Online Tutoring Platform

A literature review of the emerging channel of education

Mu Chun Khang, Choong Kai Wern, Ong Li Sheng, Lim Shi Hern, Mah Qi Hao

Faculty of Science and Technology

Sunway University

Bandar Sunway, Malaysia

Abstract—**The paper presents a literature review on online tutoring platforms. The researchers first explore several pertinent definitions to better prepare the readers for the subject. After that, an overview of current examples is provided to review the few popular online tutoring platforms in the market. The paper also examines the key elements as well as the pros and cons of online tutoring platforms.**

Keywords— Online tutoring platform; definitions; examples; elements; pros; cons

I. INTRODUCTION

Once, we have been learning through pen and paper, chalk and blackboard, marker and whiteboard, as all of these are main components in traditional education. However, the world is changing faster than traditional education can adapt. Imagine the ship that we once proud of, Titanic, still so vulnerable and sank just because a collision with the iceberg, not to mention traditional education that still have many disadvantages, cons, and drawbacks. Therefore, the world needs a revolutionary way of education to replace traditional education, which is e-learning.

This paper focuses on a particular field of e-learning known as online tutoring platform. There are few aspects that this paper will be focusing on, which are definitions of online and online tutoring platform, current examples of online tutoring platform, key elements in online tutoring platform, and pros and cons of online tutoring platform.

II. DEFINITIONS

A. Online

According to the oxford dictionary, it defines that being online as "controlled or connected to a computer" or as "being available on the internet". In the field of computing, being online is a state of connectivity the opposite of it, being offline, is the state of being disconnected, to an internet connection. Another way to describe between being online is using computer-mediated communication and being offline is using face-to-face communication [4]. Some examples include a person's phone being connected to WiFi signals, a person browsing websites on their computer is online, chatting with a friend on Facebook.

Being online means being connected to the world's biggest computer network system, the Internet [5]. A computer network system is a telecommunications network made for everyone who has a computer to connect and share data that is not owned by anyone [5]. The internet was initially made for just the communication between computer scientists [5]. About 40% of the world are connected to the internet and are online [6]. From 1999 to 2013 the number of users has increased 10 times [6] and in 1995, that number was less than 1%.

B. Online tutoring platform

Online tutoring platform is a platform to teach any individual that is willing to learn without the need of going to a physical place, where the teaching material is online. Online tutoring platforms have been growing tremendously in recent years, where many new online tutorial platforms have been gaining momentum. Individuals are using online tutorial platform to learn a new skillset or continue improve on their existing skillset. Online tutoring platform comes with features such as flexibility to study anywhere and anytime, statistics on their studying behavior, tracking their progress and more. The size of online tutorial platform market was estimated to be over USD 165 billion in 2015 [1]. Docebo predicts that the market is likely to grow by %%, bringing the market value to USD 240 billion. The market is big enough until that venture capitalists are considering on investing on online learning platform. Scott Sandell, a venture capitalist mention educational technology in 2013, where he stated that the technology will reach mainstream in 2014 and it is a sector of business that requires attention [2]. Mike Maples from Floodgate Fund mention that eLearning is still very compelling but very crowded market. In a research done by [3], 78% of the respondents agrees on online learning experience is better or similar to classroom experience. In a survey for online students, only 14% would enroll in a classroom program if the program they wanted is not available in an online format. There are a few main reasons why online tutoring platform are gaining momentum, which are affordability and flexibility. The pros and cons will be discussed in detailed in part [iii].

III. CURRENT EXAMPLES

A. Udemy

Udemy is an online learning platform in where they offer courses in business, IT & software, music, personal

development, design, marketing and more to any individuals. Udemy is founded Eren Bali in 2010. Unlike in Lynda.com, Udemy do not do subscription services, Udemy provides their courses in a courses by courses basic, meaning each course may have different prices and customers can only enroll in the courses they are interested in. There are courses which are free in Udemy which can be very compelling to individuals that are not financially strong. Udemy provides a rating system where students can rate the courses after they have finished the course. This greatly help new student to learn on the go as their platform can be accessed through the web, Android and iOS.

B. Khan Academy

Khan academy offers material in the form of instructional videos, practical exercises, and a dashboard personalized for learning. Khan academy like the other online learning platforms allow learners to study at their own pace. It offers subjects such as history, art history, computer programming, math, economics, and more. Unlike the other online learning platforms, Khan academy is a non-profit organization. That means they are free and according to them to be free forever. Khan academy believes in a world class education for anyone, anywhere.

C. Coursera

Coursera is a learning platform in where they offer courses in arts and humanities, business, computer science, data science, physical science and engineering, language learning and more. Coursera is founded on 2012 by Andrew Ng and Daphne Koller. Coursera provides a model similar to Udemy. Coursera provides courses where their customer can pay for the single course or to pay for a Specialization. A Specialization is a group of courses which shares similar content such as Deep Learning, Data Science, Digital Marketing and more. Customers that pay for a Specialization can access to all courses within the Specialization. All the courses on Coursera are provided by Universities or partner and taught by experienced professionals. Unlike in Udemy, where almost anyone can sign up to teach a course, Coursera work closely with universities and partner to provide high quality courses to individuals. Coursera can be accessed on the web, Android and iOS hence their customer can learn on the go.

D. Lynda.com

Lynda.com is an online learning platform where they offer courses in business, software, technology and creative skills to help any individual looking to improve their skill. Lynda.com is founded in 1995 by Lynda Weinman. Lynda.com provides a subscription like system for their customers. Customer needs to pay a monthly fee to gain unlimited access to all courses. Customers can learn on the go because it can be accessed on the web, Android and iOS. Lynda.com provides their customer with expert teacher which are respected professionals in their fields.

IV. KEY ELEMENTS

A. Instructors

Instructors playing an important role in online tutoring platform just as important as normal lecturer in face-to-face lecture. The switching from offline learning to online learning is just the difference in tools and medium. However, these tools still required to be utilized by instructors. Therefore, the attitude of the instructors towards technology is essentially important. The reason of this is because an instructor that has positive attitude towards the online tutoring platform tends to explore more of the platform, utilize the platform better, and even promotes the platform. Through these sequences of actions, the students of this instructor will gain better experiences towards the platform and studies, and results in positive outcomes.

Other than this, the teaching style of the instructors is also unneglectable in ensuring effectiveness of online tutoring platform. Since the students are not listening or studying in class, instructors should try to practice interactive teaching style. It is because the students might found less interesting or bored as they are unable to interact with the instructors. The students might also have off track in certain parts of the lecture or where they are not clear in certain points. Thus, the instructors should practice interactive teaching style and provide method of contact such as online messaging, email or other messaging applications to ensure better teaching styles leads to better students' experiences.

Since online learning required technology and the students might not familiar with it, they might face technical difficulties when using the platform. It is because online learning has students from worldwide and they might have completely different cultures, languages, and behaviours. Therefore, the instructors who have better experience on the platform should provide helps for these students. However, in order for instructors to provide helps, they must first understand the platform back to front.

B. Students

As we normally defined, students are responsible to learn and gain knowledges. However, there are some key characteristics that online students should pose with compared with lecture students which are self-discipline and prior computer experience. Due to the reason that online students do not being monitored like lecture students, they needed to have self-discipline to ensure that they have enough initiative to study and remain themselves not off the track. In contrast, students that do not posed with basic skills and self-discipline may do better in traditional delivered mode.

When every material and assignment goes online, which means when technology comes in between instructors and students, the computer knowledge and experience of students become significant. Students with prior knowledge and experience with computer will feel more comfort dealing with online tutoring platform as they have been using it from time to time. However, it might be challenging for those students without prior experience dealing with computer because they might need to use another effort to learn computer beforehand.

C. Technology

Technology has brought a lot of changes to our life these days. By using technology, education is advanced to a whole new level which is online learning or e-learning. From technological aspect, there are few key facets to be considered which are reliability, quality and medium richness [1]. In case of reliability, there is a need to ensure that the materials are accessible anytime and anywhere as the materials are located online. Also, the time taken to access the materials, and the time to exchange the materials should be reduced to minimum.

Furthermore, user interface of the online tutoring platform is playing a pivotal role as it is the interface that user dealing when using the platform. Therefore, the quality of the interface is crucial to ensure the user experience and more efficient delivery of education. There are few aspects to be considered when discussing quality of interface which include ease of use, navigation, cognitive load, mapping, screen design, information presentation, aesthetics, and overall functionality [1].

Since we no longer using blackboard and chalks for education, the way of delivering information and knowledge might need significant changes. By using technology, education provided with the abilities to increase the medium richness which means not only plain text. Technology allows the materials to be distributed in text, graphics, audio, and video [1]. In modern technology, the materials can even be distributed in form of virtual reality (VR) and augmented reality (AR). However, appropriate medium is needed to transmit or distribute its related materials. By utilizing the medium richness therefore are able to make the online tutoring platform more interactive and leads to a higher achievement in students learning outcomes.

V. PROS AND CONS

A. Advantages

With online tutoring platform, instructors and students are able to access the content at any time from any place. With this flexibility, the platform increases the availability of learning environment for students who are constraint to attend on-site learning [1]. According to the survey of University of Illinois at Chicago Masters of Health Profession Education Program in [2], online learning allows their students to participate in the Master's program, which would have been prohibited if not because of online courses due to personal circumstances. For instance, some of the factor that may constraint learners from attending on-site learning are on-site programme are too far from home, work-related constraint such as employment and family demands such as childcare [2]. According to [3], economic pressure cause difficulty for learners to take break from work to attend university. It is clear that online courses provide greater availability to both students and instructors compared to traditional approach of onsite learning, primarily due to the the flexibility of course schedule and location. Furthermore, online learning enables instructors to handle more students as it is not limited by physical spaces and attention needed to be given to student. [1] also state that the learning

quality in online learning environment is equivalent compared to face-to-face learning while handling more students.

Compared to traditional way of learning approach, online learning is more cost effective. In [3], the author mentioned that employers significantly reduce their training cost with online courses, especially when remote locations are involved. Furthermore, it is stated that since online learning platform allow learners to learn remotely, employers found that employees can spent more time in the office, thus lead to an increase of productivity and lower management cost, while employees continually improve their skills and knowledges through online tutoring platform. In a survey carry out by University of Illinois, some students prefer learning online due to the lower tuition fees and avoidance of expenses related to commute and accommodation. From a financial standpoint, learning online is cost less compared to traditional face-to-face education approach. From an investigation in Nigeria [4], the result concluded that online learning institutions are cost-effective, considering it establish a general framework in the education system. While the initial stage of creating an online course is costly, [4] stated that it is steadily cheaper due to economies of scale. Additionally, creating and distributing educational content online is also more cost efficient in online learning platform [1]. Online learning platform utilizing the latest technology is able to provide synchronous audio and video interaction to the learners. This allow online tutoring platform accommodate scheduling demands without any costs incurred from new facilities [5]. To conclude, the cost of distribution and creation of online course is more cost effective in long term for online tutoring platform compared to the traditional approach.

B. Disadvantages

In an online learning environment, the tutors or students may come in a different background than what we are used to. Hence, students may not completely understand what the other party is saying and discussion can be quite difficulty [2]. People from different country may use different vocabulary for a similar meaning or similar word for a different meaning. Besides, in an online discussion, students may lose contextual cues, inflection in voice, pauses and body languages [2]. This may lead to an ineffective collaboration that may hinder the progress in completing group projects. For some students [2], they felt like the lack of face-to-face interactions is hindering them from building relationship hence contributing to adverse effect on learning, completing tasks and satisfaction. [3] stated that an asynchronous communication environment is preventing an immediate discussion to get going. Students may feel the need to get immediate response to their questions while they are motivated. This is because students may originate from time zone hence it may be difficult to get everyone online at the same time.

With online tutoring platform, individuals learning is coming from different country and time zone, meaning there is a difference in the hardware and network. According to the survey of University of Illinois at Chicago Masters of Health Profession Education Program in [2], students reported that the common problems are related to personal technical issues such as slow internet speeds or unavailable internet access, older

computer hardware and insufficient computer skills. While facing these technical issues, students may be left frustrated and demotivated to continue learning. Besides, [2] students also complain online tutoring website with unintuitive functions, complicated navigation, the number of board sites and discussion area used and difficulty in tracking progress. This problem lies entirely on the platform, some platform may not follow design guidelines and sacrifice intuitiveness for aesthetically pleasing designs. Some platform may not even provide accessibility features to help people with disabilities to use the platform more easily. Lastly, students also faced difficulties in tracking, viewing and responding to long, complex discussion threads [2]. This is because the information on the bulletin board is not laid out in order.

VI. Conclusion

Thus, everything is concluded.

References