



Mphatso Imwa - LE@D, Universidade Aberta

Mestrado em Pedagogia de e-Learning pela Universidade Aberta de Portugal. Licenciado em Pedagogia pelo ISET-One World. Actualmente é tutor à distância no ISET-One World, trabalhando com estudantes do curso de Pedagogia que estudam em língua inglesa. Tem feito investigações e publicado artigos científicos em 2019 e 2020 acerca das metodologias modernas de ensino à distância ou "e-learning".
imwaphiri@gmail.com

THE IMPACT OF SOCIAL NETWORK APPLICATIONS IN OPEN EDUCATION

O IMPACTO DAS APLICAÇÕES DA REDE SOCIAL NA EDUCAÇÃO ABERTA

Abstract

Open education is key to removing the education gap among people around the globe. With the development of the internet, open education has acquired a sustainable and effective channel of production, sharing, and access to Open Educational Resources (OER). Through social media platforms, students, educators, schools, and movements can learn and help solve problems and challenges in education. The development of smartphone social network applications is even influential as access to open education can be done on the go, anytime, and anywhere than web-based applications. Besides, most smartphone devices that are compatible with the applications are becoming cheaper due to mass production, which allows many people who cannot afford a personal computer to have one, therefore, have access to OERs. That positions the social network applications at a more crucial role in the production, sharing, and access to Open education, and this is what the paper intends to analyze.

Keywords: Open-Education; Open Educational Resources (OERs); Social media; Social Network Apps.

Resume

A educação aberta é a chave para eliminar a lacuna de educação entre as pessoas no mundo. Com o desenvolvimento da Internet, a educação aberta adquiriu um canal de produção, partilha e acesso sustentável e efectivo aos Recursos Educacionais Abertos (OER). Através de plataformas de mídia social, estudantes, educadores, escolas e movimentos podem interagir, aprender e ajudar a resolver problemas e desafios na educação. O desenvolvimento de aplicativos de redes sociais para *smartphones* é ainda influente, já que o acesso à educação aberta pode ser feito em trânsito, a qualquer momento e em qualquer lugar, do que os aplicativos baseados na Web. Além disso, a maioria dos dispositivos de *smartphones* compatíveis com os aplicativos estão ficando mais baratos devido à produção em massa e isso dá a oportunidade a muitas pessoas que não podem pagar por um computador pessoal para, portanto, ter acesso a REAs. Isso posiciona os aplicativos de redes sociais em um papel mais crucial na produção, na partilha e no acesso à educação aberta, e é isso que o documento pretende analisar.

Palavras-chave: Aplicativos de Redes Sociais; Educação Aberta; Mídias Sociais; Recursos Educacionais Abertos (OERs).

INTRODUCTION

Access to education is the right for every individual around the globe. It is an essential tool that helps us face the realities of the current and the future⁹. However, the challenge of access has been through obstacles such as lack of infrastructure, teachers, teaching and learning materials, and geography, among other factors. It is uncommon to observe that most people in developing countries lack the opportunity of education due to the elements mentioned earlier. While there has been some progress in addressing the challenge of access to the school by the universal declaration of free basic or primary education, many have been left to access higher quality education in secondary and university institutions because of higher costs. Such a situation impacts the lives of many people and the development of countries at large.

The revolution of digital technologies such as the Internet, smartphones, and social network sites and applications has improved access to open, and high-quality educational resources¹⁰. The revolution has led to 95 percent digitization of information, mostly accessed via the Internet (Hilbert & Lopez, 2011). Castells (2013) mentioned that at the end of 2013, seven billion devices worldwide were connected. It implied that most of the people globally were connected, though with high inequality in terms of bandwidth, efficiency, and cost of the service (p. 132). Today, around 4 billion people worldwide possess a smartphone (O'Dea, 2020). Such a presence of smartphones has facilitated a modern way of staying connected, socializing, creating, sharing, and accessing the information. People are now connected on the go with the affordable smartphones and its applications compared to personal computers a decade ago, which were and still are relatively expensive.

The development of smartphones has increased the proliferation of social network sites and applications to an advanced level. Websites and Apps like Facebook, WhatsApp, YouTube, TikTok, Telegram, and many others are commonly used among the people. The internet expansion to many areas, including the remote places, has included the marginalized people on the global

⁹ The Open Education Consortium. (n.d.). Retrieved June 30, 2020, from <https://www.oeconsortium.org/about-oeconsortium/>

¹⁰ The Open Education Consortium. (n.d.). Retrieved June 30, 2020, from <https://www.oeconsortium.org/about-oeconsortium/>

social network platforms. Such development has led to an increase in access to education in a way that is flexible, free, or open in most cases, if not for the price of the service. Platforms/applications such as YouTube, contain a myriad of lessons from credible institutions, experts, researchers, and teachers in different disciplines such as Science, languages, and arts, just to mention a few. Students or everyone interested in learning something new or perfect the professional skills can easily choose what to learn. Institutions and platforms such as OpenLearn and Coursera, Khan Academy, and OpenStax contain hundreds of courses that are accessed for free or at a relatively low fare for some people who need authenticated certificates to prove their attainment of new knowledge.

With the social network sites and applications, it has become effortless to teach or learn by merely listening to voice or audio clips of certain information, be it educational or pleasure. The COVID-19 pandemic has also demonstrated the power of social network applications in facilitating teaching and learning from home. WhatsApp has become a socializing and a learning tool where teachers and students meet and discuss on and about school work. From this perspective, social network applications have a significant impact on increasing access and openness to open educational resources and creating freedom and flexibility for people to learn anytime and anywhere.

This paper explicitly reviews the role that social network applications have concerning Open Education (OE). The following objectives are addressed throughout the article:

- To describe the meaning of Open Education and its driving forces.
- To analyses the impact of social network applications as a catalyst for open education.

It is expected that the above objectives lay a foundation for understanding the extent to which internet technology, smartphone applications, and open education movement are impacting the lives of the many people willing to learn today. It is clear that with these technologies, the gap between the literate and illiterate has and still is becoming narrow. That literacy rate can no longer be measured through figures of people who have gone through physical classrooms or state-

regulated schools but also and through mobile technology and access to the Internet as it gives vast opportunities for self-literacy.

METHOD

This paper uses secondary sources of information by reviewing the literature surrounding the topic. The author sourced the data from search engines and databases like google, google scholar, and ERIC. Simple questions with specific keywords were entered in the said sources and depending on the title, abstract, year of publish and scanning through the articles for information regarding the topic in question, 23 pieces of information which included articles from the journals and educational websites, and books were selected to be regarded for a thorough review.

LITERATURE REVIEW

Open Education

Nyberg (2010) lays some principles to aid the understanding of the meaning of Open Education. He states that open education is about freedom to choose what to learn, schools providing different opportunities of education, individualized teaching, and learning based on learner's interest and cooperation between the student and a teacher in the process of learning (p.13). Such a definition can be narrowed to simply 'everyone's right to education' without hindrances of cost and societal class.

According to Wiley and Green (2012), education is about "*sharing*" of knowledge, and without it, education has no essence. Sharing allows people to construct a new understanding of the world around us. Development of skills and competencies happens through acts of interaction where people discuss, research, critique, and solve problems and challenges. Therefore, through sharing, education becomes an essential factor in the development of our communities and the global society at large. The rapid changes that man has experienced over the past century are a result of so many factors of which the effect of sharing in education is one of them.

Biswas-Diener and Jhangiani (2017) argue that: Even though education must be a fundamental human right, history has it that education was and still is, in some cases, only for the elite and the

upper class. That is because education is tied to considerable costs in terms of tuition, access to books, and minimum space in schools, colleges, and universities. Therefore, that robs the opportunity or the right for everyone around the globe to access quality education. In response to this, individuals, groups, and institutions have resorted to the development of the concept of **open education**. They have established movements that advocate the right to education to people in need around the world at low or no cost at all. Organizations such as the OpenStax and Khan Academy have taken the initiative of publishing books and other materials with an open license and spread them through technological means such as Apps at the disposal of teachers, students' schools, and anyone with a zest for knowledge to learn from. The Michigan Institute of Technology (MIT) has made all its courses and materials open for any institution worldwide to freely access, adapt, reuse, or redistribute in a quest for promoting the right to education. The Open University, through its OpenLearn initiative, produced hundreds of free courses offered through eLearning or online mode for everyone around the globe to choose and learn from flexibly.

Open education is regarded as a philosophy that focuses on how people develop, construct, and share knowledge, skills, and competencies¹¹. It is designed and structured to provide "*extremely efficient and affordable sharing*" (Wiley & Green, 2012, p.82). It embraces all teaching and learning resources, methodologies, and tools which are in line with promoting quality, access, and effectiveness to teaching and learning worldwide¹². Around this philosophy of open education, it is believed that the students acquire the personal agency, determination and autonomy (Blessinger & Bliss, 2016) since the "*learner is driven by his peculiar intrinsic motivation*" (Biao, 2012, p.30). In other ways, open education is concerned with eliminating the barriers and brings equality among the people to access quality education despite the social, political, and economic status. Jhangiani and Biswas-Diener (2017) make it a point that it is essential to deal with educational inequalities among the people from all classes of society:

¹¹ What is open education? (n.d.). Retrieved February 27, 2018, from <https://opensource.com/resources/what-open-education>

¹² The Open Education Consortium. (n.d). Retrieved February 27, 2018, from <http://www.oeconsortium.org/aboutoecc/>

The real tragedy of poverty is not that the poor need more opportunities to be factory foremen, office managers, or stock traders. The real tragedy is the loss of every scientific discovery, artistic work, invention, new business, and cultivated mind because of lack of opportunity according to random chance at birth (p.5)

The statement here may imply that once people have access to quality education, the results could be the increase in innovation and invention. People could create their businesses instead of waiting to be employed, which may have a more substantial impact on the entire society. People must have access to information and communication that is crucial to everyday realities.

Driving forces of Open Education

The following factors have been highlighted to demonstrate some of the forces driving Open education

- Societal problems and challenges
- Technological advancement

Societal issues and challenges

Significant reasons for the promotion of open education have been documented by many individuals and movements concerned with equal access to quality and practical training. Research done around the world before the year 2000, revealed that many poor people failed to pursue their dreams in education due to huge costs, long distances, poor quality, and lack of self-esteem among others (Jhangiani and Biswas-Diener, 2017). It is noticeable in the developing countries that governments fail to provide sufficient infrastructure, teaching and learning materials, tools, and a lack of enough and well-trained teachers to facilitate learning processes. In many cases, books are scarce and expensive; hence both teachers and students are forced to use the same books for many years that become outdated before they are replaced.

In developed countries, the question of access may not be contributed by a lack of infrastructure and teaching and learning materials. Instead, it is in the sense of costs of accessing such education. The report by OECD titled '*Education at a Glance 2017*' revealed that while in some developed countries such as the USA have improved and sufficient educational infrastructures and resources, the tuition fees in higher education institutions are expensive for the lower class to afford. The

report cited that one needs at least US\$8,000.00 on average per academic year. Therefore, people with the quest for higher education are discouraged from proceeding with their studies due to higher costs, or they are left with an option of low standard education schools and universities. If not, they risk falling into a debt trap after graduation to attend prestigious and expensive universities. According to DiGangi (2017), an online news reporter of USA TODAY reported that students' debt has gone above a trillion dollars in the USA alone by 2017. For the first time, it has surpassed credit card debt. Also, extra costs, such as books, are very high too. Wiley and Green (2012) reported that the price of textbooks had risen up and that students spent at least 25 percent of the total cost of the 4-year university course on books.

Furthermore, Jhangiani and Biswas-Diener (2017) documented that the existence of disparities among the people from a racial perspective is another factor causing many people to fail attending or to acquire quality education. Jhangiani and Biswas-Diener (2017) observed that states whose large population is the ruling or upper class are likely to have improved education systems than countries whose population is just the working or poor quality. This situation is similar in the developing nations like Malawi and Mozambique, where better schools with better teaching and learning conditions are only found in urban areas and cities. Besides, in many cases, the disparities are evident in the best international schools where mostly the rich afford to send their children to attain such a higher standard of education.

Technological advancement

A century or more ago, information and communication speeds were so slow that it contradicted the philosophy behind open education. Taking sharing or openness as a primary focus in education to give equal learning opportunities to all could not sound as good as it looks today. Such a philosophy was futuristic at that time. People who advocated for open education were faced with the challenge of finding a better strategy of quickly making the open content, materials, etc. available to all. For instance, publishing a book was costly, and despite that, transportation of it to reach the people in need was another challenge. Such a philosophy was not sustainable at that time.

As discoveries became realized, such as radio and television, Open education became a dream come true. Educational radio and TV programs were aired. People sat in front of their TV or radio, learning, therefore achieving the status of the learned in society. A few decades ago, internet technology was developed, and therefore speeds of information and communication accelerated and reached a velocity that man had never imagined. The society's way of living has changed so much compared to the era before the Internet. Communicating has become so much easier and very instant. People have become very connected not only from within their local communities but to the whole globe. It has become easier to create new relationships with people from diverse cultures and societies. Social networks and communities have been developed and established. People have moved from using landline telecommunication to mobile means. Production and access to information have been decentralized, leading to Collective Intelligence, i.e., a type of intelligence created through the collaboration of groups of individuals at creating new knowledge. Examples include volunteering at Wikipedia or Google algorithms that collect and organize intelligent responses from users who contribute answers to different questions online (Malone, 2007). People are now online more than ever due to the Smartphone and Applications technologies. The Internet technology is affordable in that even developing nations have systems working. In general, the Internet boom has changed the global ways and means of living. It has created a new culture, and Levy (2001) coined this new culture as a "cyberculture."

Therefore, from the growth of the Internet, the philosophy of open learning makes a perfect sense as it found a very sustainable strategy of giving open education to the masses. Bush & Dawson (2013) emphasize that the Internet is a vital tool for learning since the printing press. Its characteristics of allowing participants to interact with one another in a virtual defined community actively, open creation, collaboration, sharing, and publishing new information and knowledge align well with the education objectives (Selwyn, 2014).

The implications of the Internet on open education are vast. Even though formal education's cost is a barrier to many, the growth of Massive Open Online Courses (MOOCs) has helped millions of people access education. People benefit in their careers or professions, hence its lower cost or free access¹³ (The NYU Dispatch, 2017). Kumar (2015) documented that the 'Internet and

¹³ The NYU Dispatch. (2017). MOOCS. Retrieved from: <https://wp.nyu.edu/dispatch/2017/12/>

YouTube in particular' has huge educational video content from different credible companies and universities in the form of lectures, which can be accessed for free provided the user has Internet access, a computer, or a smartphone. The implication here is that teachers and students from around the globe can learn or select some materials to supplement or aid teaching.

Selwyn (2014) describes the other four implications in which the Internet functions and changes how education has to be shared. He contends that; (a) Internet provides freedom against the real-world obstacles. The student can learn without geographic restraints, at any time and one's pace. With Internet access, students can choose from the many existing schools worldwide and from any course or program which interests him/her and study without the need to relocate. (b) the Internet has created a "*new culture of learning*," characterized by "*bottom-up learning*" where students collaborate to explore, innovate, and create new knowledge. Platforms like Wikipedia, blogs, YouTube skills-share, google docs, among others, allow students to work together to produce materials, learn, or share data in a self-organized manner without any authority above them. (c) It has and still is supporting a *fluid intelligence* and connectivism where the information is distributed and used on "*just-in-time-basis*." (d) The last implication Selwyn describes is that the Internet has become the force of developing autonomous and individualized learners. It implies that students decide what they want to learn, how they want to learn, and where they want to learn it driven by self-motivation or self needs instead of following a strict course or program inspired by the teacher or an institution.

From the points above, it is no question that the Internet is a powerful tool in education. Social platforms such as Facebook, Twitter, YouTube, and many more, have shown such a potential. Quite a several researchers such as Rojas-Kramer, Esquivel-Gómez and García-Santillán (2015) in their empirical study on the use of Facebook in higher education reported that students regarded it as a collaborative environment, a medium of communication, language learning, and counseling environment among others. Such feedback should not be underrated.

However, it should be noted that the Internet alone cannot facilitate education. There should be platforms, applications, or software's with different functions to make open school a success. In the next paragraphs, Special attention will be paid to Social Network Apps' role in Open education.

Social Network Sites and Applications

To understand the meaning of the term "**social network applications**," it is essential to consider the definition of "**social media**" which refers to a collection of Internet-based Apps and platforms which facilitate the "*creation and exchange*" of "*user-generated content*" (Alabdulkareem, 2015, p 215). Such an array of applications and platforms include Facebook, Telegram, Myspace, YouTube, Twitter, and WhatsApp. Through these platforms, people create communities with similar or shared interests, such as teachers' group. Through these platforms, they can share their teaching experiences, discoveries, challenges, and teaching and learning resources, which can improve students learning lessons; Students group – where discussions of problems, assignments, sharing materials can be done, and many more. The social aspect of this social media is very crucial to education as it answers the question of the creation of content and sharing.

The existing social apps have and are helping open support education. However, there is still a lot of work to be done to maximize the existing apps to increase access to open education. And also, it is essential to note that one application cannot be enough, better ways, methods, and means must be decided to make education more accessible without constraints. Consider the following specific features in which social network apps can enhance and increase access to open education.

- ***Handy feature:*** Most of the social apps are designed to be installed and used on smartphones to provide the ability to use on the go. This feature is significant compared to the web-based platforms, which may only require a desktop or personal computer due to compatibility issues. In this way, people can use open content anytime, anywhere.
- ***Reduced open-content access cost:*** Nowadays, it is possible to get an excellent smartphone at a very affordable price compared to relatively expensive computers. The cost is already a hindrance to some people who want access to open content. Still, with cheap smartphones and apps, the barrier to open educational resources is eliminated or reduced.
- ***Easy to code/program an app:*** Massachusetts Institute of Technology, developed a platform or software (AppInventor) which makes it possible for everyone without prior

knowledge of coding or programming to develop any apps that one may need. The software aim is to increase production, creation, and sharing of content in many various ways, such as games and educational apps. All that one need is to imagine how the resources can be presented and used through Apps. That is providing the freedom to educational movements and individuals who wish to share resources with the masses.

- **Offline feature:** There are quite a several apps that once you download and install, they work in offline mode since the content does not need an update daily. For instance, the Amazon App has many free books, novels, magazines which, once downloaded, can be used for as long as one can. Having such offline apps reduces or decreases the cost of Internet data daily, opening opportunities for the poor to access education.
- **Interaction and collaboration feature:** The apps which require person content interaction or collaboration promote autonomy among learners. That is an important factor for students as it increases the standard and quality of the content and learning. For instance, a teacher may initiate a debate among the students via WhatsApp. Students may debate by commenting on one another. Each time a student may wish to comment, he might try to go deeper with the discussion topic by sharing related material, which is very important in building new knowledge. Also, it has been revealed that social apps such as Twitter, when used in the education context, develops students' academic way of expression and communicating. Students make sure that their content is free from grammar and language issues¹⁴. Besides, when posts receive comments, likes, or dislikes, it creates the opportunity for them to think in a more analytical manner, which is an essential skill in the learning process.

¹⁴ How social media is changing education, BBCActive, (n.d). Retrieved February 23, 2018, from <http://www.bbcactive.com/BBCActiveIdeasandResources/Howsocialmediaischangingeducation.aspx>

- ***Variation of apps:*** There are around 3 million apps on the Android app store and over 2 million on Apple's App store by 2017¹⁵. That means a lot in the field of open education as many people have access to content and can create and share in different ways. Well-known apps such as the OpenStax and Khan Academy have several books, articles, and other teaching and learning resources accessible to many. Many users who have and still are using these apps are benefitting a lot in situations where there are no books and new and updated information in their schools.

Conclusion

Social network applications have an essential role in Open Education. The investigation into the effects of open education shows that it gives better learning results by increasing access to open educational resources for both teachers and students. Furthermore, it increases engagement and collaboration in the learning process by changing the perspective that teaching and learning occur at a specific time and place to the perspective that education is a "social act" with no specific time and place. As people become more virtually connected and digitally socializing, it is vital that open educational resources be produced in various forms and shared through various social network platforms to promote Open Education to all people worldwide.

¹⁵ App stores: number of apps in leading app stores 2017. (n.d.). Retrieved February 27, 2018, from <https://www.statista.com/statistics/276623/number-of-apps-available-in-leading-app-stores/>

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