is the game-based platform designed. The third is the interactive quizzes in the classroom. The element of competition is crucial. Student's tries to get their names up on the white screen, which is at the front of the classroom. Separately, while they are technically engaging with their own devices, they are not looking down at them. The information they need is on the screen, and their own devices function in

the same way as buzzers. It is crucial to teachers that students are not looking down at the device, but are looking up at the screen, and you as a teacher looks around and you are engaging with people. Use of smartphones results in an excellent social learning experience for both students and teachers.

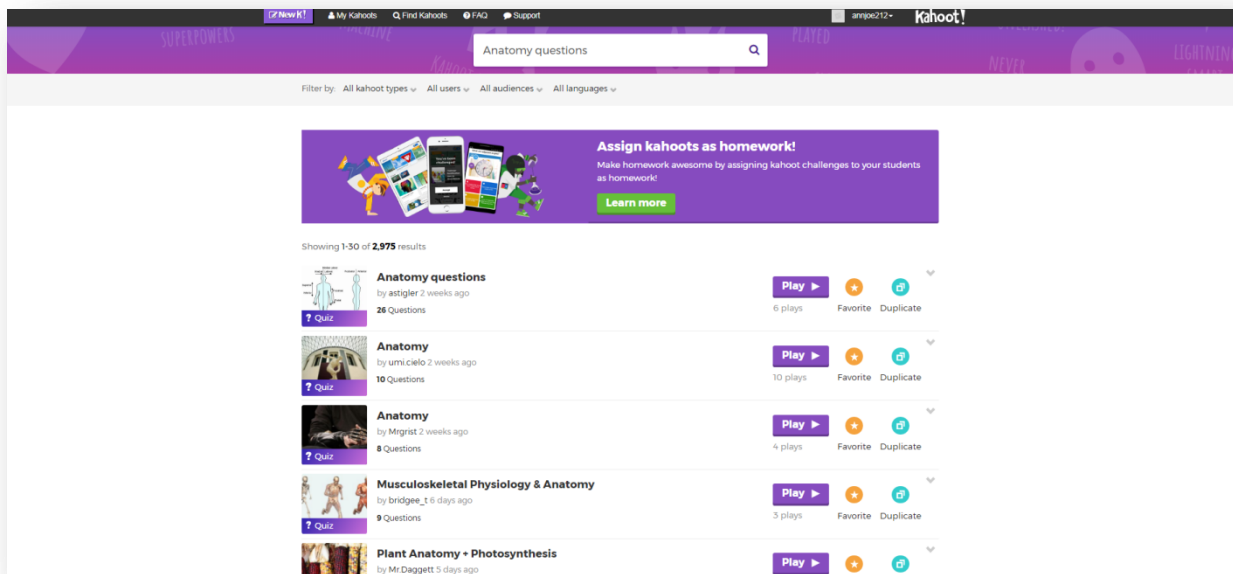


Fig: 2 Kahoot account interface

Another online platform is Google Forms. Google Forms can be used to the profit of teaching and learning in many ways. Google Forms can be used to construct quizzes and surveys. It can also be used for many classroom activities, for instance, managing assignments, to collect student feedback or book reviews, as well as to collaborate on group projects.

The teachers should build classrooms for the future and use technology not just as an enabler, but also to empower education. As our lives change, as the society reorients itself to new situations, educational support systems will have to evolve to make our schools of today, the Schools of the Future.

Background of study

Over the decades, some courses have moved away from the distribution of printed learning materials in class and instead provide digital versions in advance of teaching sessions for students to download and bring to lecturer or seminars in a form they wish. With the marked increase in student's ownership of mobile devices, in particular, tablets; there is an implicit assumption that students are confident and competent in the use of digital and digital resources for academic activity(5,6).

Ultimately, successful school-wide change will not occur without substantial resources and support from a variety of sources(1). While few technology innovations be implemented without considerable financial resources; money alone will not ensure successful implementation. Bringing about change in the school requires hard work by all involved. This includes human resources in the form of time for planning, professional development, collaborative work, and trying new things.

Research Question

What is the student's response to online learning initiatives towards a paperless classroom regarding Resources used; student Activity; Support provided and Evaluation of the online learning initiatives?

Purpose of the study

The primary objectives of the study include:

1. Implement of the online teaching and Learning initiative (includes Edmodo, kahoot, and Google forms) towards the paperless classroom.

2. Evaluation of the online teaching and Learning initiative (includes Edmodo, kahoot, and Google forms) towards paperless classroom using RASE questionnaire

2. REVIEW OF LITERATURE

Conventional social networking and classroom educational tools

An extensive, multi-site general practice decided to move towards paperless training in late 2001 and describes the progress and lessons learned to date. The principal operational reasons for this decision were problems associated with running paper medical records between surgeries, and the realization that resources to improve the computerized medical record could only come from redeploying the time spent handling paper records. A comprehensive plan was put in place to shift toward paperlessness. Audit and quality improvement activities have increased, as the output from computer searches increasingly represents the quality of care provided. This case study implies that a committed general practice can achieve a mostly paperless environment in approximately two years. The method is now fit to be part of any move towards integration of records within its local health community (7).

In a study conducted to explore the use of a mobile application called Flip board, which facilitates the digital content into a magazine-like product, to engage students in class discussion and participation in a college course. The study identified students' beliefs and attitudes regarding the use of Flip board in the learning environment; student engagement and how device choice affects student activity in the Flip board assignment. The study finding revealed that most students found the assignment useful and appropriate to their learning and read more articles because the magazine was class-created. Device choice did not affect how many articles students contributed, but those principally using mobile devices read significantly more reports than those using the computer (6).

A study conducted to assess the self-efficacy of nursing faculty and students related to their potential use of mobile technology and to ask what implications this technology has for their teaching and learning in practice education contexts. The used a cross-sectional survey design involving students and faculty in two nursing education programs in a western Canadian college. A total 121 faculty members and students completed the survey. Results showed a high level of ownership and use of mobile devices among our respondents. The study finding revealed that both faculty and students were highly confident in their use of mobile technologies and prepared to engage in mobile learning (8).

A study in a Technical University in Taiwan investigated the attitudes and self-efficacy of using mobile learning devices for college students in a language class by employing task-based instruction. The respondents comprised 58 second-year students at a technical university in central Taiwan who used mobile devices for mobile learning in an English class to complete assigned tasks under the guidance of the instructor. Results showed that most students agreed that their motivation for English learning was enhanced and most of them had positive attitudes towards mobile knowledge (9)

A study explored the Students' Mobile Learning Practices in Higher Education. Descriptive analyses regarding student access showed that more than 91 percent of respondents ($N = 849$) owned a small mobile device (such as an iPhone, Android, or iPod Touch). However, only 37 percent ($N = 290$) held a mobile tablet (such as iPad, Android tablet, or Kindle Fire) and 27 percent ($N = 186$) owned an e-book reader (such as Kindle or NOOK). 82 percent of tablet device owners said they used the device for academic purposes, while only 58 percent of small mobile device owners and 64 percent of e-book reader owners reported doing so (10).

Few researchers studied lecturer's motivation in using online teaching tools in the classroom. Self-motivation of lecturers to change their teaching styles or methods is one of the problems stated by few researchers. The objective of this paper is to identify the factors that motivate lecturers to use online teaching tools, such as Web 2.0 tools. There are a variety of online teaching tools available to the lecturers. The favorite tools are the online whiteboard, Word Press, YouTube, Facebook, Edmodo, and others. In the study, there were not many lecturers who apply the Internet as an alternative to provide access to information that can help to enhance teaching and learning materials. Thirty lecturers had completed an evaluation of the lecturer's motivation from different subject matter experts. The instruments used were interview sessions and classroom observation, which were used to measure four motivation variables: ease of use, enjoyment, usefulness, and self-confidence, based on the ARCS (Attention; Relevance; Confidence and Satisfaction) Motivation model. Based on the findings, factors that can affect lecturers' motivation in using online teaching tools are knowledge, perceptions and skills(11)

A Malaysian study evaluated whether Edmodo is an authentic teaching strategy that should be employed by more teachers hoping to encourage a student-centered technology-driven learning environment where students are actively engaged and

practicing views of responsible learning. The study conducted at a private university in Selangor district at Malaysia. The participants were 285 of the degree program students, out of which 249 students were taken for the analysis as they fall under the Edmodo users. The result of the study shows that incorporating Edmodo encourages both student engagement and responsible learning when particular Edmodo features are employed. The result through the analysis supports that the students' preference of using Edmodo is mainly towards for the resources, support, and communication such as forum, discussions and also for online activities. Students find Edmodo an enjoyable and user-friendly social learning platform that enables them to enjoy working on an online class. The results of this study may inspire teachers to re-evaluate the way they conduct their classes (12).

A study demonstrated that teachers needed to develop a new skill set that combined not only content knowledge and effective pedagogy for the content, but also the skills to effectively use technologies in the right way to maximize their potential. They called this new skill set *technological pedagogical content knowledge*(13).

3. METHODOLOGY

The setting of the Study:

The study was conducted at KPJ Healthcare University College, Nilai, Malaysia

Sample:

The study respondents were 125 Nursing students from Diploma in nursing program.

Study Instruments

The researchers developed the tool and pilot tested before administered to the students by online based on RASE pedagogy model.

Data collection method:

Formal approval obtained from Ethical clearance committee of KPJ Healthcare University College. The RASE (Resources, Activity, Support, Evaluation) questionnaire was created in Google forms. Respondents Identification data was opted out in the Google form. Prior to data collection the class was informed regarding the data collection method.

The RASE questionnaire was sent from Google form to the participants by forwarding the link (https://docs.google.com/forms/d/e/1FAIpQLSf9g1mNVDd2200AjB16FVgSSnl_JbGelTV8qIs7GOQmy5VVvSj/viewform?c=0&w=1) through What's App. The data were summarized using Google forms.

4. RESULTS

Personal information data

There was total of 125 respondents who participated in the study. The respondents were Diploma in nursing students in the year two of the program. There were 109 females and 16 male students as respondent for the study. The age of the respondents was between 18-20 years. Below are the findings from the RASE instrument administered via Google forms.

Findings of the study from RASE questionnaire

Table 1: The percentage of respondents with a Smartphone.

	Number of students(n=125)	Percentage
With smart handphone	125	100
Without smart handphone	0	0

Findings in table 1 revealed that all the 125 study participants had a Smartphone.

Table 2: The number of respondents with a laptop.

	Number of students(n=125)	Percentage
With laptop	107	86
Without laptop	18	14

The above table reveals that 86% of students participated in the study have their laptop.

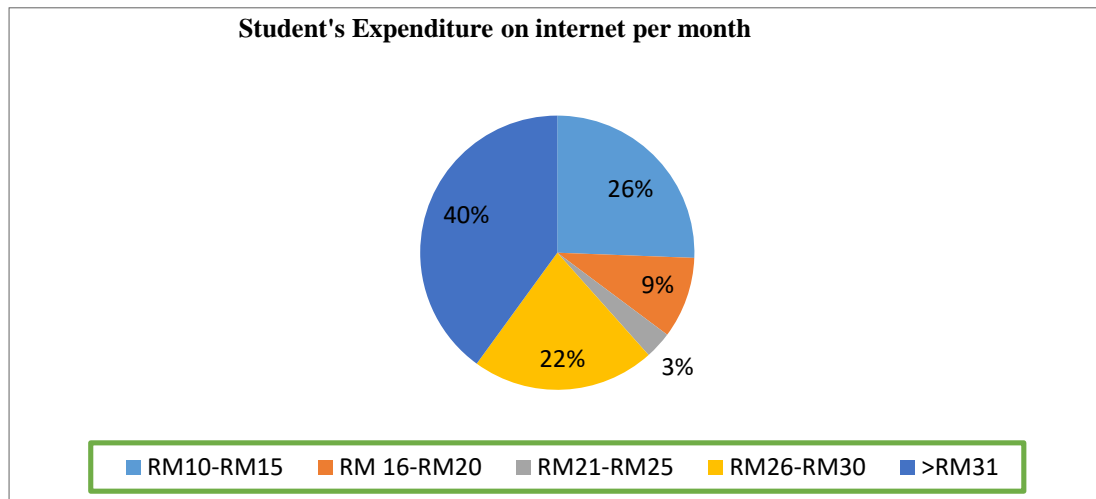


Fig 3: Student's Expenditure on the internet per month

According to study findings in Figure 3, 40% of the students spent more than RM 30 per month for the internet data. Meanwhile, 21% of them spent RM 25 – 30 followed by 26% of the study respondents spent up to RM 15 per month for internet data.

Table: 3 Money spent on printing assignments or handouts

	Number of students(n=125)	Percentage of students
>RM 5 /Month	14	11.2
<RM6-10/Month	78	62.4
>RM 10/Month	33	26.4

Table 3 indicates that 62% of the students spent >RM 10 per month, where else 27% of them spent < RM 5 – 10 for their handouts, assignments other academic tasks.

Table: 4 Duration of Internet usages for academic purpose

Duration	Number of students(n=125)	Percentage of students
<30 min	28	22.0
31-60min	48	38.0
>60min	49	40.0

The data analysis shows that forty percent of study respondents spent more than 60 min per day on the internet for academic purposes followed by 38% spent about 30 min to 60 min per day.

Study findings also revealed that 55% percentages of students use their internet data for their online learning purposes while the rest 45% uses campus Wi-Fi.

Eighty-five percentages of respondents found that it was easy to access the lecturer's resources, e.g., lecture notes, videos, etc.in Edmodo.The study also identified that 72% of students found new interest while answering the quiz in the classroom using in Kahoot. Eighty- one percentages of respondents felt it is convenient to perform the module, skill laboratory, and clinical experience evaluation through Google forms. The students felt that they can do it in their own time within a given time frame.

Seventy-four percentages of respondents shared their readiness with sufficient internet data in their smart phone on the day of Kahoot quiz. As revealed by the study , 84% of the study respondents also confessed that they read the entire web links shared in Edmodo by the lecturer for the additional knowledge. It was found to be easy and saved time and papers by submitting the assignments online (in Edmodo) by 78% of the respondents. Seventy-four percentages of students download all the learning materials in their smartphone to make sure to read all the free times using Edmodo.Eighty percentage of respondents would like to take online quizzes using Edmodo and Kahoot because it makes them be attentive and enhances their speed of answering the quizzes.

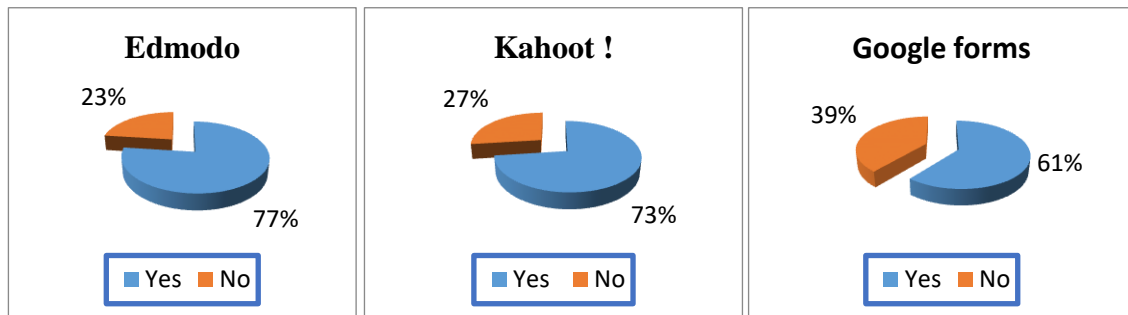


Fig: 4 Easiness in installing and using the online learning initiatives

The students also it is easy to install and use the applications. Seventy–six percentages of the students were interested in submitting their assignment through Edmodo because they felt that lecturer’s feedback was faster than paper assignments. The study findings also revealed that 90% students loved to play kahoot quiz because of instant result.

5. DISCUSSION

From Differentiated Learning to Multiple Intelligences, educators have always looked for the next big idea that would solve all teaching and learning problems and help our students be the best and brightest ever. Technology and its use and implementation in schools across the country have been no exclusion. The study findings related to Edmodo use in classroom is similar to the finding in another Malaysian study(12). In the study students preferred to use Edmodo mainly for resources as well as for communication .They also used the online application for forum and discussion.

Another study findings revealed that tablets like i Pad were efficient mobile devices in getting students engaged in classroom activities (14).Findings of a study conducted in Africa shows that mobile applications enhanced teacher – student collaboration; assisted in distance communication; increased student engagement and enhanced authentic learning (3,15).

6. CONCLUSION

This study shows the active participation with satisfaction on the resources used in this study. The study has proven that online academic applications like Edmodo, Kahoot and Google forms can make teaching and learning more fun over the traditional teaching methods. Successful implementation of these online learning platforms could be used for the betterment of their academic performances with the help of the faculties. The researcher believes that this would make the best hall of fame for the student engagement .The applications facilitate teacher student collaboration as well as networking among students beyond classrooms. A change from traditional method of teaching and learning is timely and as we are engaging more with Generation-Y mobile based technologies will be very influential in creating positive classroom environment.

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