Online Tutoring Platform

A literature review of the emerging channel of education

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Abstract—**The paper presents a literature review on online tutoring platforms. The researchers first explore several pertinent definitions and background 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; background; examples; elements; pros; cons

I. INTRODUCTION

The traditional notion of education typically revolves around face-to-face interactions between instructors and students: pen and paper, blackboard and chalk, or whiteboard and marker [1]. Nevertheless, the world is constantly evolving at a rapid pace. For education to remain relevant, it too needs to be revolutionized with the employment of technology [2].

In a sense, online tutoring platform is one such product seeking to replace traditional learning [3]. At this juncture, the paper places focus on online tutoring platform, the emerging channel of education, by conducting a thorough literature review. Specifically, the paper deliberates the following aspects of online tutoring platforms in order: definitions and background, current examples, key elements and pros and cons.

II. DEFINITIONS AND BACKGROUND

The paper begins by examining two definitions: online and online tutoring platform. The section aims to offer readers a better understanding and context on the subject matter before delving deeper in the literature review.

A. Online

Oxford Dictionaries Online defines online as "controlled or connected to a computer" or "being available on the internet" [4]. In other words, online is a state of connectivity whereas offline is the state of non-connectivity. Another way to juxtapose online and offline is by comparing computer-mediated communication and face-to-face communication [5].

Nowadays, the idea of online is tightly-coupled with the internet. Being online is getting connected to the internet, the world's biggest computer network system [6]. Herein, a computer network system is a telecommunication network meant for sharing data, easily accessible to everyone with a computer [6]. From the year 1999 to 2013, the number of internet users has increased 10 times [7]. Currently, an estimated 40% of the world is online and connected to the internet [7].

B. Online tutoring platform

Online tutoring platform is a platform that teaches willing learners through online materials, without the need of physical meetups. This channel of education has seen tremendous growth in recent years, with many new emerging products gaining strong momentum. Online tutoring platforms encourage individuals to learn new abilities or improve their existing skillsets, offering features like the flexibility of studying anywhere and anytime, study behaviour statistics, progress tracking and more.

The size of the online tutorial platform market was estimated to exceed USD 165 billion in 2015 [8]. In fact, Docebo predicts that the market will grow by at least 5%, raising the market value to USD 240 billion [8]. Scott Sandell, a venture capitalist, mentioned that educational technology reached mainstream in 2014 and will remain a business sector that demands public attention [9]. This is aligned with how a research indicated that 78% of respondents agree that online learning is equivalent or better than the traditional classroom experience [10].

III. CURRENT EXAMPLES

Having investigated the definitions and background of online tutoring platform, the paper now provides three current examples. The section deliberates the four big names in online tutoring platform – Udemy, Khan Academy, Coursera and Lynda.com – respectively to expose the readers to their relevancy in the education scene.

A. Udemy

Udemy is an online tutoring platform which offers numerous courses, ranging from business to design [11]. Founded by Eren Bali in 2010, Udemy provides material on a course-by-course basis where users can freely enrol in any course they are interested in. Courses come in different prices, but some are also offered for free. The novelty of Udemy lies in the rating system. Students are given the opportunity to rate completed courses to help others judge whether the courses are suitable for them.

B. Khan Academy

Khan Academy believes in a world-class education for anyone anywhere [12]. Khan Academy offers materials in the form of instructional videos, practical exercises and a dashboard personalized for learning. Unlike other online tutoring platforms, Khan Academy allows users to learn at their own pace, offering subjects like art, history, math, economics and programming. It is noteworthy that Khan Academy is a non-profit organisation. Essentially, all the courses provided are completely free of charge.

C. Coursera

Coursera employs a model similar to Udemy where users are required to pay for courses to be served [13]. Founded by Andrew Ng and Daphne Koller in 2012, Coursera also offers a huge plethora of subjects such as data science and engineering. Something worth noting is the specialisation feature. A specialisation is a group of courses like deep learning and digital marketing that shares similar content. At this juncture, learners who pay for a specialisation are given access to all courses under the specialisation. On top of that, all the courses on Coursera are provided by universities or partners, and therefore taught by experienced professionals. Unlike Udemy where anyone can submit courses, Coursera ensures the courses delivered are of high quality.

D. Lynda.com

Lynda.com is an online tutoring platform that offers courses encompassing software, technology and creative skills [14]. Lynda Weinman founded the platform in 1995 to provide a subscription-based system for learners. Users pay a monthly fee to gain unlimited access to all the courses available. Similar to Coursera, expert teachers or respected professionals are utilised.

IV. KEY ELEMENTS

The current examples provided each have distinctive features or characteristics. Nonetheless, they all share common key elements that make up an online tutoring platform. The section now discusses the essence of online tutoring platform: participants and medium.

A. Participants

Online tutoring platform requires the active participation from two roles. The first participant of online tutoring platform is instructors. Like a lecturer in a face-to-face class, the online instructor plays an equally-important role here. Herein, the only difference lies in the tools and medium. Hence, the instructor's attitude towards technology is of utmost importance [15]. An instructor exhibiting positive attitude would tend to explore platform and better utilise it [15]. Besides that, the instructor's teaching style also ensures the effectiveness of the online tutoring platform [15]. Students may find instructors boring when there lacks direct interaction. Hence, instructors should practice interactive teaching methods, employing channels such as online messaging and email to guarantee a better learning experience [15]. Of course, instructors should also familiarise themselves with the platform to both inspire and help students [15] to adapt to the online scene.

On the other hand, students also actively participate in the online tutoring platform. At this juncture, students are individuals with the responsibility to learn and gain knowledge. However, online students also need to equip themselves with characteristics like self-discipline and computer experience [15]. This is because online students cannot receive the same form of monitoring as traditional students. Therefore, they must possess the initiative to keep themselves on track. Like the instructors, students should also have computer knowledge to feel more comfortable dealing with online tutoring platforms. This is important in reducing the cognitive load during the learning process.

B. Medium

Online tutoring platform relies heavily on the medium to function. The first medium of discussion is technology. The very backbone of online tutoring platform, technology in this context should consider facets like reliability, quality and medium richness [15]. In terms of reliability, materials should be accessible anytime and anywhere. The time taken to access them should be reduced to minimum. Furthermore, the quality of the interface is crucial in ensuring user experience and education delivery. The user interface must address ease of use, navigation, presentation and more [15]. Lastly, medium richness means the materials should be distributed in text, graphics audio and video [15]. Advanced technology also opens new possibilities in terms of virtual reality (VR) and augmented reality (AR) [16]. Nonetheless, rich media increases interactivity and subsequently achievement in student learning outcomes [16].

The second medium for consideration is the courses. In this context, courses should be both structured and engaging. The structure of a course decides how a student will learn the content [17]. Course structure can benefit greatly from four aspects: grouping of contents, size of modules, interactive concepts and format of contents [17]. On the other hand, course engagement is derived from how the students interact with the content [17]. The interactions between student and content deserves attention. It should be noted that different students prefer different learning styles. For instance, some may prefer audio rather than video. Therefore, providing multiple options of learning is key to course engagement.

V. PROS AND CONS

After reviewing the key elements that constitute online tutoring platforms, the paper can finally deliberate the pros and cons of the education channel. The section offers insightful perspectives on both the advantages and disadvantages of online tutoring platform.

A. Advantages

The most notable advantage of online tutoring platforms is flexibility and convenience. Instructors and students can access content any time from any place. The flexibility of online tutoring platform is especially important for students facing constraints with attending on-site learning [18]. Other

constraining factors include employment and childcare [19]. Economic pressures also make it difficult for learners to break away from work to attend university [20]. A survey from University of Illinois at Chicago Masters of Health Profession Education Program showed that online learning allowed their students to participate in the Master's program; if not for online courses, this would not have been possible due to personal circumstances [19]. It is found that learning quality in an online learning environment is equivalent to that of face-to-face. Henceforth, at this juncture, at this juncture, online courses prove to be far superior compared to traditional courses.

Online tutoring platforms are also advantageous due to their cost effectiveness. With online courses, employers significantly reduce their training cost, especially when remote locations are involved [20]. Students generally prefer learning online due to the lower tuition fees and avoidance of expenses relating to commute and accommodation [19]. While the initial costs of creating an online tutoring platform can be expensive, it will become steadily cheaper due to the economies of scale [21]. Additionally, creating and distributing educational content online are also more cost-efficient [18]. Utilising the latest technology to provide synchronous audio and video interaction, online tutoring platforms can accommodate scheduling demands without incurring costs from new facilities [22]. In the long term, online tutoring platforms are more cost-effective than the traditional approach.

B. Disadvantages

The greatest disadvantage of online tutoring platforms is asynchrony. The asynchronous education channel entails that the communication between instructors and students are hindered. Immediate discussions are hard to establish, and immediate responses are even more difficult to obtain [20]. Besides that, coming from diverse backgrounds, instructors and students may not be able to effectively convey messages; different cultures may have vastly-different vocabularies or subtexts [19]. Online discussions also implicate the loss of contextual cues, vocal inflection, pauses and body language [19]. Overall, this lack of face-to-face interaction can adversely affect relationship building, learning, task completion and general satisfaction [19].

Technical issues also plague online tutoring platforms more often than not. With learners scattered across various countries and time zones, the differences in hardware and networks can be a real challenge to overcome. On the other hand, common technical issues like slow internet speed can severely demotivate and frustrate online learners [19]. On top of that, problems such as intuitiveness of functions, simplicity of navigation and ease of progress tracking also need to be considered by online tutoring platforms [19]. Herein, some platforms may sacrifice intuitiveness and usability for aesthetically-pleasing designs. In fact, online tutoring platforms often ignore accessibility features for the disabled.

VI. CONCLUSION

The proliferation of the internet has made it possible for online tutoring platforms to grow. The emerging education channel is now playing an imperative role in enhancing the quality of education, evident by the current examples explored. Flexibility, convenience and cost effectiveness are factors that may be enough to make online tutoring platforms the next game changer in education, but the asynchrony and technicalities must be addressed. With that, the researchers believe that online tutoring platforms possess immense potential if embraced properly.

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