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Review Article

Tracing the Evolution of Distance Education and its Impact on Graduate Health Administration Programs

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Abstract

Technology has become an integral part of the American higher education system [1]. For universities to offer online courses and entire programs via the Internet is now part of the fabric of college and university life, in the United States and other developed economies [2]. Abramenka (2015) [3] noted that students are increasingly being offered online education experiences, whether through hybrid or blended/learning environments or greater use of technology, even in the traditional classroom environment. According to Allen and Seaman (2014) [4], programs which have 30% to 79% of course content delivered online (syllabus/class assignments) with class meetings all conducted face-to-face are considered hybrid/blended.

Burns (2013) [5] stated that the trend of students opting to take online courses over traditional face-to-face classes has led to an increase in the literature related to online learning. Most of the current research on online learning focuses on student learning, student satisfaction, students' preferences for online courses, and improving engagement or social situations online [5]. Albert (2014) [6] explained that the proliferation of online education has transformed higher education in the last two decades. The amount of flexibility provided by online education options has rendered distance learning as a viable method for students, especially adult students, of obtaining further education [6]. This shift in the delivery of graduate education has led to the need for extensive research into student needs and desires [7].

History of Distance Education

To understand some of the problems that students experienced or faced with online education early in the introduction of this type of learning system, it is important to trace the history of distance education and its evolution to online learning. Distance education is defined as a method of teaching in which the student and teacher are physically separated [8]. Distance education can utilize a combination of technologies, including correspondence, audio, video, computer, and the Internet [9].

Today's version of distance education is online education, which uses computers and the Internet as the delivery mechanism with at least 80% of the course content delivered online [4]. Kentnor (2015) [8] observed that online education is no longer a trend but rather a mainstream phenomenon. According to Allen and Seaman (2016) [4] in the fall of 2012, 69% of chief academic leaders indicated that online learning was critical to their long-term strategy. Of the 20.6 million students enrolled in higher education, 6.7 million were enrolled in an online course (USDOE, 2016) [4].

The roots of the modern-day Internet-based online learning in the United States go back to the paper-based correspondence study in Boston in 1728, when Caleb Phillips advertised a correspondence course in the Boston Gazette newspaper [10]. In the 1800s, access to higher education was very limited because of geographic distance between potential learners and educational institutions until 1892, when Pennsylvania State University introduced a correspondence study program (Banas & Emory, 1998). According to Pappas (2013) [11], the term distance education was first used in the United States in 1892 in a pamphlet by the University of Wisconsin-Madison.

The University of Chicago became the first institution of higher education to broadcast courses over the radio in 1922 [12]. Three decades later, in 1953, the University of Houston offered the first televised college classes. The transition from the "old" mode of education to the modern version of online learning took

approximately four more decades and was fueled by the U.S. Department of Defense's Arpanet in 1969 and later the Internet [12]. Published reports show that the University of Phoenix was established in 1989 to become the first privately owned academic institution to offer degree programs via a synchronous online mode of delivery [8].

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Kentnor (2015) [8] explained that correspondence education is a form of distance education, given that the teacher and students are physically separated. Lessons and assignments would be sent through the postal service to the student, and the student would complete and resend the assignments to the instructor for grading. Records also show that summer institutes were first formed in the late 1800s, in which readings and assignments were sent through postal mail for individuals to complete "at home," with the expectation for assignments to be discussed during the summer institute [8]. Isaac Pitman, recognized as the pioneer of distance education, began teaching shorthand by correspondence in 1840 in Bath, England [13]. Pittman mailed postcards to students and instructed them to transcribe passages from the Bible into shorthand and to return them, by post, for correction [13].

The Chautauqua Movement of the 1870s is responsible for the onset and acceptance of correspondence education for adults [14]. Chautauqua University, formed in 1883, introduced extension and correspondence courses, as well as summer terms, until it closed in 1892 due to lack of resources [14]. That same year, William Harper Rainey used Chautauqua University's model and offered college-level correspondence courses at the University of Chicago (Scott, 1999). The correspondence division at the University of Chicago was successful in terms of enrollment, with 3,000 students in 350 courses with 125 instructors [15]. The need for correspondence education continued to gain strength in the late 1800s and early 1900s as the desire for a college degree grew. Correspondence education rather than attendance at a traditional university grew especially because of increased barriers for many students, such as familial obligations, financial limitations, and geographic constraints [13]. For many reasons, such as educating students for degrees, updating of professional knowledge and skills, or training new soldiers, the goal of correspondence education was to provide a quality education and enable all to expand their intellect and knowledge [8].

Radio

Distance education was further strengthened when in 1894 Guglielmo Marconi invented the spark transmitter and obtained the first patent for a radio device (Buckland & Dye, 1991). Distance educators shortly sought to explore new communication technologies as a means to reach more learners [8]. According to Buckland and Dye (1991), the early 1920s were the beginning of educational broadcasting. Very quickly, colleges and universities went beyond transmitting educational matter and entered the social broadcasting world of sporting events, concerts, dramas, and college lectures (Buckland & Dye, 1991).

Radio was the new communication technology of the 1920s. However, its use in education was more popular in Europe and other countries than in the United States [8]. This use was especially the case in nations where radio was more reliable than the postal service or where literacy rates were lower [15]. Rumble (1986) noted:

"In Latin America, radio broadcasting organizations were among the pioneers of distance education, and this reflected in the structure of many current systems where there is less emphasis on print and individual correspondence tuition, and more on locally organized listening groups (p. 9)".

Kentnor (2015) [8] explained that radio was, and in some countries still is, the ideal instrument for informing and educating the masses. Radio was inexpensive and immediate, its content could be changed quickly, and it could reach a large number of people. Following from the innovations of distance education that developed in the 1900s, the phenomenon continued to grow with the growth of new technologies. "It was not long after radio broadcasting was introduced that the ability to 'see' an instructor on a television screen, from a distance, became a marvel" [8].

Television

The evolution of visual media as a medium for education was conceived before the use of its audio counterpart (radio) in education [8]. The foresight for the use of visual technology in education was proposed long before such capability existed. Surprisingly, once the technology was implemented, it did not gain strength in education, as many had anticipated [13]. The pioneers of educational television and those who recognized the potential of educational television early on were scientists and engineers from the University of Iowa, Iowa State University, Kansas State University, the University of Michigan, and American University (Koenig & Hill, 1967).

In the late 1960s and early 1970s, the use of radio and television in education continued to grow but not in terms of distance education [8]. Educators used the television in the classroom as a tool to demonstrate and explain concepts, and families at home were tuning in to educational broadcasts for example, cable television, Public Broadcasting Service, and National Public Radio [13]. However, the use of television for distance education, in which an instructor and student interacted asynchronously, waned [13].

Part of the explanation for low viewership may be that at the time television courses for distance education were poorly produced [13]. The television courses generally involved the instruc-

tor simply reading notes, which may have been the major reason for viewers' lack of attention [8]. By the mid- to late-1970s, however, this situation changed. The British Broadcasting Company (BBC) set a standard for American television course developers to follow [13]. At the same time, the use of computers as a medium for delivering education was implemented, but educators were not yet willing to embrace the new technology [8].

Evolution of Online Education: Internet

Online education is generally defined as a form of distance education that uses computers and the Internet as the delivery mechanism, with at least 80% of the course content delivered online [4]. The use of computers for education educate arose in the corporate sector during the 1980s as companies used computer-based programs to train new employees (Rudestam & Schoenholtz-Read, 2002). Online educational programs emerged in 1989, when the University of Phoenix began using CompuServe, one of the first consumer online services [8].

Shortly thereafter, in 1991, the World Wide Web was unveiled, and the University of Phoenix became one of the first educational institutions to offer online education programs through the Internet [13]. This initial step toward the online educational marketplace prompted many reputable institutions and not-for-profit colleges and universities to follow suit [16]. The Alfred P. Sloan Foundation, a respectable philanthropic, not-for-profit grant-making institution, developed the Asynchronous Learning Networks (ALN) in 1992 to explore educational alternatives for individuals unable to attend traditional classes in the classroom [8].

According to Kentnor (2015) [8], universities and colleges began experimenting with online courses in the early to mid-1990s. However, the rapid growth of online education in traditional non-profit institutions did not take place until 1998 [17]. In October 1998, New York University (NYU), already operating one of the largest continuing education schools in the country, was the first large nonprofit university to create a for-profit online education subsidiary, NYU Online [8]. Western Governors University, a college founded and supported by 19 state governors, was founded that same fall to make education more accessible (Western Governors University, 2015). The California Virtual University, a consortium of almost 100 universities and colleges in California with nearly 1,600 online courses, opened in November 1998 [17]. Several other institutions opened for-profit subsidiaries at approximately the same time, although many did not survive [8]. Even NYU Online, which was believed to be the only institution able to compete with the growing for-profit University of Phoenix, closed its doors in October 2001.

Possibly surprisingly, that same year the University of Phoenix's enrollment nearly doubled from 16,000 to 29,000 [16]. By 2002, over 1.6 million postsecondary students were enrolled in online courses at the University of Phoenix, and 6 years later, that number had almost tripled [4]. Nevertheless, other than the online programs at the University of Phoenix, "many fledging online educational programs started during this time did not survive. Of these many were online programs begun by traditional brick-and-mortar institutions" [8].

Factors Impacting Graduate Students' Choices to Online Learning

Some research emphasizes the extent to which the absence of the F2F environment in asynchronous online teaching reduces the possibility of in-person interaction between students and instructors (Saghafi, Franz and Crowther, 2014) [18] despite the importance that is still attached to F2F communication in students' learning experience [19-21]. This is a factor that impacts graduate health administration students' choices when making decisions on the delivery modality of their courses. Nonetheless, the same and other research have pointed to the advantages that the online teaching environment offers – e.g. in terms of "shifting the learning environment to a more social, flexible and personal space" and thus promoting a student centered, problem-solving and social constructivist approach to learning [18,22,23]. The latter is, moreover, increasingly becoming a feature said to characterize contemporary learning settings in general.

According to Saghafi, Franz and Crowther (2014) [18], the online learning setting will not, however, replace activities taking place in F2F environments in higher education. Rather, their research shows that both the F2F and web-based learning environments have their respective uses - but also their limitations. Therefore, they conclude that both settings, work together in complementary ways for students, if a holistic model for blended learning is adopted. Especially in professional education, opportunities for practice-related workshop activities are important for students' learning experience. Principally, it is the accessibility and flexibility of workshop spaces 24 hours - virtual or F2F - that is recognized as critical for students. According to Saghafi, Franz and Crowther's comparative study, the F2F synchronous workshop provides a learning space for students supporting hands-on skills training, peer learning and spontaneous feedback, while the virtual asynchronous workshop turns out to be better suited for constructive discussion, archival of design development and review of individual or peer progress. Similar insights are generated from studies done by Westermann (2014) and Gonzàles-Gómez et al. (2016) [22,23], who note that one of the advantages of the dual classroom setting involving online as well as F2F learning is that it supports the development of specific skills. In Westermann's study, students experienced that their critical thinking skills were stimulated because the online setting was used for preparing oral peer discussion in the F2F classroom environment through postings of written peer and teacher response in an online discussion

forum [22].

In Gonzàles-Gómez et al.'s study, students found themselves better equipped for solving general science problems during F2F classroom and laboratory activities when online video lessons and instructions outlining the theoretical and practical aspects of laboratory work can be watched at any point in time prior to or after in-class sessions. The visualizing potentials of the online element in blended learning are investigated in studies by [19,24]. Both studies emphasize the extent to which online technologies can be used for creating a learning environment that through visual support represents an added value in students' learning experience. Graduate students' execution of the different steps in a problem-based learning project is, for instance, shown to be experienced as cognitively enriched through the latter's graphic representation via the use of Web 2.0 tools in an online learning platform [19].

As mentioned earlier, students' experience of the learning community and their own learner identity appears to be significantly affected by the online element of blended learning education. Several studies point to the paradoxes that inhere in "the incorporation of information and communication technologies into the learning and teaching experience" [25]. On the one hand, it is pointed out that online LMSs often used in online and blended education – create new opportunities for interactivity between student and content, between student and teacher and among students themselves [26]. On the other hand, the digital learning environment offered by LMSs is also one in which students' geographical dispersal, asynchronous participation and limited visual contact are taken for granted [25].

Therefore, the sense of belonging to a meaningful learning community is stressed as an important factor in online/blended learning students' learning experience especially because it is difficult to make their social presence perceptible in the online environment [25,27,28]. Moreover, studies have related students' sense of belonging to meaningful online learning communities to their engagement and learning achievement [25,29]. Nevertheless, although seen as a crucial factor, student-student interactions and collaboration activities are not necessarily the sole prerequisite for online/blended learning students to feel part of a learning community. The presence of engaging academic content and a strong teaching presence are considered just as important for creating this feeling [29,25]. Since the establishing of meaningful learning communities is a distinct challenge in online/blended learning education because of the partial or complete lack of F2F interaction between student and teachers and among students, many studies have investigated how and the extent to which digital learning technologies can be used to support students' sense of partaking of a community of learners. Closely related to the question of students' sense of belonging to a meaningful learning community in online and blended learning environments is the question of students' experience of their own learner identity [30].

According to Baxter and Haycock building on Lave and Wenger (1991) [31], the formation of learner identity is bound up with agency and feelings of being in control resulting from feelings of belonging to a learning community. They further claim that the development of "a strong and salient online identity" plays an important role for student retention and motivation in online learning programs. For the same reason, their study investigates how successful online learning forums contribute to social and academic integration as a means of consolidating students' learner identities. Their findings reveal that students' prior experience with social media sites such as Facebook tended to be transferred to the academic online learning forum and thus to impact both negatively and positively on their learner confidence and agency. For instance, the public nature of the online forum made some students feel their postings assume an air of authority and expertise, which, on the other hand, led other students to refrain from posting due to feelings of lacking knowledgeability. Finally, lack of peer response or teacher moderation seemed to be detrimental to students' learner identity because they felt isolated from and peripheral to the academic community of the forum.

In this part of the review, the aspects that have proved most prominent in terms of their importance for education in online and blended learning programs include the following:

1. appropriate teaching and learning spaces online as well as offline;

2. establish engaging and meaningful learning communities as a means of supporting students' social relations and their learning experience and

3. develop a strong and salient sense of learner identity

Course design influences student satisfaction (Lee, 2014) [32] and their perceived learning [33], and many elements can contribute to good results here. An overall contribution might be found in the suggestion that variation in (online) teaching and learning activities are necessary [26,34], but the activities and suggestions for specific course design can be numerous when research is to give an answer. Blended learning design can successfully mix online activities with practice in the field and thus prepare preservice teachers for their future work in the profession. Here, inclusion of digital collaborative tools and work with digital literacy of the pupils are - or should be - parts of everyday practice.

Hunt (2015) focuses on exploiting blended learning for introducing authentic learning in teacher education, and she concludes that through deliberate course design and the use of relevant digital tools, blended learning can offer pre-service teachers a digital platform for collaborative and inquiry-based learning related to practice in the field. Chat sessions supplement the group work and

the teachers are present and active during the students' field work period. In professional education, it is of high importance that the online as well as the on-campus activities relate to the professional life to come, and as profession programs have both content and skills as part of the curriculum, course design should consequently be developed to support knowledge transmission and skills acquisition [35]. Heinerichs and colleagues find that this could be facilitated by the use of digital technology in a flipped classroom or in a blended format of online and offline activities. Also, in a study [36] among midwifery students, a blended learning design was created for F2F meetings, with focus on practice-related activities, roleplays, narratives and reflection, and online sessions with synchronous discussions, "home-grown" learning recourses and active and present teachers. An innovative aspect was found in the double blends of both online-offline activities and of theory-practice activities.

Several studies find that strong educator presence along with quality course content are essential elements in courses that successfully facilitate online student engagement and learning [37,38]. Establishing educator presence in online courses can be achieved in several ways, such as through regular communication with students, consistent feedback and critical discourse modeled by the educator [33]. Online students need to feel connected to the educator, to other students in the course and to the course content [39,40], which can be achieved in a supportive learning environment in which educators strategically combine audio, video, synchronous and asynchronous discussions, practical activities and other online tools to engage students [33]. Southard, Meddaugh and France-Harris (2015) [39] found the use of high-impact videos featuring the educator and/or the course content particularly useful in promoting a strong educator presence and in cultivating students' interest in the topic under study, in particular in pure online courses where there is little or no synchronicity between the student and the educator.

In the study carried out by Southard et al. (2015) [39], introductions to undergraduate history lessons were filmed on the location of historical sites, and props as well as stop motion videos where static objects were brought to life and moved as the educator narrated were successfully used to strengthen students' feelings of connectedness to the educator and the content [39]. Facilitating teaching and learning in an online environment poses a number of challenges to educators, who often struggle with adapting the practices they have found effective in F2F classes to an online environment (Mills, 2015). Fletcher and Bullock (2015) [28] argue that in this respect, teacher educators are particularly challenged because asynchronous online environments may impede the fostering of positive relationships between the educator and her students, a relationship that is considered central to meaningful teaching and learning by most teacher educators. Their results indicate that, ide-

ally, professional teaching programs should not be based on asynchronous teaching only but should be blended with synchronous online class sessions and F2F interaction as well.

A number of researchers find that the educator plays a crucial role in scaffolding students to successfully participate in asynchronous online discussions by providing clear guidelines for how to initiate and take part in online discussions that facilitate learning [41,42]. In a study on how responsibility and generativity were enacted in asynchronous online discussions in a hybrid course, Beth et al. (2015) [41] conclude that educators can successfully scaffold students' online discussions in terms of both quantity (e.g., online discussion were scheduled at regular intervals and students were required to post a minimum number of posts) and quality (e.g., students were instructed to use a conversationally inviting tone, to provide contextual information and to address academic questions and comments to their peers). Others have found that in blended courses involving few F2F classes, synchronous online classroom sessions involving interaction and discussion can contribute positively to students' feelings of connectedness to their educator and fellow peers [36].

To sum up, the factors that have proved most salient in relation to the educator's role in e-learning, blended learning and online learning in the literature reviewed include:

a)   establishing strong educator presence in online settings and

b)   building online learning communities that foster positive relations.

In relation to educator roles and relations, the dimensions that are reported in the literature reviewed to have significant influence on student learning in professional programs offered through blended or online formats include the educator's role in establishing strong educator presence in online settings and in building online learning communities that foster positive relations. As for the students, research indicates that several factors, influence their learning experience in eLearning/ blended/online courses. The factors that are highlighted by the literature reviewed to be of specific importance for professional education students' learning experience and their learner identity include the presence of appropriate teaching and learning spaces online as well as off-line and the presence of engaging and meaningful learning communities that support the students' social relations.

Why Early Online Institutions Failed

Numerous factors influenced the demise of these online institutions. Perhaps the most significant was The lack of understanding of online pedagogy and online learning styles, as well as the lack of faculty buy-in for online education [43]. Online education presents instructors with a different medium for teaching and learning than traditional face-to-face education and therefore

requires a different pedagogy [44]. Faculty were, and continue to be, an integral part of any university's success, and many faculty members at the traditional universities did not embrace online education because of concerns about the quality of education provided through this medium [45]. As many traditional universities entered the online marketplace, they did so without the full support of the faculty, and this lack of support ultimately impacted the sustainability of their online programs [16].

Another factor that led to the closure of many of the institutions providing online education was the failure of educators to recognize that differences exist between teaching and learning in the online and face-to-face environments [17]. Many professors merely provided the online students with lecture notes from the traditional classrooms, with the assumption that these notes would suffice [8]. However, research has supported the concept that a well-designed, documented, and structured online course that facilitates active engagement with the students is essential for success [46].

Carlson and Carnevale (2001) [16] contend that online pedagogy was not the only reason for the initial failure. Lack of institutional support for the faculty and lack of leadership, with little understanding of online education, were also to blame. According to Shelton and Saltsman (2005) [45], the most common complaints from faculty regarding online education were (a) lack of understanding of this method of teaching; (b) lack of institutional support; and (c) fear that the quality of education in the online environment would suffer.

Kentnor (2015) [8] pointed out that as nonprofit institutions sought to increase profits by entering into the online marketplace through the creation of subsidiaries and partnerships, the institutions ignored the fundamental principles of the quality of education, institutional governance, and project planning. Bok (2003) [47] argued that new technologies harness great power with the potential to improve teaching and learning, yet if universities continue to seek profits and commercialize education, the credibility and integrity of the institution of higher education will be threatened. He further contends that universities must invest in researching new technologies and use them to improve the quality of education provided [47].

Distance education is based on the premise that education was possible without the face-to-face interaction between the student and teacher [8]. In the 1700s, this idea may have been difficult to conceive. Today, with the advancements in communications technology and the connectivity of computers and the Internet, distance education is commonplace [8]. "Distance education continues to play an important role in education in the United States, as it provides greater access and, in some respects, an affordable option" [8].

It is possible, as Kolowich (2014) [48] noted, that in 10 or 20 years, when the great universities are judged, the standards will not consider only their research accomplishments but the reach of their teaching as well. Distance education, since its inception in the 1700s, has been concerned with making knowledge accessible to more than just a privileged few [8]. As financial aid and scholarships make education possible for those who are unable to afford the cost of on-campus education, distance education makes education attainable for those who are unable to attend traditional classes at all [48]. "From the Postal Service, to spark transmitters, to television broadcasting, to the Internet and the Web, advances in communication technology have led to the changing landscape of education and the proliferation of distance education" [8]. Distance education has become a widely accepted and pervasive mode of education.

A recent study (Roopnarinesingh, 2019) [7] explored graduate health administration students' choices to attend face-to-face programs at predominantly online universities. The study explored the lived experiences of the participants in face-to-face and online educational formats. Overall, the experiences were different in both formats, therefore influencing the participants' choices to attend face-to-face programs at predominantly online universities. It was determined further research is needed in analyzing the impact of teaching styles and methodology as they relate to graduate health administration student choices and student self-efficacy with regards to academic delivery of courses. For graduate student success in health administration programs, it is of the upmost importance to understand and address the implicit factors affecting their decisions. As more institutions of higher education invest heavily in online instructional methodologies, it becomes imperative to understand and address the critical factors needed to convert face-to-face graduate health administration students to online modalities. Identifying the factors and addressing them may allow educators to impact the choices of graduate health administration students while addressing their self-efficacy issues. Another area of interest for future research may be a retrospective study comparing and contrasting the success of students in other given healthcare fields of study, based on the delivery methodology used during their courses of study, face-to-face versus online. This may be most valuable by focusing the study on a specific area of healthcare administration [7]. As the world continues its exponential growth in technology, educators must continuously improve teaching/delivery methodologies to stay attuned to societal wants and needs [7].

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