Education is not only an Issue of Literate but of Learner: A Lifelong Learning Competency

Nalini Verma
Department of Education
University of Lucknow, India
Email: vnalini.verma2@gmail.com

ORCID iD: 0009-0000-1116-5503

Abstract: Education plays a pivotal role in fostering learning. Education in the 21st century extends far beyond basic literacy, embracing the concept of creating lifelong learners. This paradigm shift recognizes that the ability to learn, adapt, and acquire new skills continuously is paramount in our rapidly evolving world. Education now focuses on developing competencies that enable individuals to become autonomous, adaptable learners throughout their lives. This study explores the paradigm shift from viewing education solely as a means of achieving literacy to recognizing its role in developing lifelong learners. This paper examines the importance of lifelong learning competencies in the context of rapid technological advancements, global economic shifts, and evolving societal needs. It argues that in the 21st century, education must transcend basic literacy skills to foster a set of competencies that enable continuous learning throughout life. The research examines how traditional educational models often fall short in preparing individuals for the rapidly changing global landscape, where adaptability and continuous skill development are crucial. By analyzing current literature and case studies, the paper identifies key lifelong learning competencies, including critical thinking, digital literacy, and self-directed learning. It also investigates the challenges in implementing this approach within existing educational frameworks. The findings suggest that reorienting education towards developing lifelong learners is essential for individual success and societal progress. The study concludes by proposing strategies for educational institutions and policymakers to cultivate these competencies, emphasizing the need for a holistic approach to education that goes beyond mere literacy.

Keywords: 21st Century, Education, Learning, Lifelong Learning Competencies, Paradigm Shift.

How to cite this work (APA):

1. Introduction

Education and learning have undergone a significant transformation in the 21st century, reflecting a paradigm shift that emphasizes the importance of lifelong learning competencies. Education has traditionally been viewed as a means to achieve literacy, focusing primarily on reading, writing, and basic numeracy skills. However, in today's rapidly evolving global landscape, this perspective is increasingly recognized as insufficient, and the rapid pace of technological advancements, globalization, and evolving societal needs have necessitated a more comprehensive approach to learning. This shift recognizes that education is not merely a phase confined to formal schooling but a continuous process that extends throughout an individual's life. The 21st century paradigm acknowledges that the skills and knowledge acquired in formal education may quickly become obsolete in our fast-changing world. As a result, the focus has shifted towards developing a set of core competencies that enable individuals to adapt, learn, and grow continuously. Lifelong learning competencies are a set of skills, attitudes, and knowledge that enable

individuals to continuously acquire and apply new information throughout their lives. These lifelong learning competencies include critical thinking, digital literacy, adaptability, creativity, communication, and self-directed learning. They encompass cognitive, social, and emotional capacities that facilitate ongoing personal and professional development, enabling individuals to navigate an ever-changing world, remain employable, and contribute meaningfully to society in various contexts and stages of life. As the pace of change accelerates, traditional education models are no longer sufficient to equip individuals for long-term success. Recent studies have highlighted the importance of developing adaptable skills that extend throughout an individual's life. For instance, Longhurst et al. (2020) argue that education should prioritize cultivating learners who can navigate an ever-changing world. Similarly, Belanger and Kops (2023) emphasize the need for a shift from content-based education to competency-driven approaches that prepare individuals for ongoing learning challenges. While literacy remains a fundamental aspect of education, research increasingly points to the significance of developing critical thinking, problem-solving, and self-directed learning skills (Chen et al., 2022).

This new educational paradigm emphasizes the need to cultivate a love for learning, foster curiosity, and develop the ability to acquire new skills independently. Lifelong learning has become crucial for personal growth, professional development, and societal progress. As Delors et al. (1996) argue in their seminal UNESCO report, education must be built on four pillars: learning to know, learning to do, learning to live together, and learning to be. This perspective emphasizes that education is not merely about acquiring knowledge but developing the capacity to learn throughout life. Despite this understanding, there remains a significant gap between the recognition of lifelong learning as a crucial educational goal and its practical implementation in educational systems worldwide. Furthermore, Jarvis (2007) notes that the concept of lifelong learning is often misunderstood or narrowly interpreted in policy and practice. This disconnect between theory and implementation represents a critical research gap that needs to be addressed to ensure education systems effectively prepare learners for the challenges of the 21st century and beyond. The paper looked at the following research questions:

1. How can the perspective on education shift from considering it as a means of achieving literacy on its own to acknowledging its role in fostering lifelong learners?
2. What is the significance of lifelong learning skills in light of the rapid advancement of technology, changes in the world economy, and shifting social demands?
3. How could traditional educational models often fall short in preparing individuals for the rapidly changing global landscape, where adaptability and continuous skill development are crucial?
4. What are the key lifelong learning competencies?
5. What are the challenges in implementing the lifelong learning competencies approach within existing educational frameworks?

Overall, this research will look at the new educational paradigm. This study also suggests some strategies for fostering lifelong learning competencies. Lifelong learning competencies are essential in the 21st century, enabling individuals to adapt to rapid technological changes, navigate complex global challenges, and thrive in an increasingly interconnected world, thus driving personal, professional, and societal progress. It recognizes that education's primary goal is not just to produce literate individuals but to create lifelong learners who are equipped to face the challenges of an uncertain future and seize the opportunities it presents.

2. Literature Review

Education has long been viewed primarily through the lens of literacy - the ability to read, write, and perform basic numeracy. However, a growing body of research suggests that education encompasses much more than these fundamental skills. It is increasingly recognized as a lifelong process of developing competencies that enable individuals to adapt, learn, and thrive in a rapidly changing world. This shift in perspective places the learner at the center, emphasizing the development of broader skills and mindsets that support continuous growth and learning throughout one's life.

Recent studies have highlighted the importance of viewing education as a lifelong journey focused on developing key competencies. Desjardins (2020) argues that in the context of technological change and globalization, education systems must prioritize cultivating adaptability, creativity, and critical thinking skills that allow individuals to navigate an uncertain future. His research demonstrates how traditional literacy-focused approaches fall short in preparing learners for the complexities of modern society and work environments. Critical thinking and information literacy have emerged as crucial competencies in the digital age. A study by Wineburg et al. (2016) reveals that many students struggle to evaluate online information sources effectively, highlighting the need for education to focus on developing these skills. This research underscores the shift from mere literacy to more complex cognitive abilities required for lifelong learning in the information era. The traditional focus on literacy as the primary goal of education has been challenged by studies emphasizing the importance of developing learners' capacities for ongoing growth and adaptation. Tough (2014) argues that non-cognitive skills such as perseverance, curiosity, and self-control are more predictive of academic and life success than traditional measures of intelligence. This

perspective aligns with the growing recognition that education should prepare individuals for a rapidly changing world where the ability to learn and adapt is crucial.

The concept of lifelong learning has gained traction as a key educational competency. Laal and Salamati (2012) define lifelong learning as an ongoing, voluntary, and self-motivated pursuit of knowledge for personal or professional reasons. Their work highlights how this approach to education extends beyond formal schooling and encompasses a wide range of learning experiences throughout one's life. Building on this, Lonka et al. (2021) introduce the concept of "learning to learn" as a crucial competency for the 21st century. Their study of Finnish education reforms shows how embedding metacognitive strategies and self-regulated learning practices into curricula can significantly enhance students' ability to acquire new knowledge and skills independently throughout their lives. This approach moves beyond content knowledge to equip learners with the tools to direct their own learning journey. The importance of social-emotional learning (SEL) in education has also gained prominence. Cefai et al. (2022) conducted a meta-analysis of SEL interventions across Europe, finding that programs focusing on emotional awareness, relationship skills, and responsible decision-making not only improved academic performance but also enhanced overall well-being and life satisfaction. This research underscores the need for a holistic approach to education that nurtures both cognitive and non-cognitive skills.

Research by Dweck (2015) on growth mindset demonstrates how learners' beliefs about their own capacity for improvement significantly impact their educational outcomes. Students who view intelligence as malleable rather than fixed show greater resilience in the face of challenges and are more likely to pursue ongoing learning opportunities. This underscores the importance of fostering attitudes conducive to lifelong learning from an early age.

In the context of rapid technological advancement and economic change, the ability to continually acquire new skills has become increasingly important. A study by Autor et al. (2020) shows that workers who engage in ongoing learning and skill development are better able to adapt to technological disruptions in the job market. This emphasizes the need for education systems to equip learners with the tools for continuous self-directed learning. Digital literacy has emerged as another critical competency in the modern educational landscape. A study by van Laar et al. (2023) examined the digital skills gap across different age groups and found that continuous learning opportunities throughout adulthood are essential for maintaining relevant digital competencies. Their findings suggest that education systems must evolve to provide ongoing support for digital skill development beyond formal schooling years.

The role of technology in facilitating lifelong learning has been a focus of recent research. Initiatives in online and mobile learning have expanded access to educational resources beyond traditional institutions. A meta-analysis by Means et al. (2013) found that online learning can be as effective as face-to-face instruction, particularly when it incorporates interactive and collaborative elements.

Furthermore, research by Kearney and Maher (2022) explores the role of experiential learning in developing practical competencies. Their case studies of work-integrated learning programs in Australian universities demonstrate how real-world experiences can bridge the gap between theoretical knowledge and applied skills, better-preparing learners for professional challenges and lifelong learning. In conclusion, the literature of the past decade reflects a significant shift in understanding education as a process of developing lifelong learners rather than simply imparting literacy. Recent research strongly supports the notion that education extends far beyond traditional literacy. This evolving perspective emphasizes the importance of non-cognitive skills, growth mindset, adaptability, and critical thinking in preparing individuals for a world of ongoing change and learning. As education systems adapt to these insights, the focus is increasingly on equipping learners with the competencies needed for continuous personal and professional growth throughout their lives.

3. Methodology

This qualitative study employs a systematic literature review methodology to explore the evolution of education from literacy-focused to lifelong learning-oriented. The research will utilize secondary sources, primarily peer-reviewed journal articles, books, policy documents, reports, and credible online resources published within the last decade. Data collection will involve searching academic databases such as ERIC, JSTOR, and Google Scholar using keywords related to literacy, lifelong learning, and educational competencies. The gathered literature will be critically analyzed using thematic analysis to identify key trends, theoretical frameworks, and empirical findings. The study depended on qualitative information since it was necessary for it to address its objectives in-depth, subjectively, and extensively. A thematic analytical framework was used to analyse the secondary and qualitative data to create themes that complemented the research questions of the study. Document analysis of educational policies, curricula, and institutional mission statements will provide contextual information on systemic changes. Observations in both traditional and alternative learning environments will offer insights into practical implementations of lifelong learning approaches. This triangulation of data sources will ensure a comprehensive understanding of the complex interplay between literacy, learner development, and lifelong competencies in

modern education. This approach allows for an in-depth understanding of the shift in educational paradigms and its implications for contemporary learning practices, synthesizing diverse perspectives to provide a holistic understanding of the topic.

4. Results and Discussion

4.1 Paradigm Shift from Literature to Lifelong Learner

The first research question (RQ1) explores how can the perspective on education shift from considering it as a means of achieving literacy on its own to acknowledging its role in fostering lifelong learners. This transformation is evident in both theoretical frameworks and practical implementations across various educational contexts. The qualitative research findings reveal a significant shift in educational perspectives, moving from a narrow focus on literacy to a broader emphasis on fostering lifelong learners. Recent literature provides compelling evidence for this transformation. Merriam and Kee (2014) argue that the rapid pace of technological and societal change necessitates a reconceptualization of education as a continuous, lifelong process rather than a finite achievement of literacy. This view is supported by Jarvis (2018), who emphasizes the importance of developing adaptable learning skills to navigate an increasingly complex world. The research indicates that this shift is driven by the recognition that traditional literacy alone is insufficient for success in the 21st century. Furthermore, Biesta (2015) argues for a more holistic approach to education that values the development of personal and social capabilities alongside academic skills. The findings also suggest that this paradigm shift has implications for educational policy and practice. Sefton-Green and Erstad (2017) propose that curriculum design should prioritize the development of learning-to-learn skills and metacognitive abilities.

Additionally, research by Deakin Crick et al. (2014) emphasizes the need for assessment practices that recognize and value the diverse ways in which lifelong learning competencies manifest. The evidence collectively points to a growing consensus that education should be viewed as a continuous journey of personal growth and skill development, rather than a finite process of knowledge acquisition. This perspective aligns with the demands of a rapidly evolving global economy and society, where the ability to adapt and continue learning throughout one's life is increasingly crucial for personal and professional success. The work of Hase and Kenyon (2013) on heutagogy, or self-determined learning, further supports this shift by proposing educational approaches that empower learners to take control of their learning processes. In terms of policy, the UNESCO Institute for Lifelong Learning (2020) has documented global trends towards incorporating lifelong learning strategies into national education policies, reflecting a broader recognition of education's role beyond initial schooling. These findings collectively suggest a paradigm shift where education is increasingly viewed not just as a means to achieve literacy, but as a continuous process of developing adaptable, self-directed learners capable of navigating an ever-changing world.

4.2 Significance of Lifelong Learning Competencies

The second research question (RQ2) examines the significance of lifelong learning skills in light of the rapid advancement of technology, changes in the world economy, and shifting social demands. The qualitative research findings surrounding the significance of lifelong learning skills in the context of rapid technological advancement, economic changes, and shifting social demands reveal several key themes supported by recent literature. A central finding is that lifelong learning has become increasingly critical for individual and societal adaptability in the face of accelerating change. Deming and Noray (2020) found that the rapid pace of technological change is causing job skills to become obsolete more quickly, necessitating continuous learning and upskilling. This aligns with research by Frey and Osborne (2017), which predicts that nearly half of U.S. jobs are at risk of automation, underscoring the need for workers to continually adapt and learn new skills. In the economic sphere, Brown et al. (2020) highlight how globalization and the rise of the knowledge economy have intensified the demand for high-skilled, adaptable workers capable of continuous learning. Social demands are also evolving, with studies like that of Mateus et al. (2022) emphasizing the growing importance of digital literacy and critical thinking skills in navigating an increasingly complex information landscape. The COVID-19 pandemic has further accelerated these trends, with research by Klosters (2021) demonstrating how the crisis has heightened the need for digital skills and the ability to learn remotely.

In the 21st century, education must evolve beyond basic literacy to cultivate lifelong learning competencies. This paradigm shift is necessitated by rapid technological advancements, economic volatility, and complex social challenges (World Economic Forum, 2020). Education should focus on developing critical thinking, adaptability, digital literacy, and self-directed learning skills (Fadel et al., 2015). These competencies enable individuals to navigate an ever-changing landscape, continuously acquire new knowledge, and remain relevant in a dynamic global environment (OECD, 2018). Moreover, lifelong learning is increasingly seen as crucial for addressing global challenges. For instance, UNESCO's (2020) report on education for sustainable development highlights how lifelong learning skills are essential for fostering the innovation and adaptability needed to tackle climate change and other pressing

issues. Collectively, these findings underscore that lifelong learning skills are not just beneficial but increasingly essential for individual prosperity, economic competitiveness, and societal progress in a rapidly changing world.

4.3 Falling Short of Traditional Educational Models

The third research question (RQ3) looks at how could traditional educational models often fall short in preparing individuals for the rapidly changing global landscape, where adaptability and continuous skill development are crucial. Research findings indicate that traditional educational models often fall short in preparing individuals for the rapidly changing global landscape due to their emphasis on standardized curricula, rote learning, and narrow definitions of academic success. Recent studies highlight several key limitations of these models in fostering adaptability and continuous skill development. Zhao (2020) argues that the industrial-age education system, designed to produce homogeneous workers, fails to cultivate the creativity and entrepreneurial skills necessary in the modern economy. This sentiment is echoed by Robinson and Aronica (2015), who posit that standardized testing and rigid curricula stifle individual talents and fail to nurture diverse intelligences. Furthermore, Fadel et al. (2015) demonstrate that traditional models often prioritize content knowledge over competencies like critical thinking, collaboration, and metacognition, which are crucial for lifelong learning. The rapid pace of technological advancement exacerbates these shortcomings. A study by the World Economic Forum

(2020) reveals that 42% of core skills required for existing jobs are expected to change by 2022, underscoring the need for educational models that emphasize adaptability. Dweck's (2015) research on the growth mindset further illuminates how traditional education often instills fixed notions of ability, hindering students' capacity for continuous learning.

Additionally, Ito et al. (2013) argue that traditional models fail to leverage the potential of digital media for connected learning, missing opportunities to engage students in real-world problem-solving. The COVID-19 pandemic has further exposed the rigidity of traditional systems, with research by Reimers and Schleicher (2020) highlighting how schools struggled to adapt to remote learning, emphasizing the need for more flexible and technology-integrated approaches. Collectively, these findings underscore the urgent need for educational reform that prioritizes adaptability, fosters lifelong learning skills, and prepares students for an uncertain future.

4.4 Key Lifelong Learning Competencies

The second last research question (RQ4) identifies the key lifelong learning competencies. The research findings regarding the key lifelong learning competencies reveal a complex set of skills, attitudes, and behaviors that enable individuals to adapt and thrive in an ever-changing world. Recent literature highlights several core competencies that are consistently identified as crucial for lifelong learning.
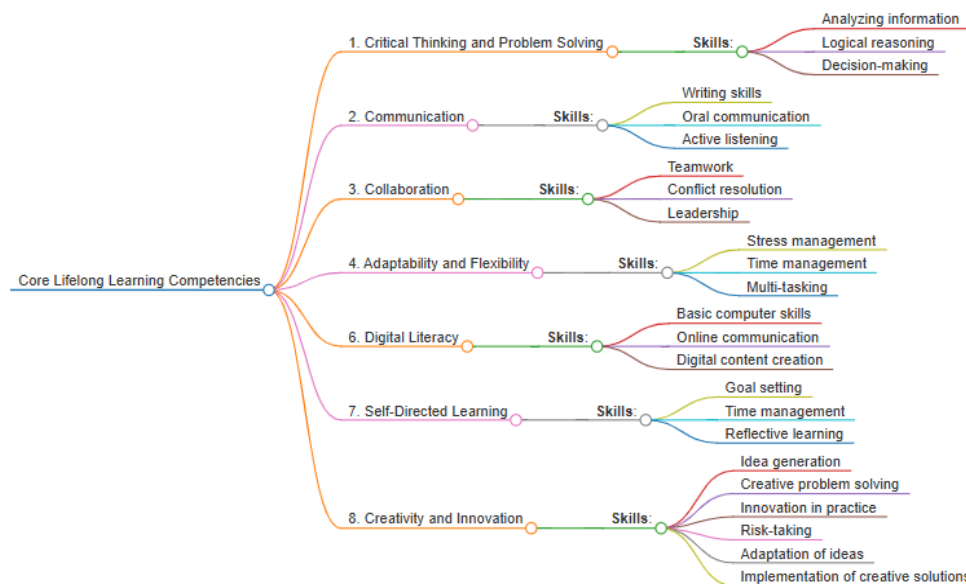

Figure 1: Core lifelong learning Competencies (suggested by the researcher)

Critical thinking and problem-solving skills emerge as fundamental competencies in numerous studies. Facione

(2015) emphasizes the importance of analytical reasoning, interpretation, and evaluation in navigating

complex information landscapes. These skills enable learners to approach new challenges systematically and make informed decisions. Closely related is information literacy, which Julien et al. (2020) describe as the ability to locate, evaluate, and effectively use information from various sources. In our digital age, this competency is vital for discerning credible information and avoiding misinformation.

Communication and collaboration skills are increasingly recognized as vital competencies. Laal and Ghodsi (2012) highlight how collaborative learning enhances problem-solving abilities and prepares individuals for teamwork in professional settings. Effective communication, both written and verbal, is essential for sharing knowledge and engaging in meaningful discourse across diverse contexts.

Adaptability and flexibility are frequently cited as essential lifelong learning competencies. Patton and McMahon (2014) argue that the ability to adjust to new situations and embrace change is crucial in a rapidly evolving job market. This adaptability is closely linked to resilience, which Duchek (2020) identifies as a key factor in overcoming setbacks and persisting in learning endeavors.

Digital literacy has become a cornerstone of lifelong learning in the 21st century. Ng (2012) defines this as the ability to use digital technologies effectively for learning, work, and leisure. This competency extends beyond basic computer skills to include understanding digital ethics, online safety, and the ability to leverage technology for continuous learning.

Self-directed learning is another crucial competency identified in the literature. Knowles et al. (2015) emphasize the importance of learner autonomy, goal-setting, and self-motivation in sustaining lifelong learning. This involves the ability to identify learning needs, set objectives, and pursue knowledge independently.

Creativity and innovation are increasingly recognized as key competencies for lifelong learners. Robinson and Aronica (2016) argue that creative thinking is essential for adapting to new challenges and generating novel solutions. This competency involves the ability to think divergently and apply knowledge in innovative ways.

These findings underscore the multifaceted nature of lifelong learning competencies, emphasizing a shift from purely academic skills to a broader set of capabilities that enable continuous growth and adaptation throughout one's life.

4.5 Challenges in Developing Lifelong Learning Competencies

The last research question (RQ5) investigates the challenges in implementing the lifelong learning competencies approach within existing educational frameworks. Implementing lifelong learning competencies within existing educational frameworks presents several significant challenges, as highlighted by recent research. One major obstacle is the rigid structure of traditional education systems, which often prioritize standardized testing and subject-specific knowledge over the development of broader, transferable skills. Tino (2023) notes that many institutions struggle to integrate lifelong learning competencies into their curricula due to the pressure to meet established academic standards and prepare students for standardized assessments. Another challenge lies in the mindset shift required from both educators and learners. Lifelong learning competencies demand a more student-centered, self-directed approach to education, which can be difficult to foster within traditional teacher-led environments. Choi and Kim (2022) found that many teachers feel underprepared to facilitate the development of these competencies, citing a lack of training and resources as primary concerns. The rapidly evolving nature of lifelong learning competencies also poses a challenge for educational institutions. As the workplace and society continue to change at an accelerating pace, the specific skills and competencies required for lifelong learning must be continually updated. This necessitates frequent curriculum revisions and professional development for educators, which can be resource-intensive and time-consuming (Walker et al., 2024).

Furthermore, assessment and evaluation of lifelong learning competencies remain problematic within existing frameworks. Traditional grading systems and standardized tests are often ill-suited to measure skills such as adaptability, critical thinking, and self-reflection. Developing appropriate assessment tools that can effectively gauge these competencies while aligning with institutional and governmental requirements is an ongoing challenge (Leong and Tan, 2023).

Despite the challenges, research findings overwhelmingly suggest that reorienting education towards developing lifelong learners is essential for both individual success and societal progress. The rapidly evolving global landscape demands adaptable, self-directed learners capable of continuous skill acquisition and knowledge updating. Studies indicate that individuals with strong lifelong learning competencies are better equipped to navigate career changes, contribute to innovation, and maintain personal well-being in the face of societal shifts. Moreover, societies with a higher proportion of lifelong learners demonstrate greater economic resilience, social cohesion, and capacity for addressing complex global challenges. As

such, overcoming the obstacles to implementing lifelong learning competencies in educational frameworks is not just beneficial, but critical for future prosperity and sustainable development.

5. Conclusion and Recommendations

The perspective on education must shift from viewing it solely as a means of achieving literacy to recognizing its crucial role in fostering lifelong learners. This transformation is imperative given the rapid advancement of technology, changes in the world economy, and evolving social demands. Traditional educational models often fall short in preparing individuals for the dynamic global landscape, where adaptability and continuous skill development are essential. Key lifelong learning competencies include critical thinking, digital literacy, adaptability, self-directed learning, and effective communication. However, implementing these competencies within existing educational frameworks faces challenges such as rigid curricula, assessment difficulties, and resistance to change. To address these issues and cultivate lifelong learning skills, educational institutions and policymakers should adopt a multi-faceted approach. Firstly, curricula should be redesigned to integrate these competencies across all subjects, emphasizing their practical application. This could involve project-based learning, interdisciplinary studies, and real-world problem-solving exercises. Secondly, professional development programs for educators should focus on equipping them with the skills to facilitate lifelong learning, moving away from traditional lecture-based teaching methods. Thirdly, assessment methods need to evolve to evaluate not just knowledge retention, but also the application of lifelong learning skills. This might include portfolio assessments, project evaluations, and self-reflection exercises. Partnerships between educational institutions and industry can align learning outcomes with real-world needs. Policymakers should incentivize collaborations and fund innovative programs for lifelong learning. Promoting a culture of continuous learning, creating community learning centers, supporting adult education, and leveraging technology, is crucial for individual success and sustainable development.

References

Aspin, D. N., & Chapman, J. D. (2000). Lifelong learning: concepts and conceptions. *International Journal of Lifelong Education, 19*(1), 2-19.

Autor, D., Mindell, D., & Reynolds, E. (2020). The Work of the Future: Building Better Jobs in an Age of Intelligent Machines. MIT Work of the Future.

Biesta, G. (2006). What's the point of lifelong learning if lifelong learning has no point? On the democratic deficit of policies for lifelong learning. *European Educational Research Journal, 5*(3-4), 169-180.

Biesta, G. (2015). What is education for? On good education, teacher judgement, and educational professionalism. *European Journal of Education, 50*(1), 75-87.

Brown, J., Gosling, T., & Sethi, B. (2020). Workforce of the future: The competing forces shaping 2030. PwC.

Candy, P. C. (1991). Self-direction for lifelong learning: A comprehensive guide to theory and practice. Jossey-Bass.

Cefai, C., et al. (2022). *Journal of Education and Human Development, 11*(2), 1-15.

Cropley, A. J. (1978). Some guidelines for the reform of school curricula in the perspective of lifelong education. *International Review of Education, 24*(1), 21-33.

Deakin Crick, R., Broadfoot, P., & Claxton, G. (2014). Developing an effective lifelong learning inventory: The ELLI project. Assessment in Education: *Principles, Policy & Practice, 11*(3), 247-272.

Deardorff, D. K. (2015). Intercultural competence: Mapping the future research agenda. International Journal of Intercultural Relations, 48, 3-5.

Delors, J., et al. (1996). Learning: The treasure within. UNESCO.

Deming, D. J., & Noray, K. (2020). Earnings dynamics, changing job skills, and STEM careers. *The Quarterly Journal of Economics, 135*(4), 1965-2005.

Desjardins, R. (2020). *International Review of Education, 66*(5), 627-645.

Duchek, S. (2020). Organizational resilience: a capability-based conceptualization. *Business Research, 13*(1), 215-246.

Dweck, C. S. (2015). Carol Dweck revisits the 'growth mindset'. *Education Week, 35*(5), 20-24.

Edwards, R., Ranson, S., & Strain, M. (2002). Reflexivity: towards a theory of lifelong learning. International Journal of Lifelong Education, 21(6), 525-536.

Facione, P. A. (2015). Critical thinking: What it is and why it counts. Insight Assessment, 1-30.

Fadel, C., Bialik, M., & Trilling, B. (2015). Four-dimensional education: The competencies learners need to succeed. Center for Curriculum Redesign.

Faure, E., et al. (1972). Learning to be: The world of education today and tomorrow. UNESCO.

Faure, E., et al. (2013). Learning to be: The world of education today and tomorrow. UNESCO.

Field, J. (2000). Lifelong learning and the new educational order. Trentham Books.

Hase, S., & Kenyon, C. (2013). Self-determined learning: Heutagogy in action. Bloomsbury Academic.

Ito, M., Gutiérrez, K., Livingstone, S., Penuel, B., Rhodes, J., Salen, K., ... & Watkins, S. C. (2013). Connected learning: An agenda for research and design. Digital Media and Learning Research Hub.

Jarvis, P. (2007). Globalisation, lifelong learning and the learning society: Sociological perspectives. Routledge.

Jarvis, P. (2018). Learning to be a person in society: Learning to be me. In Contemporary Theories of Learning (pp. 15-28). Routledge.

Julien, H., Gross, M., & Latham, D. (2020). Information literacy in higher education. In Encyclopedia of Teacher Education (pp. 1-6). Springer.

Kearney, S., & Maher, D. (2022). Higher Education Research & Development, 41(3), 790-804.

Knapper, C. K., & Cropley, A. J. (2000). Lifelong learning in higher education. Psychology Press.

Knowles, M. S., Holton III, E. F., & Swanson, R. A. (2015). The adult learner: The definitive classic in adult education and human resource development. Routledge.

Laal, M., & Salamati, P. (2012). Lifelong learning; why do we need it? Procedia-Social and Behavioral Sciences, 31, 399-403.

Laal, M., & Ghodsi, S. M. (2012). Benefits of collaborative learning. Procedia-social and behavioral sciences, 31, 486-490.

Laar, E., et al. (2023). Computers in Human Behavior, 138, 107443.

Longworth, N. (2003). Lifelong learning in action: Transforming education in the 21st century. Routledge.

Lonka, K., Cho, V., Keinonen, T., & Fryer, L. K. (2021). Fostering lifelong learning in the digital era. Educational Research Review, 34, 100395.

Means, B., Toyama, Y., Murphy, R., & Bakia, M. (2013). The effectiveness of online and blended learning: A meta-analysis of the empirical literature. Teachers College Record, 115(3), 1-47.

Merriam, S. B., & Kee, Y. (2014). Promoting community wellbeing: The case for lifelong learning for older adults. Adult Education Quarterly, 64(2), 128-144.

Merriam, S. B., & Bierema, L. L. (2014). Adult learning: Linking theory and practice. Jossey-Bass.

OECD. (2018). The future of education and skills: Education 2030. OECD Publishing.

OECD. (2019). OECD Future of Education and Skills 2030: OECD Learning Compass 2030. Paris: OECD Publishing.

Patton, W., & McMahon, M. (2014). Career development and systems theory: Connecting theory and practice. Springer.

Reimers, F. M., & Schleicher, A. (2020). A framework to guide an education response to the COVID-19 Pandemic of 2020. OECD.

Robinson, K., & Aronica, L. (2016). Creative schools: The grassroots revolution that's transforming education. Penguin Books.

Sefton-Green, J., & Erstad, O. (2017). Researching 'learning lives'–a new agenda for learning, media and technology. Learning, Media and Technology, 42(2), 246-250.

UNESCO Institute for Lifelong Learning. (2020). Embracing a culture of lifelong learning: Contribution to the Futures of Education initiative. Hamburg: UNESCO Institute for Lifelong Learning.

Tough, P. (2014). How children succeed: Grit, curiosity, and the hidden power of character. Houghton Mifflin Harcourt.

Tuijnman, A., & Boström, A. K. (2002). Changing notions of lifelong education and lifelong learning. *International Review of Education, 48*(1-2), 93-110.

UNESCO Institute for Lifelong Learning. (2020). Embracing a culture of lifelong learning: Contribution to the Futures of Education initiative. UNESCO.

Wineburg, S., McGrew, S., Breakstone, J., & Ortega, T. (2016). Evaluating information: The cornerstone of civic online reasoning. Stanford Digital Repository.

World Economic Forum. (2020). The Future of Jobs Report 2020. World Economic Forum.

Zhao, Y. (2020). Two decades of havoc: A synthesis of criticism against PISA. *Journal of Educational Change, 21*(2), 245-266.