

Virtual education: A Brief Overview of Its Role in The Current Educational System

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Abstract. Virtual education is a growing and evolving system that creates new opportunities for forming and upgrading people's skills with a non-presential factor, which allows students from different regions and backgrounds to gain instant access to quality education and knowledge. In recent years, many online platforms have been joining to these new systems allowing to create a virtual environment, even professional institutions, such as colleges and universities, are offering their entire specialty in different online programs. Although, online education has evolved and improved since its apparition after the internet commercialization, many problems still remain unsolved and challenging its effectiveness; self-motivations and virtual drop-out are one of the common factor among virtual learners, besides the lack of required technology and resources in different places, especially in developing countries. Even there are problems, virtual education is changing the way how we consume educational content and it is helping to connect students and teachers all over the world in a gain-to-gain way, so in the coming years, its role is expected to be more critical in our education system. One case in new model class, teleconferencing. It is conducting a meeting over the telephone, is a one model of learning directly. It is distance learning management for people in conveying a message in different locations. It saves time and travelling costs. Despite the convenience, teleconferences are often run poorly, due to inadequate planning or lack of understanding of the technology. This paper is to observe new model of learning teaching, exploring the effectiveness in raising student's motivation and find out the solution of lacking technology. The study is qualitative and quantitative, it finds out the factor of student's interest and finally it is used all scores to get a result. The result is most students are interested on the model of learning teaching and the score is rising up 45%. The new model of learning teaching has some benefits: innovative, portable, economic, authentic, live interactive and recordable. It is suggested additional training for academicians at the same time identify their personality traits have a significant difference in their acceptance of new idea for teaching and learning. It will support new behaviour towards new platform to fully implement this technology in an institution and the integrated technology will raise the community's participation in development

Keywords: Virtual education, media, innovative, online platforms.

1. Introduction

Education is one of the most important activities we go through while we grow up, that is because we need to generate insights and ideas that will help us to solve daily situations and deal with ongoing changes in the environment. While we age, we also experience the necessity to create new connections and patterns that shed light onto certain problems and events.

The necessity of new ways of education has increased considerably in the last centuries, partially, due to the rapid increment on online resources and technological gadgets, which has enabled a wide range of opportunities to generate and share information across multiple regions and areas. The increment in education quality has helped to increase the GDP value in different regions [1]; besides increasing knowledge, it has allowed people to make better decisions and to take actions wisely.

In recent decades, thanks to the evolution and expansion of technological devices, it has been created new virtual classrooms and environments [2]. These spaces have allowed multiple interaction between students from different parts and different backgrounds. Additionally, the costs of creating and exploring virtual environments have decreased partially to the demand and offer than the market and society has required, which makes possible better and more complete resources with better quality [3].

Nevertheless, online learning has still many problems and challenges that needs to go through before being accepted and globalized, two of which are the lack of access of the whole population to the required and necessary devices and connections [4], and the lack of complete engagement with the classes and the online material [5].

To face the industrial revolution 4.0 (IREV), it needs a new model of ELT which combines teaching material with technology to shorten the distance, time and energy and to connect Internet of Things (IoT) atau Internet of People (IoP) [6]. Dunwill predicted that the biggest change in ELT when the ELT used MOOC (*Massive Open Online Courses*) [7]. The next Method is application of ELT with peer-teacher or the condition when the student is able to choose the best teacher and material of the subject directly without a teacher. This method has been applied by Universitas Teknologi Mara in facing Industrial Revolution 4.0 [8]. It has been published in International Conference by the topic of medical learning teaching using teleconference [9]. This was in European University and the result was risen up significantly. Learning using teleconference has also been done for decreasing the distance cost [10]. It shows that the best innovation in learning teaching activity by inviting the outside teacher and expert/ *native speaker* both in school or college. The idea of ELT is developed by applying video editing to motivate student's interest then create a new material [11] the recent research by Fackhrudin to understand the speech, it can use video recording by whatsapp platform.

2. An overview to online teaching and learning.

2.1. Characteristics of online teaching

With the arise of a connected world, the material and content of the teaching strategies need to be deeper than years ago. This evolution has to be systematic and consistent to match the current requirements and skills necessary to survive in the digital era [12], just like humankind, the education system requires ongoing progress and new systems of teaching and acquiring information. Virtual education is one of the new changes than has surged as an alternative to many students than desire to get knowledge on a self-pace speed.

Due to the integration of digital and virtual devices and concepts, the traditional classroom can be virtualized, this has the potential to compete or complement currents teaching methods and techniques [13], but there are still some changes that need to be made in order to get the same level of quality.

One of the most noticeable advantages of online teaching is the wide disposition of different materials and instruments to be used to create fruitful experiences [14], such tools can be: 3D virtual worlds and environments, wiki and online repositories, blogs and posts, discussion bords and virtual meetings, videos and documents, online libraries and registers.

2.2. Evolution of virtual education

At the beginning, education was taught completely in a traditional classroom with an audience and with presential students, the concept of virtualization was not presented until the last years of the 19th century with the development of the internet [15], since then a noticeable increment on participation has been created, especially in technological subjects [16], this new development allowed people to start taking and upgrading their skills to cope new challenges and to get new opportunities in the changing world.

One of the biggest changes and evolutions that online learning has experienced is the improvement of a collaborative learning environment which is the integration of constructing their own learning through quality experience rather than limiting the material to lecture only formats, which has enhanced the total quality and dimension of possible subjects and options to access online resources and classrooms.

Regarding evolution, big changes have been made since the first apparition of this virtual environment, the principal components are the interactivity, collaboration, interest driven and differentiation, material with appropriate resources, and the correct implementations and communication [17].

Since the commercialization of internet, online education has been growing at an incredible speed, leading to a new virtualization of environment and scenario simulation [18]. This has also been affecting the necessity of increasing the material and content to be offered to the students and self-learners, besides it has been possible to increase the transition of material to remote students, even from different regions or countries, breaking barriers regarding to locations and available options.

Some of the trending platforms for self-learners have been improving their offer and expanding their scope, these web sites are educating thousands of students and forming edge cutting professionals just like normal and traditional institutions, to name some ones there are: Coursera, EdX, Udacity, Alison, Class central, Brilliant, and Khan academy.

Some of the named sites are free with the option of paid courses and certifications; other required a pre-paid subscription. In addition, a wide spreading video web site, such as YouTube, has granted the desire of many students to get access to many online free courses or explanatory videos and tutorials, while universities and colleges are also offering professional courses through their platforms.

2.3 Case Study in The English Language Teaching (ELT) Class in Indonesia

The new model worked in ELT classroom. There was research to find out evaluation in final test. It used quasi-experimental method with a design model of nonequivalent control group. The method used for the experimental and control groups were not unsystematically chosen [19]. It is used the method for finding out the improving learning effectiveness in the modul among students were treated by using this technology. The research design used preliminary data and it showed that third- Semester-students have several obstacles in understanding the material based on instruction. It effects on the student's motivation in learning English. The low score of them can be made up and teacher can develop his/her creativity to achive the goals by using teleconference through skype.

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In addition, some tests are for learning outcoming average between pre-test and post-test. The population of class control was 30 and 17 for experimental group. This is following test:

Tabel 2. The gain score result of N

Class	Average		N-Gain	Category
	<i>Pre test</i>	<i>Post test</i>		
Control	30	43	0.45	Medium
Experiment	17	83	0.73	High

Based on the calculation results of the N-gain is the average of the experimental class is 0.73. it shows in high category and N-gain of control group is 0.45. it is in medium category. The results of these calculations established that third semester students is appropriated learning using.

2.4 Case Study in The Math Language Teaching (MLT) Class in using Google

Classroom (GC) in Malaysia

The research distributed 60 questionnaires developed through Google Forms through email and only 31 respondents provided feedback. One of the respondents had no experience with GC, therefore, he was omitted from this study hence leaving a sample size of 30. The majority of the respondents were female (N=19, 63.3 %) and 46.7% of the respondents have more than 5 years' experience using any type of GC (N=14). SPSS 24 was used to analyse the data. Based on the data obtained, the overall reliability coefficient obtained for the instrument was $\alpha = .954$ and other reliability values for each factor are reported in Table 1. All values surpass $\alpha = 0.8$, hence deemed reliable [20].

Tab 1. Reliability of the instruments

Scale	Number of Items	Cronbach Alpha
Perceived usefulness (PU)	6	.966
Perceived ease of use (PEOU)	7	.907
Attitude towards use (ATU)	3	.949
Behavioural intention to use (BIU)	4	.918
Overall	20	.954

Based on the mean value obtained from the data, two items had the same mean value "In my job, the usage of GC is important" and "In my job, the usage of GC is relevant" at Mean = 4.367, s.d. =.6687 and Mean = 4.367, s.d. =.6687 respectively. These items were from the Behavioral intention to use (BIU) scale indicating that they accept that the application of LMS for teaching and learning is important. The lowest mean score was obtained for "I feel that my ability to determine GC ease of use is limited by my lack of experience" at Mean = 2.933, s.d. =1.2015. Other mean and s.d. values are presented in Table 2.

Table 2. Mean value of item indicating attitude toward GC

No	Question Item	Mean	s.d.
1	Using <i>Wawasan Learn</i> and <i>Wawasan2u</i> in my job enabled me to accomplish tasks more quickly.	3.867	.937
2	Using <i>Wawasan Learn</i> and <i>Wawasan2u</i> improved my job performance.	3.667	1.061

No	Question Item	Mean	s.d.
3	Using <i>Wawasan Learn</i> and <i>Wawasan2u</i> in my job increased my productivity.	3.733	1.048
4	Using <i>Wawasan Learn</i> and <i>Wawasan2u</i> enhanced my effectiveness on the job.	3.933	.980
5	Using <i>Wawasan Learn</i> and <i>Wawasan2u</i> makes it easier to do my job.	3.567	1.073
6	I do find <i>Wawasan Learn</i> and <i>Wawasan2u</i> useful in my job.	3.867	.860
7	I feel that using <i>Wawasan Learn</i> and <i>Wawasan2u</i> is easy for me.	3.767	.817
8	I feel that my interaction with <i>Wawasan Learn</i> and <i>Wawasan2u</i> is clear and understandable.	3.700	.877
9	I feel that it would be easy to become skillful at using <i>Wawasan Learn</i> and <i>Wawasan2u</i> .	3.700	1.022
10	I found <i>Wawasan Learn</i> and <i>Wawasan2u</i> to be flexible to interact with.	3.600	.932
11	Learning to operate <i>WawasanLearn</i> and <i>Wawasan2u</i> is easy for me.	3.767	1.006
12	It was easy for me to get <i>WawasanLearn</i> and <i>Wawasan2u</i> to do what I want to do.	3.533	1.137
13	I feel that my ability to use <i>WawasanLearn</i> and <i>Wawasan2u</i> is limited by my lack of experience.	2.933	1.202
14	I believe it is a good idea to use a <i>WawasanLearn</i> and <i>Wawasan2u</i> .	4.267	.740
15	I like the idea of using a <i>WawasanLearn</i> and <i>Wawasan2u</i> .	4.200	.761
16	Using <i>WawasanLearn</i> and <i>Wawasan2u</i> is a positive idea.	4.100	.803
17	I plan to use <i>WawasanLearn</i> and <i>Wawasan2u</i> in the future.	4.067	.740
18	Assuming that I have access to a <i>WawasanLearn</i> and <i>Wawasan2u</i> , I intend to use it.	4.100	.803
19	As a lecturer, the usage of <i>WawasanLearn</i> and <i>Wawasan2u</i> is important.	4.367	.669
20	As a lecturer, the usage of <i>WawasanLearn</i> and <i>Wawasan2u</i> is relevant.	4.367	.615

Therefore based on the findings of this study, it can be concluded that the lecturers in WOU have positive perceptions towards using GC however they are doubtful on the value of it and secondly the ease of use of the system. This can be further elaborated as they found that their skills, experience, and knowledge about the application of GC is lacking. Therefore, indicating reluctance due to the complexity of the system. This was supported by research which indicated that the application of GC may be a challenge to some lecturers and additional training is required to overcome their reluctance.

2.5. Setbacks and challenges of virtual education

At the same speed than virtual education and online teaching has been integrating into society, some concerns have been ongoing regarding to the learning experience and quality of the material presented, which has been improving regularly, although some problems are still present at the moment. Among the most important issues that need to be solved are [21]: Lack of interest and enthusiasm from certain students, Lack of necessary technological skill in teachers or material providers, Relative short span of attention and distractions, Access to internet or equipment related to virtual education, no immediate feedback and lack of interaction with teachers and classmates, and internet speed and accessibility.

Another problem is the insufficient background knowledge that some students might present before taking online classes, especially when there is no clear previous knowledge requirements or formation, indeed, this has been found to be one of the most common causes of drop-out from online platforms [22].

Although, some of these situations have been resolved by the motivation of the students and teachers, other problems still exist, which need to be taken down before getting a complete and involving virtual education and online teaching. Nevertheless, some problems are beyond the reach of the students and teachers themselves, such as the accessibility to the proper resources and materials, which is a latent problem in developing countries and nations, besides, the language barrier and the lack of proper vocabulary might represent an obstacle for some virtual learners located in remote and distant places.

3. Conclusion

The advance and evolution of new technologies have been increasing the accessibility and usage of virtual platforms and environments, among these developments one of the sectors that has improved is the education system, which some decades ago was completely personal interaction face to face, but now it can be virtualized and spread all around the world in just a matter of hours, forming students from beginners to experts through online classes and with online resources.

Many self-paced web sites have been leading the online education system, besides the college driven courses and programs that have formed multiple and dedicated students. Nevertheless, drop-out from online classes has also been increasing, primary because of the lack of necessary equipment in some families, the internet requirements and the lack of self-motivation from students and teachers.

Even with setbacks and problems that online education and classroom virtualization present, it is still a big opportunity for many learners that search for ways to increase and gain new skills to face current problems and situation, the trend of virtual education shows us that in the future, we can expect advanced and more user-friendly environments where people have access to knowledge remotely and easily.

The new model of teleconference class has some advantages: innovative. The new model will improve any idea insight ([23]; Motivative. A creative model will rise the student's motivation effectively [24] ; Portable. The tools can be applied in indoor or outdoor. It only needs a wifi (internet connection). [26]; Economic, the latest hardware is more economical 30% than the previous one [11]; And it just install in google play store freely. The management system will help teacher or student to do some task efficiently [27]; Authentic. The conference material is original. [28]; Live interactive, while processing the learning teaching, the student can make interaction to the native directly. [29]; Recordable, the teacher can record all activities from the beginning to end. It can be the evaluation in teaching strategy. [8], it also can be analyzed anytime and anywhere [24].

4. Suggestion

The researchers would like to suggest additional training for lecturers and at the same time identify if their personality traits have a significant difference in their acceptance of GC for teaching and learning. We also agree with [30] where additional research is required to identify students behaviour towards GC to fully implement this technology in an institution. The integrated technology raises the community's participation in development [26].

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