

Evolution of Higher Education and the effect of Covid-19 Pandemic

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Abstract: *The purpose of this research is to review prior studies that illustrate academic deliberations over the meaning, idea, and the evolution of universities in Higher Education institutions, and what to expect in the post Covid-19 era. This paper pursues to answer the following research questions: what is the aim of higher education; how did higher education evolve throughout the years; how did the Covid-19 impact higher education; and what is to be expected in the future regarding higher education. This paper is a secondary research. This research paper involves using already existing prior research, data, and literature in understanding the concept of higher education and the future trends in higher education. Existing literature is summarized and arranged to increase the overall effectiveness of the research. The review of literature aids the researcher in developing recommendations on how higher education can use modern strategies and ideas to enhance the education system, ensuring quality education and students' employability.*

Key words: *Higher Education, technological development, educational transformation, e-learning, technology.*

Date of Submission: 20-12-2020

Date of acceptance: 03-01-2021

I. Introduction

Education is an important process that develops human abilities and attitudes (Haleem et al., 2020). Education is said to be one of the driving forces of the economy (Weeden and Benjamin, 2020). With educated citizens, a nation develops prosperously. Education is not a new concept in the world (Kriger, 2020). On the contrary, Takshashila University, the oldest higher education entity, was more than 2700 years old (600 B.C). According to Brahma et al. (2020), this university was the Oxford, Cambridge, Harvard, Stanford, MIT, IIT or IIM of the world. It became a well-known center of learning. In addition, during 331 BC, Alexander the Great also established the University of Alexandria in Egypt. It flourished almost 2400 (300 BC) years ago when Alexandria had become the intellectual and cultural hub of the world.

Modern higher education refers to a systematized and structured learning and training undertakings and organizations that range from conventional universities (arts, humanities, and science faculties) to more focused university institutions like agriculture, engineering, science, and technology (Alemu, 2018). Higher education can signify universities, a university college, a university branch, a college or polytechnic and community college. Higher education is characterized as: “*direction or preparing of a course of study prompting the honor of an endorsement, certificate or degree upon the successful fulfillment thereof*” (Private Higher Educational Institutions Act, 1996, p.13).

Over the years, higher education systems have been reshaped in accord with governmental, socioeconomic, development aspirations and market dynamics (Alemu, 2018). In the past, educators would instruct and teach students in the manner that they were taught, with little regard to their needs (Gagne et al., 1992). Over the years, it changed, encouraging a responsive teacher model. Accordingly, during this period, educator would adept how they educated and trained their students, meeting the changing student needs (Kriger, 2020). Nowadays, in the contemporary market, a third wave transpired. This wave is disturbing the existent and used pedagogies. This development in education is established by the gigantic availability of online courses. Education is seen nowadays more about empowering the learner by learning style and skills, and the access of information (Haleem et al., 2020).

During the 2020 global pandemic, shifts to online learning have revolutionized higher education worldwide (Murphy, 2020). Covid-19 pandemic allowed higher education structure has reshaped its system to digital transformation. “*The unexpected closing of campuses as a social distancing measure to stop community transmission has shifted face-to-face classes to online learning systems*” (Rashid, 2020, p.1). The institutions that do not adapt to the changes in the market and the educational system deemed to become extinct in the cluttered global education competition (Haleem et al., 2020). Accordingly, this literature paper pursues to answer the following research questions: (RQ1) what is the current aim of higher education; (RQ2) how did higher education evolve throughout the years; (RQ3) how did Covid-19 impact higher education; (RQ4) what is

to be expected in future higher education. This conceptual paper provides university (governmental or private) guidelines that should be implemented during the post Covid-19 period to help uphold and enhance the system's production of wanted graduates; thus, guaranteeing their employability.

II. Literature Review

2.1 The Aim of Higher Education

Higher education enables society to advance in order to sustain a learning society (Goyal, 2012). According to Bourner (1996), traditional higher education has two principal roles: creating and disseminating knowledge. Douglas Hague (1991) clarified that: *"Academics must believe that acquiring the ability to test ideas and evidence is the primary benefit of university learning"* (p.64). Haleem et al. (2020) stated that it is the goal of higher education to give citizens the opportunity to understand knowledge of the world around them; and changes it into something better.

Recent studies have found that higher education empowers people through expanding their knowledge and skills, *"clearly express their thoughts both orally and in writing, grasp abstract concepts and theories, and increase their understanding of the world and their community,"* developing people's quality of life (UN Academic Impact, 2020, p.1).

According to Bourner (1996), there are four main purposes to higher education. In the research paper, it indicated that higher education is to: *"inspire and enable individuals to develop their capabilities to the highest potential levels throughout life, so that they grow intellectually, are well-equipped for work, can contribute effectively to society and achieve personal fulfillment; increase knowledge and understanding for their own sake and to foster their application to the benefit of the economy and society; serve the needs of an adaptable, sustainable, knowledge-based economy at local, regional and national levels; play a major role in shaping a democratic, civilized, inclusive society"* (p.1).

According to the UN charter, many studies were conducted under their supervision related to the significance of higher education. Studies show that higher education is given credit to providing citizens in different societies with knowledge that makes them more intellectual individuals. Accordingly, they make decisions that add to their quality of life, leading to: *"longer life spans, better access to health care, better dietary and health practices, greater economic stability and security, more stable employment and greater job satisfaction, less dependency on government assistance, greater understanding of government, increased community service and leadership, more self-confidence, and less criminal activity and incarceration"* (UN Academic Impact, 2020, p.1).

When individuals seek to gain higher education, they consider and trust that it is an education that will lead to a rewarding career. This factor is why many people invest in college both with their money and time (Goyal, 2012). According to scholars and practitioners, it is intended that higher education institutions not just universities and colleges, prepare to the labor market by training people, teaching them complex subjects, to think analytically, as well as communicate ideas effectively (Reeves et al., 2002). Research illustrate that higher education aids individuals to become more professional. Further, it aids in the development of a wide range of skills (soft and hard skills) that can be implemented in the work market, allowing them the opportunity to end up in a field they didn't necessarily study for (Gavin, 2016). Therefore, higher education creates and disseminates knowledge that allows for open opportunities that might not have become available if they did not receive a higher education (Binh, 2016).

2.2 The Evolution of Higher Education

Teaching methods have significantly changed over the years, the traditional styles in which education was brought using recitating and memorizing methods, while the modern techniques of education includes interactive methods (Haleem et al., 2020). In the past, many educators would require students to review, study, learn, and memorize the acquired academic content and assignments. Then, a written/oral examination would take place. This procedure was defined as an Assignment Study Recitation Test (Meriam, 1910). In this education style, the teacher is the main source of information, and the learners receive knowledge in a passive manner (Sursock, 2015).

The main purpose of the traditional education was to focus on repetition. It was considered task-based approaches to learning - the teachers communicate their knowledge and must enforce specific standards of behavior. This approach to learning sought to transmit to the students the skills, knowledge, realities, and principles of moral and social conduct that the adults considered being essential to ensure the social success of coming generations social success (Dewey, 1938). According to Hooker (1997), *"the nineteenth-century model of teaching at higher level still holds sway and (teaching) has not changed much since. Fundamentally, higher education is still a process of imparting knowledge by means of lectures to those who want to acquire it"* (p.1). Education appeared to be based on a teacher lectures in a classroom while the students sit in their respective places with the books open in front of them so they can listen and follow along (Sursock, 2015).

As years passed, education reforms took place, allowing students to learn from a completely different angle. Employment work and the labor market are characterized competitive, dynamic, risky, complex and interdisciplinary. Thus, it is necessary that higher education allow individuals to organize for their introduction to such an environment and prepare them with the relevant skills, knowledge, ethics and attributes to succeed in it (Haleem et al., 2020). Especially in the 21st century, the labor market became more forceful and dynamic as the world entered the era of booming population, technological explosions, financial crisis, entrepreneurial development, business expansion, globalization, internationalization, privatization, commercialization and corporatization of public sectors (Katz, 2000). Therefore, higher education institutions significantly need to meet the labor market needs, developing potential employees that are able to function in the market effectively (Aminuddin et al., 2014). Modern education began to apply more cognitive and interpersonal skills. Education evolved into becoming more focused on the individual student's wants rather than supposing that all students are have an equal level of understanding (Henard and Roseveare, 2012). The modern method of teaching is relatively more based on activities (Allan and Clarke, 2007).

According to Sursock (2015), modern educations consist of collaboration techniques. It includes the implementation of knowledge dissemination through theory and practice links, variation in teaching styles, recognition of differences in learners; collaborative learning, advances in assessment practices; integration of technology, research and evidence-based; and the involvement of students in planning and delivery (Henard and Roseveare, 2012). The European Commission (2013) indicated that higher education should: *“help the student be confident in handling the subject as it has developed so far, to be courageous in openness to new ideas, curious enough to seek new solutions and opportunities, and insightful enough to work well with others so that the flow of information and effort is maximized”* (p.1). Consequently, modern approaches to learning inspire individuals to collaborate and become more productive through developing their technical, cognitive, and interpersonal skills (Allan and Clarke, 2007).

According to Yakovleva and Yakovlev (2014) in their research about Interactive teaching methods being used within contemporary higher education, they indicated that: *“modern education must focus on the student's independent activity, the organization of self-learning environments as well as experimental and practical training methods, where students have a choice of actions and can use initiative—as well as flexible training programs where students can work in a comfortable rhythm. These interactive methods of training encourage interest in the profession; promote the efficient acquisition of training material; form patterns of conduct; but also provide high motivation, strength, knowledge, team spirit and freedom of expression; and most importantly, contribute to the complex competences of future specialists”* (p.75).

The education system has been around for thousands of years. As the years passed the education approach has seen significant change (Kruger, 2000). Edifications in most higher education entities rely on a mix of traditional and modern learning styles. Nevertheless, the advancement of information technology and communication has altered the face of higher education severely (Aminuddin et al., 2014). Several highly important developments in education have happened since the launch of the Internet. Technology has had a great impact on education, by allowing usage of advanced techniques and tools for research and development. In addition, advanced technology aided the enhancement of the speed and quality of the learning process through the Internet (Katz, 2000).

2.3 The Internet and its Impact on Higher Education

Technology has intensely and completely changed education process and approaches (Kriger, 2020). Technology allowed education resources to be accessible to individuals in a convenient manner. For instance, it cancelled the institution's monopoly on content, and removed the geographic barrier to competition (Aminuddin et al., 2014). When the Internet was introduced, it allowed content and knowledge to be distributed instantly to the mass audiences in different geographic locations (Haleem et al., 2020). Additionally, students can now easily have access to information through diverse sources that include online journals and learning sites, but also blogs, YouTube, social networking sites and search engines. The internet provides students with considerable amounts of information (books, audio, images, videos), and numerous opportunities for formal learning online worldwide through massive open online courses, traditional online degree programs, and more (Kriger, 2020).

Advanced technology has provided higher education with the opportunities for expanding communication and collaboration. With technology materials and lectures are not isolated and limited to a number of students in a classroom (Aminuddin et al., 2014). Academics and or practitioners that are lecturing can distribute what they are discussing with students in other classrooms in other countries who are seeking the same knowledge (Kruger, 2000). Students can collaborate and work together virtually on group projects using technology based tools (Kriger, 2020). In the 21st century, there is no such thing as classroom walls acting as a obstacle since technology created new techniques for learning, sharing, and working in collaboration (Haleem et al., 2020).

Technology has also started to transform the roles of teachers and learners. The access of advanced technologies led educators to become a “guide to learning” and made students take on initiatives for their own self study and learning through technology to gather relevant information. Higher education worldwide is enabling this recent model of education, promotes greater interaction and group work, research, and readings (Kruger, 2000). The existing technology today has enabled this learning approach. With the universal reach of Internet and the devices that are able to connect to it, “*a new age of anytime anywhere education is dawning*” (Purdue university, 2020, p.1).

E-learning is developing as the paradigm of contemporary education (Haleem et al., 2020). Due to the development of advanced technology, the notion of E-learning is widespread, as many universities propose degree and programs using E-learning techniques (Goyal, 2012). E-learning refers to learning without usage of printed instructional and concrete material, but through the direct usage of electronic telecommunication technology to deliver information (McLeod, 2006). Lecturers and students get to use information and communication technologies in the creation and dissemination of education and knowledge (Purdue university, 2020). Therefore, higher education, with the use of technology, enables entities to promote liberating education (Sun et al., 2008). According to Goyal (2012), E-learning provides: “*the students with the ability to fit learning with their individual lifestyles, successfully allowing even the busiest person to further a career and gain new qualifications*” (p.240).

Still, many higher education institutions still provide edifications through a mix of traditional and modern learning styles. Many higher education entities required students’ physical attendance in class to learn alongside the online materials and readings (Aminuddin et al., 2014). However, during the 2020 global pandemic the tradition approach of education had to come to a stop. Covid-19 have disturbed the operations of higher education globally. Since the spread of the virus, many higher education systems had to change the learning approaches. Therefore, traditional learning approach has become dysfunctional (Katz, 2000). Higher education institutions shifted to online learning within short time to promote social distancing (Quacquarelli Symonds, 2020).

2.4 The Covid-19 Impact on Higher Education

When the global pandemic hit the countries, governments enforced travel restrictions, border closure, physical distancing, isolation, and quarantining (Killan, 2020). These changes affected both the education system. Accordingly, during the pandemic education had to take place online. Students' interest levels in joining online classes varied. Certain students enjoyed the online attendance of classes, while some, were affected by demotivation and negative attitudes due to the closure of the educational institutions (Quacquarelli Symonds, 2020). The pandemic caused “*emergency eLearning*” procedures, generating a speedy transition from face-to-face classes to online learning systems (Rashid, 2020, p.2).

The pandemic has exposed the weaknesses and deficiencies of today’s education systems. The educational establishments are confronting challenges to adjust virtual learning and choosing the right methods and technology for teaching and appealing to their students. Digital literacy developments need to be promoted in higher education. The sudden campus closing down and switching from traditional learning approaches to remote learning instructions opened the eyes for higher education to create stronger relationships between higher education, online education businesses, and providers of technology during the post-pandemic phase (Quacquarelli Symonds, 2020). According to Rashid (2020), higher education will need to have: “*educators trained and equipped with digital technology for a smooth teaching-learning process. The government will have to step up and commit to sustained programs for professional development to boost educators teaching capabilities*” (p.2). This is significant to be implemented because scholars and practitioners have declared that digitalization of educational services and messages will become a standard after the pandemic (Murphy, 2020).

Relying on eLearning approaches during the pandemic caused many higher education institutions to consider implementing more online components and approaches in the teaching methods (Rashid, 2020). Many higher educations, due to the pandemic, are rethinking education approaches. The pandemic has challenged higher education institutes in delivering quality education, which is reflected on the methods of delivering educations, the way it is accessible, the significance of lifelong education, and the educator’s observations on the different types of learners (Haleem et al., 2020). During this era, many higher educations are seeking to develop student-learning outcomes, by revising the proposed curricula as well as their pedagogy, to reflect more the digitalization culture. Current researches illustrate the importance of digitalization in higher education. Digitization is transforming the learning experience, first by usages of new technologies as well as production and dissemination of technologies, and second, by participating to the creation of a knowledge society (Murphy, 2020).

2.5 Predictions for Higher Education's Future

Most specialists and authority figures have declared that a global Covid-19 vaccine would not exist until mid-2021 (WHO, 2020). In the interim, the higher education field is still under transformation and the educational system might not return ever back to normal (Haleem et al., 2020). Nevertheless, the existing technology today has enabled new learning approach. With the universal reach of Internet and the used smart devices, “*a new age of anytime anywhere education is dawning*” (Purdue university, 2020, p.1). According to Kriger (2020), various predictions are made to illustrate the upcoming years during the Covid-19 post period.

Based on research predictions, the future of higher educations is deemed to have strong virtual presences. Universities seek to renovate many of their proposed programs into permanent online programs. Accordingly, innovative infrastructure and systems must be implemented using partnerships with technology providers to guarantee data security and its sustainability. Since education will be virtual, students can choose any entity from around the world to enroll in. Therefore, there will be increase of online competition and consolidation. The market will have likely have a maximum of 50 principal online universities; numerous of them fueled by partnerships with major Fortune 500 corporations. Universities are likely to partnership with with strong brands, such as those powered by Google. Accordingly, once higher education is regarded of as an IT platform, not a simple campus, major technology companies, who retain stronger brands than most educational institutions, can pursue to enter the field and offer higher education programs (Kriger, 2020).

III. Concluding the Literature

This literature paper sought to answer the following research questions: (RQ1) what is the current aim of higher education; (RQ2) how did higher education evolve throughout the years; (RQ3) how did Covid-19 impact higher education; (RQ4) what is to be expected in future higher education. Higher education is meant to embrace a wide variety of elements for the society and its citizens: “*labor market success; public service to society; and the development of students' social skills, analytical thinking skills, understanding, and commitment to civic engagement, to name a few*” (McGuinn, 2015, p.5).

In the current days during the Covid-19 era, online courses and education have become extremely popular. Higher education institutes are offering courses online (Kriger, 2020). Simultaneously, with the growing popularity of online courses, traditional training methods were preferred in education (Katz, 2000). Research showed that traditional methods sought to help provide interactions with other individuals, be better disciplined, follow a regular schedule, etc. (Aminuddin et al., 2014). Traditional education allows teachers act as mentors (evaluate students observed strengths and weaknesses), and guide students in their career possibilities (McGuinn, 2015). As advances in technology appear, E-learning emerges as the revolution of modern education (Haleem et al., 2020), as many institutions have already been offering numerous degree and programs through E-learning mode (Goyal, 2012). During the year 2020, it became a vital tool to educate students. The courses and the curriculum have been transformed virtual, simplified and streamlined to make learning easier on people and to aid them in practicing social distancing (Kriger, 2020).

According to Azar and Nelson (2020), higher education should take this chance to innovate and reconsider their education strategies. Higher education that will perceive Covid-19 as a temporary problem, and seeks to return to traditional methods when it's over is improbable to survive. Future online collaboration and method development is needed to emerge and improve education in the fourth revolution. Rashid (2020) education post pandemic is all about maximizing technology-related efficiency gains.

Killan (2020) clarified that higher education should seek to comprehend innovation in the educational field and develop strategies to better interact with the latest digital trends. “*The combination of critical education principles with a digital participation culture implies the growth of curricular strategies that allow learners to transform their online participation into meaningful acts of learning*” (Ilich, 1971, p. 87). Furthermore, novel infrastructure and developed systems must be implemented by partnerships with dependable providers to ensure its quality as well as sustainability of methods (Quacquarelli Symonds, 2020).

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Dr. Hanan Gouda. "Evolution of Higher Education and the effect of Covid-19 Pandemic." *IOSR Journal of Research & Method in Education (IOSR-JRME)*, 10(6), (2020): pp. 44-49.