21ST CENTURY EDUCATIONAL TRANSFORMATION: LITERATURE REVIEW ON INNOVATION IN THE CONTEXT OF MODERN EDUCATION

Ohib Muhibburrhoman[1]*. Anis Fauzi[2], Ahmad Qurtubi[3]
232625233.ohib@uinbanten.ac.id[1], anis.fauzi@uibanten.ac.id[2], ahmad.qurtubi@uinbanten.ac.id[3]
[1,2,3] Magister of Islamic Education Management, UIN Sultan Maulana Hasanuddin Banten, Indonesia
*Corresponding author

ABSTRACT

Educational innovation encompasses new ideas, products, or methods that can effectively drive educational progress and resolve challenges within the education sector. This research aims to establish a comprehensive theoretical framework for understanding the core concepts of innovation, encompassing its aims, manifestations, obstacles, and strategies relevant to educational contexts. Data was obtained through an extensive literature review spanning six key research areas, encompassing the purpose and forms of educational innovation, challenges in its implementation, and strategies and objectives in educational innovation. Employing a qualitative research approach and documentation techniques, this study conclusively underscores the indispensable nature of educational innovation amidst the 21st-century landscape, despite its dual potential for positive and negative effects on the education sector.

Keywords: innovation, change, education, educational transformation

INTRODUCTION

Education in Indonesia is facing a problematic challenge of lack of access to education; the quality of education tends to be low, as well as educational gaps between urban and rural populations (Azizah, Nur 2019). As time goes by, it brings the impact of rapid changes through social aspects. The changes that occur have positive impacts, but they can also have negative impacts (Indy 2019). The development of technology in our lives can no longer be avoided because science will advance along with technology (Sanita and Saparia, 2023). In today's technological era, information can be easily accessed. Students look for friends through social media and tend to read information from cell phones rather than books. The problem is that they get this information without checking the truth of the information again (Adiyono, Julaiha, 2023). The development of technology must also be balanced with human resource skills to use technology so that utilizing technology in the digital world as it is now is the key to helping the country's social, economic, and cultural life now and in the future (Ambarwati et al., 2022).

So this change requires in-depth study to create values that are useful for the world of education (Muhammad Nur Hadi, Syaifullah, and Wiwin Fachrudin Yusuf 2022). In a digital era like this, problems arise from the inadequate readiness of human resources and teaching staff and the uneven readiness of infrastructure. So this problem becomes a challenge to keep up with changes, but infrastructure disparities occur in every region of Indonesia (Verdinandus Lelu Ngono and Taufik Hidayat 2019). Students in an era like this are overly glorifying technology, so education is currently experiencing a value crisis where the output of education is only cognitive intelligence and not human and social values, or what is usually

called dehumanization (Dewi 2019). Therefore, teaching staff must be able to understand the skills and knowledge to develop digital or internet-based learning, as well as educators must be able to provide innovations in learning methods to utilize technology so that the impact of education can exist and be of quality in times like this (Gunawan and Widiati 2019).

The description above explains how the era of globalization in Indonesia cannot be separated from its obligation to improve the quality of human resources in free and open competition in the 21st century. This has been contained in Law No. 14 of 2005 concerning lecturers and teachers as the spearheads of education reform in Indonesia (Rasyidi 2023). This law is a change and an innovation in the realm of education. Technological literacy is required for the application of technology-based learning methods and models so that developments in the era and the world of education can be balanced (Rahayu, Iskandar, and Abidin 2022). Thus, understanding the educational innovation process is an individual-oriented development and is the basis for understanding the organizational innovation process (Firmansyah 2019).

Research by Asep Machsus in 2020. Regarding Islamic boarding school curriculum innovation, which aims to realize national education goals, this research discusses Islamic boarding schools, which are experiencing rapid development in both urban and rural areas, which gives rise to competition to foster competitive values. Curriculum innovation was formed to adapt to national education goals and in line with the global vision of Islamic boarding schools, namely the Five Souls of Islamic boarding schools (Asep Machsus 2020). Talkhah conducted research in 2022 on learning innovations in Islamic religious education during the pandemic. This research discusses the role of technology as a medium for interaction and facilitating educator delivery of material. This pandemic phenomenon invites all elements of education to use technology as a medium for utilizing innovation in the learning process (Ahmad, Hasnawati, and Hasirah, 2022). Fahroji made a comparison between 19-20 and 2021 in Indonesia, which experienced renewal or innovation in learning methods and models. The result of the discussion is that the learning carried out in the past in Indonesia was very simple. Nowadays, the government is trying to improve Indonesian education by using strategies that include learning to be proficient in critical thinking. So modern schools are currently adopting a learning process that provides knowledge to students and provides problem-solving learning innovations, as well as skill development to prepare students for the future (Fahrozy et al., 2022).

Muhaimin Amin also analyzed technology-based Islamic religious education learning innovations, which discussed one of the innovations in Islamic religious education learning that is very necessary, namely information and communication technology (ICT), which is designed for the learning process by obtaining appropriate sources, especially the internet. However, the rapid development of technology during globalization has affected the effectiveness and efficiency of education. However, the impact is on society's social culture, such as the shrinking of space and time, and the social differences felt in society are not meaningful on the internet (Muhammad Amin 2021). Anggun also analyzes learning innovations that are expected to solve Indonesian education problems. This research comes from all the changes based on the COVID-19 outbreak phenomenon, which has affected education in Indonesia. With innovative learning, it is hoped that problems in the world of education can be resolved. This research found that learning innovation played a good role in solving the problems of Indonesian education during the COVID-19 pandemic (Zahra Rosyiddin, Johan, and Mulyadi 2022).

Based on the above description, the purposes of this research can be identified as (1) Analysis of various innovations that have been applied in 21st-century education based on a literary review, including educational technologies, new teaching methods, and curricula tailored to the needs of the time; (2) Evaluation of how such innovations affect the quality of education, both in terms of student learning outcomes, teaching effectiveness, and the

satisfaction of stakeholders (students, teachers, parents, and society); (3) Identification of challenges and barriers faced in implementing innovations in education, including technical barriers, policies, resources, and resistance to change; 4) and, formulation of strategies and recommendations that can be used by educators, policymakers, and educational institutions to address the challenges in adopting and integrating educational innovations. The research also contains theories that are expected to support change and innovation in education, both in curriculum aspects, social culture, human resources, educational resources, and pupils.

METHOD

The research design used in this research is qualitative, with a library study approach, namely an approach taken by collecting data and literature from various sources, such as legislation, books, and journal articles (Sugiyono 2022). The data collection technique uses documentation, namely searching for literature and exploring six things that are the focus of the research, including: 1). understanding educational innovation; 2). innovation goals; 3). forms of innovation in education; 4), educational innovation challenges; 5), educational innovation strategy; and 6). Targets of innovation in the world of education. The data analysis was carried out by analyzing theories related to the text and connecting them with the literature observed, thus enabling an understanding that was following the research focus explained above.

RESULTS AND DISCUSSION

Basic Concepts of Educational Change and Innovation

According to Van de Van, innovation is a new idea that can be applied to produce a product, service, or process (Aliyah et al., 2023). Rogers believes that innovation is a novelty of ideas, practices, and objects as seen by the individual or institution implementing it (Muhammad Nur Hadi et al., 2022). According to Chehade, innovation is a new process in developing a nation (Ambarwati et al., 2022). Innovation also means a new change that is improving and different from before (Muhammad Amin 2021). The word innovation is a discovery; the word discovery in English is "discovery" or "inventory" (Abdullah Sarif, Munib 2021). Change occurs when there are changes in social structures, institutions, values, attitudes, and behaviors in society. It involves a transformation of economics, culture, politics, culture, and social interactions. Impacts on individuals' way of life and social relationships (Azizah, Nur 2019). Organizational success can be measured, by the ability to innovate (Faliza et al., 2020), as well as educational organizations.

Education, according to Driyarkara, is an effort to raise the level of humans to become human beings (Aliyah et al., 2023). Law No. 2 of 2003 explains that education is a conscious and planned effort to create an active learning atmosphere and learning process and develop one's potential so that one has personality strength, self-control, religious spirituality, intelligence, and skills that are useful and necessary for oneself. , society, nation, and state (Muhammad Nur Hadi et al., 2022). Ki Hajar Dewantara defines education as guiding children's strengths so that they grow as humans and members of society and can provide safety and happiness (Muhammad Amin 2021). The world of education certainly requires innovation to continue to develop and keep up with the times, and it must be structured so that it continues to improve in a better direction (Ambarwati et al., 2022).

Educational innovation is the act of creating and socializing a new practice tool, in an organizational or technological form (Aliyah et al., 2023). According to Ekosusilo, educational innovation is educational change that is based on conscious, planned, and patterned educational efforts that aim to direct the needs and demands of the times. Saud also

defines innovation in education as a new and qualitative change intended to increase the ability to achieve certain educational goals (Muhammad Nur Hadi et al., 2022). The definition explained by Saud creates keywords for educational innovation, namely:

a. New

Innovation refers to something new, not yet understood, developed, or implemented by the innovator, but more importantly, new qualitative aspects.

b. Qualitative

Innovation involves reorganizing or redefining the structure of an educational unit rather than simply rearranging or eliminating all components. This involves more students, teachers, and staff, but also a more holistic approach to learning, time, place, and delivery.

c. Matter

The term "thing" in the definition of innovation in education refers to the idea or concept of innovation. It includes ideas, methods, and techniques of work, teaching, instruction, norms, materials, and resources.

d. Intentional

Deliberation is a new direction in teaching. Innovation and education must be done with care and consideration, not based on personal bias.

e. Increase efficiency

The ability to manage resources, including money and resources, including organizational structures and processes, must be improved to ensure all planned tasks are carried out effectively.

f. Objective Goals

must be clearly defined and addressed to understand the differences between current capabilities and those before the implementation of the innovation.

Goals of Educational Innovation and Change

According to Suryosobroto, educational innovation aims at effectiveness, efficiency, and relevance regarding student targets and educational outcomes using very small amounts of energy, tools, money, and time. According to Hasbullah, educational innovation has the aim of solving educational problems and welcoming a more promising direction for the development of the world of education. The focus of educational reform is real educational problems that must be solved in innovative ways (Saputera 2022). According to the explanation from the Malang Lecturer Team, there are two main objectives of innovation in education (Muhammad Nur Hadi et al., 2022), namely:

a. Educational reform is a new response to dealing with educational problems.

b. Striving for the development of education to be more effective and economical.

Innovation certainly has a goal in the field of education, which hopes for changes and improvements in current education to achieve the goal of higher quality and better education (Malik, 2023). The main goal of educational innovation is to improve students' learning experiences to encourage more engagement and motivation to learn, thereby producing competent graduates who are ready to face the demands of society and the world of work (Rahmawati and Nurachadija, 2023).

According to Kusnadi, the aims of educational innovation are systematically as follows:

a. Will take advantage of what will happen to education in the future.

b. Will strive to provide quality education and good service to all members of the community.

c. Will promote and encourage the development of education and culture in Indonesia.

d. Will strengthen nationalism, promote identity, and encourage interesting learning for students.

Forms of Innovation in Education

In general, innovation in education has two models, (Suja'i 2019):

a. top-down model, which means educational innovation created by a leader and applied to his subordinates. For example, the Active Student Learning Method (CBSA), the Pamong Teacher, the Distance Learning System, and the Mobilizing Teacher. Innovation models like this are not always well received. This is due to the many rejections from teachers because they involvement is not fully involved in planning and implementation (Malik 2023).

b. The bottom-up model is a model of educational innovation created from below to improve the quality of education. This kind of innovation model is carried out by teachers, schools, and the general public on an initiative basis. Unfortunately, this model is rarely applied in Indonesia because it is centralized or centralizes authority (Malik 2023).

Challenges in the Demands for Innovation and Change in Education

Innovation needs to be conveyed well, easily understood, and accepted by society. According to Saefudin, innovation has the characteristics of complexity, which means the level of complexity to understand and use (Nasucha 2021). It is undeniable for society that innovation has this character because the concept of innovation is a new thing, and something new needs to be socialized so that it can be understood and accepted. Therefore, innovation and change pose challenges in the world of education. The world of education is experiencing problems and could be a challenge for the future, including;

a. Various changes

Recently, I have been troubled by the declining quality of education at all levels of education. The reason is that the curriculum does not encourage students to have broad competencies, and the learning process is less effective. Rusman thinks that if this happens, the appropriate solution lies with the school principal, who should form and empower a curriculum development team so that curriculum evaluation produces results that adapt to student needs. Another thing is the relatively low quality of teachers, due to the lack of opportunities to develop themselves with the dilemma of teaching materials that are too dense, which makes students less conducive and enthusiastic about learning.

b. Education Quality

It has become a public concern, and it has become a reality that the quality of education is not yet satisfactory. The cause is the establishment of education quality standards that have not yet reached a mutual agreement between education providers and the education department. To reach an agreement on quality standards, this quality is an indication that the quality of education is still low, namely that the types of skills that are by the needs for employment are still low, so this is a challenge for the world of education so that there is no accumulation of educated unemployment. According to Saputera, the challenges in the world of education are divided into three main problems (Saputera 2022), including:

a. The challenge of equal distribution in the quantity of learning opportunities

This needs to be a priority to be addressed in creating an education system to accommodate students in equal quantity in each region.

b. Quality challenges in education

The number of teachers, lack of funding, and educational facilities are influences on the decline in the quality of education.

c. Challenges in educational effectiveness and efficiency

Education needs to strive to obtain good results with limited funds and time.

Educational Innovation Strategy

It is not an easy job to choose the right strategy. The function of choosing the right strategy is to achieve the target of achieving change over time (Malik 2023). However, at least Rasyidi quoted that Sa'ud had explained that there were three types of innovation strategies in education (Rasyidi 2023), including;

e. Facilitative Strategy

The targeted social change strategy prioritizes the provision of facilities that ensure social change runs smoothly and easily.

f. Education Strategy

The strategy of a fact conveyed by that fact is that people will use that fact as a source of information to determine the action to be taken.

g. Persuasion Strategy

A way to persuade people to follow the changes that are being planned. This strategy will work if the reasons are rational and provide concrete facts.

According to Suja'i, innovation requires at least three innovation strategies in education (Suja'i 2019). That is;

a. Coercive Power Strategy (coercive strategy)

A strategy that tends to force one's will, one-sided thinking does not pay attention to conditions and situations.

b. Re-educational normative strategy (repeated educational strategy)

An innovation strategy that emphasizes the thinking of experts so that people understand the problems of innovation.

c. Rational Empirical Strategy (rational empirical)

This strategy has the basic assumption that humans have and can use logical thinking so that they act rationally.

Educational Innovation Targets

Innovation in education certainly cannot stand alone, but it must involve every element in it. The success of innovation is not measured by one or two factors but is also determined by teachers, students, and the completeness of existing facilities. So the targets of innovation in education that need to be paid attention to are teachers, students, curriculum, and objectives (Saputera 2022). For the world of education to be more innovative, a teacher is needed with strong competence and creativity (Rabiyatul 2022). Teachers must be able to provide learning activities that are interesting and easy to understand. They must also have a strong understanding of the importance of learning at various levels and how to apply this knowledge effectively (Abdullah Sarif, Munib 2021).

Prioritizing students is another important aspect of education reform. Teachers must prioritize the needs and interests of their students, ensuring that all work units are aligned with educational goals (Ansori and Sari 2020). This includes using intelligence, motor skills, experience, skills, and committees based on their own needs without imposing them on others. The curriculum, which is the basis of educational reform, plays an important role in the learning and teaching process (Rahayu et al., 2022). It is a new way to apply new practices and approaches to overcome potential problems or achieve certain goals.

Innovation in education can be divided into three types: operational innovation, which involves individuals making decisions without influencing others; collective innovation, which involves individuals making decisions together at the social system level; and authority innovation, which involves individuals making decisions based on experience. and their abilities (Zahra Rosyiddin et al., 2022). Teachers play an important role in driving educational innovation by providing effective teaching methods, cultivating a culture of continuous

learning, and promoting innovation among students. By focusing on these areas, educators can contribute to the development of a more innovative and successful educational environment.

CONCLUSION

Educational innovation is a conscious and planned act of change to achieve educational goals that are in line with the needs and demands of the times. The keywords for educational innovation are new, qualitative, intentional, increasing efficiency, and having a purpose. Educational innovation aims at change and improvement to solve educational problems and welcome positive developments in the world of education. There are two models or forms of innovation in education, namely the top-down model (from top to bottom) and the bottom-up model (from bottom to top).

The challenges of innovation and change in the world of education are various aspects of change, namely the quality of education, the equal distribution of the number of learning opportunities, and the effectiveness and efficiency of the world of education. Educational innovation strategies exist to overcome problems or challenges in the world of education, including facility strategy, education strategy, persuasion strategy, coercion strategy, and rational empirical strategy. The targets of innovation in education that are the focus of change are teachers, students, curriculum, and goals. By focusing on these targets, it is hoped that the world of education will develop and be more innovative to successfully achieve educational goals.

REFERENCES

Abdullah Sarif, Munib, Ahmad Fudholi. 2021. "Manajemen Inovasi Pendidikan Dalam Konsep Perubahan Menjadi Madrasah Wisata Di Man Sampan." *Journal of Social Community* 6(14):44–60.

Adiyono, Julaiha, Jumrah Siti. 2023. "Perubahan Pengembangan Kurikulum Pendidikan Agama Islam Di Madrasah Aliyah Negeri Insan Cendikia Paser." *IQRO: Journal of Islamic Education* 6(1):33–60.

Ahmad, Hasnawati, and Hasirah. 2022. "Inovasi Pembelajaran Pendidikan Agama Islam Di Masa Pandemi Covid-19." *Edukasi* 10(1):16–28. doi: 10.61672/judek.v10i1.1970.

Aliyah, Jannati, Miftahul Cholifah, Karoma Karoma, and Mardiah Astuti. 2023. "Konsep Dasar Inovasi Pendidikan Dan Globalisasi." *Jurnal Pendidikan Dan Keguruan* 1(5):357–67.

Ambarwati, Dewi, Udik Budi Wibowo, Hana Arsyiadanti, and Sri Susanti. 2022. "Studi Literatur: Peran Inovasi Pendidikan Pada Pembelajaran Berbasis Teknologi Digital." *Jurnal Inovasi Teknologi Pendidikan* 8(2):173–84.

Ansori, Aan, and Ahmad Fitriyadi Sari. 2020. "Inovasi Pendidikan Di Masa Pandemi Covid-19." *Jurnal Literasi Pendidikan Nusantara* 1(2):133–48.

Asep Machsus. 2020. "Inovasi Kurikulum Pesantren: Upaya Mewujudkan Tujuan Pendidikan Nasional (Studi Kasus Pada Pondok Pesantren Bina Insan Mulia-Cirebon)."

Azizah, Nur, Siti Khalijah Simanjuntak dan Sri Wahyuni. 2019. "Jurnal Dirosah Islamiyah." *Jurnal Dirosah Islamiyah* 5(2):1–18. doi: 10.17467/jdi.v5i3.4270.

Dewi, Eva. 2019. "Potret Pendidikan Di Era Globalisasi Teknosentrisme Dan Proses Dehumanisasi." *Sukma: Jurnal Pendidikan* 3(1):93–116. doi: 10.32533/03105.2019.

Fahrozy, Fazrul Prasetya Nur, Sofyan Iskandar, Yunus Abidin, and Mia Zultrianti Sari. 2022. "Upaya Pembelajaran Abad 19-20 Dan Pembelajaran Abad 21 Di Indonesia." *Jurnal*

Basicedu 6(2):3093–3101. doi: 10.31004/basic.v6i2.2098.

Faliza, N., Adam, M., Basri, H., & Abd, M. S. (2020). "CSR and the Performance of Islamic Banks in Aceh". *Ijicc.Net*, *12*(6), 658–676. https://www.ijicc.net/images/vol12/iss6/12617_Faliza_2020_E_R2.pdf

Firmansyah, Eki. 2019. "Penerapan Teknologi Sebagai Inovasi Pendidikan." *Prosiding Seminar Nasional Pendidikan FKIP* 2(1):657–66.

Gunawan, Suprapto, and Sri Widiati. 2019. "Tuntutan Dan Tantangan Pendidik Dalam Teknologi Di Dunia Pendidikan Di Era 21." *Prosiding Seminar Nasional Pendidikan Program Pascasarjana* 594–601.

Indy, Ryan. 2019. "Peran Pendidikan Dalam Proses Perubahan Sosial Di Desa Tumaluntung Kecamatan Kauditan Kabupaten Minahasa Utara." *Holistik, Journal Of Social and Culture* 12(4):1–18.

Kusnadi. 2019. "Model Inovasi Pendidikan Dengan Strategi Implementasi Konsep 'Dare to Be Different.'" *Jurnal Wahana Pendidikan* 4(1):132–44.

Malik, Abdul. 2023. "Inovasi Pendidikan Dalam Upaya Mewujudkan Sekolah Yang Berkualitas Di Smp Islam Terpadu Nurul Azmi Medan." *Jurnal Fadillah* 3(1):1689–99.

Muhammad Amin. 2021. "Teknologi Dan Inovasi Pembelajaran Pendidikan Agama Islam." *Jurnal Literasiologi* 7(2):1–12.

Muhammad Nur Hadi, Syaifullah, and Wiwin Fachrudin Yusuf. 2022. "Inovasi Pendidikan Agama Islam." *Jurnal Mu'allim* 4(1):53–66. doi: 10.35891/muallim.v4i1.2948.

Nasucha, Juli Amaliya. 2021. "Difusi Dan Desiminasi Inovasi Pendidikan." *Intizam, Jurnal Manajemen Pendidikan Islam* 4(2):1–10.

Rabiyatul, Adawiyah. 2022. "Konsep Dasar Inovasi Pendidikan." *The Effects of Brief Mindfulness Intervention on Acute Pain Experience: An Examination of Individual Difference* 1–27.

Rahayu, Restu, Sofyan Iskandar, and Yunus Abidin. 2022. "Inovasi Pembelajaran Abad 21 Dan Penerapannya Di Indonesia." *Jurnal Basicedu* 6(2):2099–2104. doi: 10.31004/basicedu.v6i2.2082.

Rahmawati, S., and K. Nurachadija. 2023. "Inovasi Pendidikan Dalam Meningkatkan Strategi Mutu Pendidikan." *Bersatu:Jurnal Pendidikan Bhinneka Tunggal Ika* 1(5):01–12.

Rasyidi, Abdul Haris. 2023. "Studi Analisis Tentang Inovasi Dan Perubahan Dalam Kebijakan Pendidikan Islam." *Jurnal Palapa* 58(12):7250–57. doi: 10.1128/AAC.03728-14.

Sanita, Sanita, and Andi Saparia. 2023. "Peran Teknologi Pendidikan Dalam Inovasi Pembelajaran Di MTSN 1 Poso." *Multilateral : Jurnal Pendidikan Jasmani Dan Olahraga* 22(4):69. doi: 10.20527/multilateral.v22i4.16587.

Saputera, Yuli. 2022. "Tujuan, Masalah, Dan Sasaran Inovasi Pendidikan." *Tugas Mata Kuliah Mahasiswa* 249–56.

Sugiyono. 2022. *Metode Penelitian Kualitatif Untuk Penelitian Yang Bersifat: Eksplorasi, Enterpretif, Interaktif, Dan Konstruktif*. 3rd ed. Bandung: Alfabeta.

Suja'i, A. 2019. "Inovasi Pendidikan Full Day School." *Jurnal Al-Fikrah* 1(1):75–94.

Verdinandus Lelu Ngono, and Wijayanto Taufik Hidayat. 2019. "Pendidikan Di Era Digital." *Jurnal Seminar Nasional Pendidikan* 628–38.

Zahra Rosyiddin, Anggun Apriliani, Riche Cynthia Johan, and Dadi Mulyadi. 2022. "Inovasi Pembelajaran Sebagai Upaya Menyelesaikan Problematika Pendidikan Indonesia." *Inovasi Kurikulum* 19(1):44–53. doi: 10.17509/jik.v19i1.42679.