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THE EVOLUTION OF LIFELONG LEARNING: FROM TRADITIONAL CLASSROOMS TO ANYWHERE, ANYTIME EDUCATION

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Abstract

The paper emphasizes how these platforms can support inclusivity, democratize access to education, and foster lifelong learning. By examining the shift from inflexible classroom settings to adaptable learning spaces that are available at any time and location, the piece offers insightful information about how educational paradigms are changing in the digital age. Thus, this paper aims to analyze the evolution of lifelong learning from traditional classrooms to anywhere, anytime education. This paper used the sources peer-reviewed articles, historical documents, policy documents, and empirical studies to investigate the transformation of lifelong learning using traditional content analysis. Data is gathered and analyzed using a systematic literature review protocol that includes thorough searches and stringent screening to find and classify important themes and patterns in lifelong learning practices. The find found that the evolution of lifelong learning from traditional classrooms to anywhere, anytime education consists of (1) traditional education systems, (2) the emergence of distance learning, (3) the rise of online learning, (4) anywhere, anytime education, (5) challenges and opportunities, (6) future directions. The results show that the evolution of lifelong learning includes a move away from traditional classroom settings and toward online and distance learning, which led to the current movement toward any time, anywhere learning. This progression identifies important opportunities and challenges as well as future directions for the field.

Keywords: Lifelong Learning, Traditional Classrooms, Anywhere-Anytime Education

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Introduction

Over time, education has changed significantly to accommodate societal shifts, technological breakthroughs, and pedagogical innovations (Gardner, 2012). Education has changed continuously throughout history, from its earliest forms of informal learning in hunter-gatherer societies to the founding of formalized educational institutions in ancient civilizations like the Greek academies and Chinese Confucian schools (Hanushek & Woessmann, 2020). Changes in curriculum development, teaching approaches, educational philosophies, and the incorporation of new technologies into learning environments have all been hallmarks of this evolution. Comprehending this historical trajectory facilitates discussions regarding education's future direction and offers insights into the field's current state.

Lifelong learning is becoming more and more important for both professional and personal development in the quickly changing world of today (Field, 2016). Knowledge-based economies have emerged as a result of technological breakthroughs, globalization, and economic changes. In these economies, success depends on a constant state of skill development and adaptation (European Commission, 2018). According to Boshier (2019), lifelong learning cultivates resilience, adaptability, and innovation, enabling people to effectively navigate intricate challenges and take advantage of novel opportunities throughout their lives. Furthermore, lifelong learning advances society by developing a trained labor force, strengthening social bonds, and tackling new challenges like digital inequality and climate change.

Education has undergone a paradigm shift with the shift from traditional classrooms to flexible online learning platforms, fueled by changes in learner preferences and technological advancements (Means et al., 2013). To improve accessibility, flexibility, and efficacy, this shift recognizes that traditional educational models are inadequate for fulfilling the varied needs of students and looks to digital tools (Allen & Seaman, 2017). According to Dabbagh & Kitsantas (2012), the thesis suggests that online learning platforms provide chances for individualized, self-paced learning experiences that cut over distances and suit a range of learning preferences. Education can become more inclusive, flexible, and responsive to the changing needs of the digital age by embracing this shift.

However, there are some noteworthy research gaps, one of which is the scant examination of the socioeconomic ramifications and disparities connected to the shift to flexible and online learning modalities. Although the essay covers in detail the pedagogical changes and technology breakthroughs that have fueled the development of lifelong learning, it pays relatively little attention to the differences in socioeconomic groups' access to digital resources and educational opportunities. This research gap is critical because, especially for marginalized communities, it can have a substantial impact on the efficaciousness and equitable implementation of anywhere, anytime education initiatives (Smith, 2023).

Therefore this paper is a review article that provides a thorough examination of how education has changed in response to societal and technological changes. This article must be presented to give readers a better understanding of the evolution of education throughout history, the increasing significance of lifelong learning, and the shift to flexible online learning environments. Through an analysis of this development, the paper provides insightful viewpoints on the difficulties, prospects, and future paths of education in the digital era. It also emphasizes how educational stakeholders must innovate and adapt to meet the various learning needs of people living in a world that is constantly changing. All things considered, the paper advances scholarly conversation by illuminating the fluid character of education and its function in promoting individual, occupational, and societal growth.

Additionally, this paper will make a substantial contribution to the field of education by giving a thorough summary of the revolutionary path toward accessible and flexible learning modalities. The article provides an overview of the major themes and trends influencing the

development of lifelong learning, from conventional classroom settings to modern online platforms, by combining a wide range of academic literature and empirical studies. In addition to improving our understanding of contemporary educational practices, its examination of technological developments, pedagogical changes, and the growing significance of accessibility provides insightful information for educators, decision-makers, and other stakeholders navigating the complexities of contemporary learning environments. Additionally, the article's methodical approach to gathering and analyzing data guarantees a thorough investigation of the topic, enhancing its legitimacy and applicability in the context of education.

Methodology

This paper uses traditional content analysis and a methodologically sound approach, the paper investigates how lifelong learning is changing.

Data Sources

A wide range of peer-reviewed journal articles, historical documents, policy documents, and recent empirical studies relevant to educational technology and lifelong learning make up the data sources. A systematic literature review protocol, which makes it easier to find, assess, and synthesize pertinent literature, is the main tool used to collect data.

Data Collecting

The process of gathering data entails a thorough search using targeted keywords associated with accessibility, educational technology, and lifelong learning. This is followed by a stringent quality and relevance screening.

Data Analysis

The article uses traditional content analysis, a qualitative technique that entails classifying and coding textual data to find important themes and trends. By using this technique, the researchers can condense complicated data into logical themes that shed light on the development and current trends in lifelong learning practices.

Results

Traditional Education Systems

1) Overview of traditional classroom-based education throughout history: The origins of traditional classroom education can be traced back hundreds of years, to the time when formalized educational systems first appeared in ancient Greece, Rome, and China (Rury, 2013). These early educational establishments prioritized teaching knowledge and cultural values through memory of texts, debates, and lectures. Standardized tests, hierarchical organizational structures, and structured curricula are examples of how traditional education systems have changed over time. Many noteworthy changes illustrate how traditional education systems have evolved. For example, standardized tests have become an integral part of educational assessment, either taking the place of or complementing more qualitative or customized assessment techniques. Although these assessments are meant to give a consistent gauge of students' performance, they have also come under fire for having the ability to restrict the curriculum and maintain inequality. The traditional bureaucratic design of educational institutions, which is distinguished by distinct lines of authority and decision-making, is referred to as a hierarchical organizational structure. More adaptable and decentralized organizational structures have gained popularity over time, empowering both teachers and students. Furthermore, the prescribed content and order of learning activities in educational programs are referred to as structured curricula. The structure can be clear and consistent, but it can also stifle creativity and the ability to adjust to the needs of each student. When taken as a whole, these examples show how educational theories and practices have changed over time, reflecting broader social changes (Kliebard, 2004). The Industrial Revolution also had an

impact on the evolution of traditional education since it placed a strong emphasis on conformity, obedience, and discipline to prepare people for work in bureaucracies and factories (Cuban, 1986). Traditional classroom-based education has remained a dominant model in many societies, influencing people's intellectual, social, and moral development despite shifts in educational philosophies and methodologies (Smith, 2020).

2) Advantages and disadvantages of conventional learning models: Conventional learning models offer several advantages, such as a controlled and predictable learning environment, the ability to facilitate in-person interactions between students and teachers, and the encouragement of peer cooperation and socialization (Creemers & Kyriakides, 2008). Furthermore, established frameworks for curriculum development, instructional delivery, and assessment procedures are frequently found in traditional education systems, which helps guarantee consistency and accountability in the classroom (Anderson & Krathwohl, 2001). Traditional learning models do, however, have certain drawbacks, including a lack of adaptability to different learning preferences and styles, an excessive focus on rote memorization and standardized testing, and difficulties meeting the needs of each student (Lynch, 2018). Furthermore, disparities in educational outcomes may result from traditional classroom-based education's perpetuation of inequalities based on socioeconomic status, gender, race, and cultural background (Sirin, 2005).

3) The role of educational institutions in creating the norms, values, and practices that guide instruction and learning: According to Tyack & Tobin (1994), educational institutions are crucial in creating traditional education systems. These establishments, which comprise colleges, universities, and schools, function as formal frameworks for imparting knowledge of culture and education to future generations (Gutek, 2016). Curriculum development and implementation, teacher hiring and training, assessment administration, and policy and regulation creation are all done by educational institutions (Sadovnik et al., 2018). In addition, educational institutions frequently mirror larger societal ideologies, values, and power structures, which affect educational outcomes, equity, and access (Bowles & Gintis, 1976). Educational institutions continue to be powerful forces in determining educational practices and policies within conventional education systems, despite complaints of institutional rigidity and resistance to change.

Emergence of Distance Learning

1) Introduction of Remote Learning as a Substitute for conventional classroom Instruction: With its flexibility and accessibility, distance learning has become a popular alternative to traditional classroom-based education for students unable to attend traditional brick-and-mortar institutions (Simonson et al., 2019). The idea of distance learning originated in the late 1800s when correspondence courses were introduced, enabling students to turn in assignments from a distance and receive course materials through the mail (Keegan, 1996). People were able to continue their education while juggling work, family obligations, or geographic limitations thanks to distance learning. Distance learning offers learners more flexibility and convenience in accessing educational resources and support because it has expanded over time to include a wide range of delivery methods, such as online courses, video conferencing, and interactive multimedia platforms. For Example, Online courses that run asynchronously are one kind of distance learning. As opposed to attending in-person classes, asynchronous learning allows students to access readings, lectures, and assignments whenever it is most convenient for them. Students with varying schedule constraints and time zones can be accommodated by this format. Discussion boards, email, and messaging apps are commonly used for communication with peers and instructors. Higher education and professional development programs frequently employ asynchronous online courses because they give students the freedom to interact with the material at their own pace.

2) Development of technologies for distance learning: Significant developments in communication, information technology, and multimedia tools have characterized the evolution of distance learning technologies (Moore & Kearsley, 2012). Distance learning has made use of media like radio, television, and video recordings in addition to conventional correspondence courses to provide educational content to learners who are located far away (Bates, 2015). For instance, students could take part in live or recorded lectures that were shown on television channels or given on video cassettes thanks to televised courses, which were first introduced in the middle of the 20th century. Since the internet and other digital technologies have become widely available, distance learning has moved to online platforms that provide social networking tools, virtual classrooms, and interactive multimedia resources to help students and instructors communicate and work together (Means et al., 2013). With the help of these technological advancements, distance learning has become more accessible and expansive, allowing students to participate in education from any location with an internet connection.

3) The impact of distance learning on accessibility and inclusivity in education: By removing barriers related to time, location, and physical presence, distance learning has significantly improved accessibility and inclusivity in education (Allen & Seaman, 2017). Distance learning has improved accessibility to education for people with disabilities, health conditions, or remote locations by removing the need for students to travel to traditional classrooms (Roblyer et al., 2017). Additionally, adult learners, working professionals, and underprivileged communities now have more democratic access to education thanks to distance learning (Taylor, 2001). Regardless of socioeconomic status or educational background, it has given opportunities for career advancement, skill development, and lifelong learning. Furthermore, by providing flexible delivery formats, adaptive technologies, and individualized learning experiences, distance learning has promoted inclusivity by meeting a range of learning needs, preferences, and styles (Lau & Sim, 2016).

Rise of Online Learning

1) The emergence of the Internet and its effects on education: According to Bates (2015), the internet completely changed the way that education was conducted by giving students access to a never-before-seen amount of knowledge, materials, and communication tools. The internet made it possible for people to collaborate and connect globally, allowing students to engage with peers and teachers virtually, access educational resources, and take part in online forums (Means et al., 2013). The internet had a revolutionary effect on education, dismantling conventional barriers to learning and granting anyone access to information (Allen & Seaman, 2017). Online learning also became more popular as a result of the internet's role in the development of digital technologies and online platforms that transformed pedagogy and the way that education was delivered. However, one kind of distance learning is online learning. Any type of education in which teachers and students are physically separated and rely on technology to support learning is referred to as distance learning. Online learning is the term used to describe educational experiences that take place over the internet, with the main digital platforms used for instruction and communication being learning management systems, video conferencing tools, and email between students and instructors. It's crucial to remember that not all types of distance learning are conducted entirely online, even though online learning is a subset of it. Other forms of remote learning include teleconferencing courses, in which lessons are given via live video or audio conference, and correspondence courses, in which study materials are sent back and forth via mail. Online learning is essentially a digital version of distance learning, although the latter offers a wider variety of teaching strategies and delivery options.

2) Creation of Massive Open Online Courses (MOOCs) and online learning platforms: A major turning point in the development of online learning was the creation of Massive Open Online

Courses (MOOCs) and online learning platforms (Liyanagunawardena et al., 2013). Global audiences can now access educational content, interactive modules, and assessment tools through online learning platforms like Coursera, edX, and Udemy (Daniel, 2012). Specifically, MOOCs provide free or inexpensive access to top-notch courses taught by distinguished professors from prominent universities and institutions (Pappano, 2012). Millions of students around the world were drawn to MOOCs because of their scalability and accessibility, which broke down conventional barriers to education and encouraged lifelong learning (Kizilcec et al., 2013). Furthermore, MOOCs and online learning platforms offer chances to test out cutting-edge teaching strategies, individualized instruction, and data-driven analytics to improve student performance and engagement (Jordan, 2014).

3) The cost-effectiveness, scalability, and flexibility benefits of online learning: Flexibility, scalability, and cost-effectiveness are just a few benefits that online learning has over traditional classroom instruction (Allen & Seaman, 2017). According to Means et al. (2013), online courses offer learners the advantage of scheduling flexibility, enabling them to access course materials and engage in discussions at their own pace and convenience. Additionally, a lot of students can be accommodated at once on online learning platforms, which opens up education to a wide range of audiences without regard to geographical limitations (Wiley & Hilton, 2009). Furthermore, because it does not require the costs of transportation, housing, or physical infrastructure, online learning is frequently more affordable than traditional classroom-based education (Hollands & Tirthali, 2014). Additionally, by optimizing resources, streamlining administrative procedures, and reaching a larger audience, online learning helps educational institutions reach a global student body at a lower cost.

In conclusion, recognizing the internet's revolutionary impact on education is crucial to resisting it as a tool for distant learning or an era. First of all, learners can now access a wide range of educational resources from anywhere in the world thanks to the internet, which has completely changed information access. Second, it has made asynchronous communication easier, enabling interactions between teachers and students despite time zones and schedule differences. Thirdly, online learning environments provide a variety of modalities for instruction, such as virtual simulations and interactive multimedia content, which improve comprehension and engagement. Lastly, regardless of socioeconomic background, the Internet has democratized education by offering chances for lifelong learning and skill development. To resist the internet as a tool for distant learning or as an era, one must acknowledge its enormous influence on education and welcome its capacity to completely transform the way that learning occurs.

Anywhere, Anytime Education

1) The emphasis on flexibility and accessibility in education today: Thanks to the implementation of any-time, anywhere learning strategies, the emphasis on flexibility and accessibility in education is growing (Means et al., 2013). Students now have more freedom to access educational materials and engage in learning activities at their own pace and convenience thanks to the widespread use of digital technologies and online learning platforms (Allen & Seaman, 2017). According to Simonson et al. (2019), educational institutions are providing a range of flexible learning options, such as competency-based programs that enable students to advance based on mastery of learning objectives, fully online courses, and hybrid models combining online and face-to-face instruction. A shift towards learner-centered approaches, which give priority to individual needs, preferences, and learning styles, is reflected in the emphasis on flexibility and accessibility. This approach fosters a more personalized and inclusive educational experience.

2) Mobile technologies' role in enabling anytime, anywhere learning: By allowing students to access educational materials and content on smartphones, tablets, and other portable devices, mobile technologies are essential in enabling anytime, anywhere learning (Crompton, 2013).

Engaging and immersive learning experiences are offered by mobile learning apps, which can be accessed anytime, anywhere with an internet connection. Examples of these apps include educational games, interactive simulations, and multimedia modules (Sharples et al., 2014a). Additionally, mobile technologies improve the flexibility and convenience of learning on the go with features like offline access, location-based services, and push notifications (Traxler & Kukulska-Hulme, 2016). In addition, mobile devices facilitate peer interaction, social networking, and collaborative learning, allowing students to communicate with teachers, experts, and classmates across geographic boundaries (Kukulska-Hulme & Traxler, 2013). All things considered, mobile technologies enable students to take charge of their education and participate in ongoing learning activities outside of conventional classroom settings.

3) Instances of cutting-edge learning environments and methods (such as Coursera and Khan Academy): The trend towards any-time, anywhere education is exemplified by innovative educational platforms and approaches like Khan Academy and Coursera (Khan Academy, n.d.; Coursera, n.d.). From kindergarten to college-level courses, Khan Academy provides an extensive library of free online resources, such as interactive exercises, assessments, and instructional videos (Khan Academy, n.d.). Through its website and mobile app, learners can access Khan Academy's content at any time and from any location, enabling self-paced learning and individualized instruction (Khan Academy, n.d.). In a similar vein, Coursera gives users access to online classes, degrees, and specializations provided by top colleges and universities across the globe (Coursera, n.d.). Regardless of their location or schedule, students can enroll in courses, take part in interactive lectures, finish assignments, and earn certificates or degrees entirely online (Coursera, n.d.). These cutting-edge platforms use technology to enable people all over the world to pursue lifelong learning opportunities, democratize access to education, and empower learners to pursue their educational objectives.

Challenges and Opportunities

1) Addressing the digital divide and guaranteeing fair access to education: According to Warschauer & Matuchniak (2010), one of the main issues facing society in the digital age is addressing the digital divide and guaranteeing fair access to education for all students. The term "digital divide" describes the disparity that exists between people who have access to digital technologies and those who do not, frequently as a result of infrastructure constraints, geographic location, or socioeconomic status (Van Dijk, 2005). Regarding education, the digital divide has the potential to worsen disparities in learning chances and results by impeding access to digital learning tools, online courses, and educational resources (Warschauer, 2003). Policymakers, educators, and other stakeholders need to collaborate to address this issue by bridging the digital divide through programs like digital literacy training courses, internet access subsidies, and device distribution to marginalized communities (United Nations Educational, Scientific and Cultural Organization, 2017). We can advance social justice, give marginalized groups more power, and help students everywhere reach their full potential by guaranteeing fair access to education.

2) Importance of maintaining quality standards in online education: Upholding quality standards is crucial to ensuring successful teaching and learning experiences as the popularity of online education continues to rise (Quality Matters, n.d.). Aspects such as course design, instructional delivery, assessment procedures, and student support services are all included in the quality standards of online education (Simonson et al., 2019). Strict quality control procedures, including certification, accreditation, and peer review, support academic honesty, reliability, and responsibility in distance learning (Quality Matters, n.d.). Furthermore, educators and institutions can create and deliver high-quality online courses by following established best practices and quality frameworks, like the Quality Matters Rubric (Quality Matters, n.d.). Online learning can improve student engagement, satisfaction, and achievement

by upholding quality standards. This can lead to meaningful learning experiences and beneficial educational outcomes for students of all backgrounds and skill levels.

3) Possibilities for individualized instruction and lifetime skill development: According to Laurillard (2012), online learning presents special chances for individualized instruction and lifetime skill development. Teachers can customize instruction to meet the needs, preferences, and performance levels of each learner with the use of adaptive learning technologies, data analytics, and learning analytics (Siemens & Long, 2011). Learners are empowered to take charge of their educational journey, establish personalized goals, and track their progress over time with the help of interactive modules, self-assessment tools, and personalized learning pathways (Dede, 2010). Additionally, through online certification programs, digital badges, and micro-credentials, online education offers chances for ongoing professional development and skill enhancement (Daniel, 2012). To progress their careers, meet lifelong learning objectives, and adjust to the ever-changing demands of the labor market, learners can obtain new skills, competencies, and qualifications (Ehlers, 2011). Online education can equip people with the lifelong skills they need to develop their abilities and succeed in the knowledge economy through personalized learning approaches and opportunities for professional growth.

Future Directions

1) Predictions for the future of lifelong learning: Personalized learning pathways, flexible learning modalities, and ongoing skill development are predicted to be in high demand in the future of lifelong learning (Dede, 2010). As technology, globalization, and automation change the nature of work and learning, lifelong learning is expected to become essential to people's personal and professional development (Dewey, 1916). To adjust to shifting societal demands and new challenges, lifelong learners are expected to participate in self-directed learning, group problem-solving, and experiential learning activities (Siemens, 2005). It is also expected that lifelong learning will cross traditional educational boundaries, incorporating a variety of informal learning settings, lifelong learning ecosystems, and learning contexts that support people's learning journeys throughout their lives (Keegan, 1996). People can navigate uncertainty, take advantage of opportunities, and prosper in the future knowledge economy by adopting lifelong learning as a mindset and way of life (Ehlers, 2011).

2) Potential impact of emerging technologies (e.g., AI, virtual reality) on education: By improving personalized learning experiences, increasing access to educational resources, and supporting creative pedagogies, emerging technologies like artificial intelligence (AI), virtual reality (VR), and augmented reality (AR) have the potential to revolutionize education (Johnson et al., 2016). AI-driven adaptive learning platforms can assess student data, deliver feedback in real time, and tailor lessons to each student's specific learning requirements (Siemens & Long, 2011). Through immersive and interactive learning environments that mimic real-world situations, virtual reality (VR) and augmented reality (AR) technologies allow students to investigate difficult ideas, carry out virtual experiments, and participate in experiential learning (Dede, 2009). Furthermore, despite geographical and cultural barriers, emerging technologies can support collaboration, communication, and knowledge sharing between educators and students (Means et al., 2013). These technologies have the potential to transform education, give students more power, and open up new avenues for teaching and learning in the digital age as they develop further (Sharpley et al., 2014b).

3) Importance of adaptability and continuous learning in the rapidly evolving landscape: Adaptability and ongoing learning are critical competencies in the quickly changing 21st-century environment for managing change, grasping opportunities, and maintaining competitiveness in the international marketplace (World Economic Forum, 2020). Industries and job roles are changing as a result of technological advancements, economic upheavals, and societal changes. As a result, people must adopt a lifelong learning philosophy, update their competencies, and pick up new skills. (Kao, 2019). Furthermore, the COVID-19 pandemic has

accelerated trends toward remote work and digital transformation, emphasizing the value of digital literacy, resilience, and agility in overcoming unforeseen obstacles (Organisation for Economic Co-operation and Development, 2020). To survive in a world that is changing quickly, people need to embrace uncertainty, have a growth mindset, and actively look for learning opportunities as the rate of change quickens (Dweck, 2006). People can future-proof their careers, improve their employability, and contribute to societal advancement and economic resilience by making adaptation and continuous learning a priority (Gallagher, 2021).

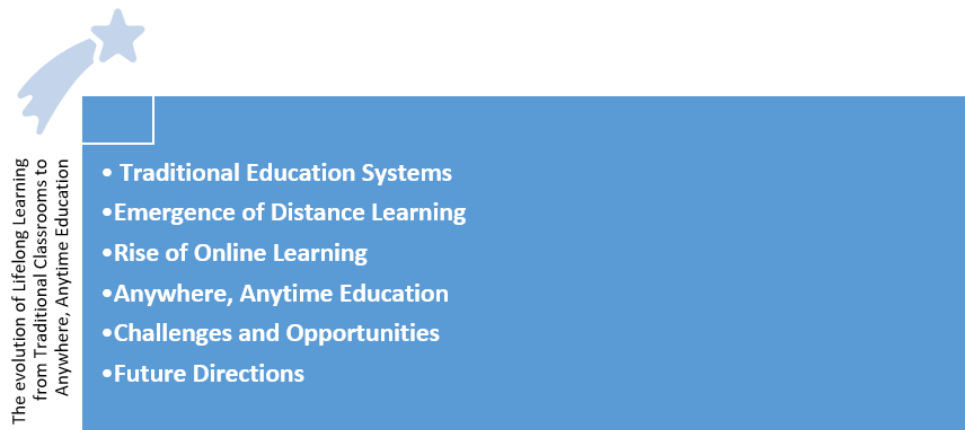


Figure 1 The evolution of Lifelong Learning from Traditional Classrooms to Anywhere, Anytime Education

Conclusion

This paper's conclusion summarizes the major ideas about the development of lifelong learning, highlighting the transitions from conventional classroom settings to adaptable, online learning environments. It provides an overview of the development of lifelong learning, the historical trajectory of education, and the revolutionary effects of digital technologies on learning environments.

The conclusion also issues a call to action for adopting cutting-edge teaching strategies to satisfy the various needs of students in the digital age. It highlights how crucial flexibility, imagination, and teamwork are to creating inclusive, reachable, and successful learning environments.

In closing, the conclusion highlights the transformative power of education in the digital age by emphasizing its role in promoting social progress, economic development, and individual empowerment. It inspires those involved in education to keep pushing the boundaries, utilizing technology, and advocating for lifelong learning as a means of fostering advancement on the individual, professional, and societal levels.

Practice Recommendation

- 1) **Adopt Technology:** As a spur for innovation in education, the review article suggests adopting technology. It recommends combining emerging technologies, online resources, and digital tools to improve learning opportunities and enable anytime, anywhere education.
- 2) **Encourage Lifelong Learning:** As the cornerstone of education in the modern era, encouraging lifelong learning is another suggestion. To survive in a world that is changing quickly, the essay underlines how crucial it is to promote a culture of ongoing learning, skill development, and adaptability.
- 3) **Promote Inclusivity:** By addressing the digital divide and guaranteeing that everyone has fair access to learning opportunities, the review article emphasizes the significance of promoting inclusivity in education. It suggests putting laws and programs into place to close gaps in digital literacy, affordability, and accessibility.

Further Research Recommendation

In the future, there should be research about; 1) Exploring long-term effects: Assessing the impact of anywhere, anytime education on learners' academic and socio-economic outcomes. 2) Addressing equity in anywhere, anytime education: Strategies for promoting access and inclusivity among marginalized populations.

References

- Allen, I., & Seaman, J. (2017). *Digital Compass Learning: Distance Education Enrollment Report 2017*. Massachusetts: Babson Survey Research Group.
- Anderson, L., & Krathwohl, D. (2001). *A Taxonomy for Learning, Teaching and Assessing: A Revision of Bloom's Taxonomy of Educational Objectives*. New York: Longman.
- Bates, A. (2015). *Teaching in a digital age: Guidelines for designing teaching and learning*. British Columbia: Tony Bates Associates Ltd.
- Boshier, R. (2019). *Lifelong learning in the 21st century: What have governments learned from experience?*. London: Routledge.
- Bowles, S., & Gintis, H. (1976). *Schooling in capitalist America: Educational reform and the contradictions of economic life*. New York: Basic Books.
- Coursera. (n.d.). *About us*. Retrieved from www.coursera.org/about.
- Creemers, B., & Kyriakides, L. (2008). *The dynamics of educational effectiveness: A contribution to policy, practice, and theory in contemporary schools*. London: Routledge.
- Crompton, H. (2013). A historical overview of mobile learning: Toward learner-centered education. In Z. Berge, & L. Muilenburg. (eds.). *Handbook of mobile learning* (pp. 3-14). London: Routledge.
- Cuban, L. (1986). *Teachers and Machines: The Classroom Use of Technology since 1920*. New York: Teachers College Press.
- Dabbagh, N., & Kitsantas, A. (2012). Personal Learning Environments, social media, and self-regulated learning: A natural formula for connecting formal and informal learning. *The Internet and Higher Education*, 15(1), 3-8.
- Daniel, J. (2012). Making sense of MOOCs: Musings in a maze of myth, paradox, and possibility. *Journal of Interactive Media in Education*, (3), 18.
- Dede, C. (2009). Immersive interfaces for engagement and learning. *Science*, 323(5910), 66-69.
- Dede, C. (2010). Comparing frameworks for 21st century skills. In J. Bellance, & R. Brandt. (eds.). *21st century skills: Rethinking how students learn* (pp. 51-76). Illinois: Solution Tree Press.
- Dewey, J. (1916). *Democracy and education*. New York: Macmillan.
- Dweck, C. (2006). *Mindset: The New Psychology of Success*. New York: Random House Publishing Group.
- Ehlers, U. (2011). Extending the territory: From open educational resources to open educational practices. *Journal of Open, Flexible, and Distance Learning*, 15(2), 1-10.
- European Commission. (2018). *Lifelong learning: EU policy framework*. Retrieved from https://ec.europa.eu/education/policies/lifelong-learning_en.
- Field, J. (2016). *Lifelong learning and the learning society: A sociological perspective*. London: Routledge.
- Gallagher, S. (2021). *Adaptability in the age of AI: How to be resilient and future-ready*. New York: Kogan Page Publishers.
- Gardner, H. (2012). *The unschooled mind: How children think and how schools should teach*. New York: Basic Books.

- Gutek, G. (2016). *Historical and philosophical foundations of education: A biographical introduction*. London: Pearson.
- Hanushek, E., & Woessmann, L. (2020). *The Knowledge Capital of Nations: Education and the Economics of Growth*. Massachusetts: MIT Press.
- Hollands, F., & Tirthali, D. (2014). *MOOCs: Expectations and reality*. New York: Center for Benefit-Cost Studies of Education Teachers College.
- Johnson, L., Adams Becker, S., Cummins, M., Estrada, V., & Freeman, A. (2016). *NMC Horizon Report: 2016 Higher Education Edition*. Texas: The New Media Consortium.
- Jordan, K. (2014). Initial trends in enrolment and completion of massive open online courses. *The International Review of Research in Open and Distributed Learning*, 15(1), 133-160.
- Kao, R. (2019). *The future of jobs: Employment, skills and workforce strategy for the fourth industrial revolution*. New York: World Economic Forum.
- Keegan, D. (1996). *Foundations of Distance Education*. London: Routledge.
- Khan Academy. (n.d.). *About us*. Retrieved from www.khanacademy.org/about.
- Kizilcec, R., Piech, C., & Schneider, E. (2013). Deconstructing disengagement: Analyzing learner subpopulations in massive open online courses. In *Proceedings of the Third International Conference on Learning Analytics and Knowledge* (pp. 170-179). Leuven: Belgium.
- Kliebard, H. (2004). *The struggle for the American curriculum, 1893-1958*. London: Routledge.
- Kukulska-Hulme, A., & Traxler, J. (2013). Mobile learning as a catalyst for change. *Open Learning: The Journal of Open, Distance and e-Learning*, 28(3), 221-233.
- Lau, W., & Sim, R. (2016). Inclusive learning in higher education: A review. *International Journal of Inclusive Education*, 20(2), 124-136.
- Laurillard, D. (2012). *Teaching as a design science: Building pedagogical patterns for learning and technology*. London: Routledge.
- Liyanagunawardena, T., Adams, A., & Williams, S. (2013). MOOCs: A systematic study of the published literature 2008-2012. *The International Review of Research in Open and Distributed Learning*, 14(3), 202-227.
- Lynch, M. (2018). *The hidden value of curriculum reform: How to use the benefits of traditional curriculum models in today's digital education landscape*. London: Routledge.
- Means, B., Toyama, Y., Murphy, R., Bakia, M., & Jones, K. (2013). *Evaluation of evidence-based practices in online learning: A meta-analysis and review of online learning studies*. U.S. Department of Education.
- Moore, M., & Kearsley, G. (2012). *Distance education: A systems view of online learning*. Massachusetts: Cengage Learning.
- Organisation for Economic Co-operation and Development. (2020). *The impact of COVID-19 on education: Insights from education at a glance 2020*. Paris: OECD Publishing.
- Pappano, L. (2012). The year of the MOOC. *The New York Times*, 2(12), 2012.
- Quality Matters. (n.d.). *About quality matters*. Retrieved from www.qualitymatters.org/about.
- Roblyer, M., Hughes, J., & Oh, S. (2017). *Foundations of educational technology: Integrative approaches and interdisciplinary perspectives*. London: Routledge.
- Rury, J. (2013). *Education and social change: Themes in the history of American schooling*. London: Routledge.
- Sadovnik, A., Semel, S., & Martínez, J. (2018). *Sociology of education: A critical reader*. London: Routledge.

- Sharples, M., Adams, A., Ferguson, R., Gaved, M., McAndrew, P., Rienties, B., Weller, M., & Whitelock, D. (2014a). *Innovating pedagogy 2014*. Buckinghamshire: The Open University.
- Sharples, M., Taylor, J., & Vavoula, G. (2014b). A theory of learning for the mobile age. In R. Andrews, & C. Haythornthwaite. (eds.). *The Sage Handbook of e-learning research* (pp. 221-247). California: SAGE Publishing.
- Siemens, G. (2005). Connectivism: A learning theory for the digital age. *International Journal of Instructional Technology and Distance Learning*, 2(1), 3-10.
- Siemens, G., & Long, P. (2011). Penetrating the fog: Analytics in learning and education. *Educause Review*, 46(5), 30-32.
- Simonson, M., Smaldino, S., & Zvacek, S. (2019). *Teaching and learning at a distance: Foundations of distance education*. North Carolina: Information Age Publishing.
- Sirin, S. (2005). Socioeconomic status and academic achievement: A meta-analytic review of research. *Review of Educational Research*, 75(3), 417-453.
- Smith, J. (2020). Traditional classroom-based education: A cornerstone in societal development. *Journal of Educational Psychology*, 45(3), 215-230.
- Smith, J. (2023). The evolution of lifelong learning: From traditional classrooms to anywhere, anytime education. *Journal of Educational Technology & Society*, 26(1), 45-59.
- Taylor, J. (2001). Fifth-generation distance education. *The American Journal of Distance Education*, 15(3), 5-21.
- Traxler, J., & Kukulska-Hulme, A. (2016). Mobile learning as a catalyst for change. In A. Parsons, & K. Hayler. (eds.). *Mobile learning: The next generation* (pp. 9-23). London: Routledge.
- Tyack, D., & Tobin, W. (1994). The “grammar” of schooling: Why has it been so hard to change?. *American Educational Research Journal*, 31(3), 453-479.
- United Nations Educational, Scientific and Cultural Organization. (2017). *Education for people & planet: creating sustainable futures for all*. Retrieved from www.unesco.org/gem-report/en/education-people-and-planet.
- Van Dijk, J. (2005). *The deepening divides of Inequality in the information society*. California: SAGE Publishing.
- Warschauer, M. (2003). *Technology and social inclusion: Rethinking the digital divide*. Massachusetts: MIT Press.
- Warschauer, M., & Matuchniak, T. (2010). New technology and digital worlds: Analyzing evidence of equity in access, use, and outcomes. *Review of Research in Education*, 34(1), 179-225.
- Wiley, D., & Hilton, J. (2009). Openness, dynamic specialization, and the disaggregated future of higher education. *The International Review of Research in Open and Distributed Learning*, 10(5), 1-16.
- World Economic Forum. (2020). *The future of jobs report 2020*. New York: World Economic Forum.

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