

Building Student Moral Resilience in the Industrial Revolution 4.0 Era through Character Education

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Abstract. The advancement of digital technology in the Industrial Revolution 4.0 era presents major challenges in the world of education, especially related to moral decline among students, such as identity crises and weakened empathy. Character education is a strategic necessity to overcome these problems. This article examines the importance of character education in building student moral resilience in the digital era through a literature review with a qualitative-descriptive approach. The synthesis of the literature review reveals that effective character education must be implemented in stages according to the student's developmental phase. This staged approach includes value habituation at the Elementary School (SD) level, moral strengthening and critical thinking through discussions and social projects at the Junior High School (SMP) level, and the formation of moral resilience and transcendental values through reflection and contextual learning at the Senior High School (SMA) level. Furthermore, teachers play a crucial role as value facilitators, and collaboration among schools, families, and communities is essential to create a supportive educational ecosystem. This staged and integrated model offers a clear pedagogical framework for educational institutions to cultivate a generation that is not only technologically proficient but also possesses strong ethical and moral resilience in the face of modern value crises.

Keywords: Digital Era, Pedagogy, Teacher's Role, Students, Digital Technology.

INTRODUCTION

The advancement of digital technology in the era of the Fourth Industrial Revolution has brought significant changes to various aspects of life, including the field of education (Sangole et al., 2022). Although the development of digital technology offers convenience and benefits, such as easier access to information and increased efficiency in learning, it also poses serious challenges, particularly concerning the decline of morality among the younger generation (Saulnier & Krettenauer, 2022). Children and adolescents today have unrestricted access to information, which can trigger various issues such as plagiarism, cyberbullying, and technology misuse (Davda & Buchanan, 2022). According to Ikhsan (2024), 40% of teenage respondents in his study had either experienced or witnessed cyberbullying, with impacts ranging from anxiety to depression. Research conducted in Malang City revealed that 55.9% of adolescents suffered health consequences from using the internet for more than seven hours per day, including sleep disturbances, weight gain, and eye strain (Alfitri & WidiatriLupi, 2020). These conditions have led to demoralization and a character crisis, manifested in the weakening of moral values, social solidarity, and everyday ethics (Harjanti & Ardiansyah, 2024).

Social changes influenced by technology have also affected patterns of interaction among students, both inside and outside of school. The tendency for children to be more connected to the virtual world than to their surrounding social environment has shifted the values and norms that were once instilled through direct experience (Aulia et al., 2022). Harahap et al. (2024) state that social media significantly influences adolescents' communication behavior, with 55% of respondents preferring online interaction over face-to-face communication. According to Fithriyaani et al. (2021), character education integrated into the learning process positively affects students' attitudes and learning outcomes. This indicates that character education needs to be explicitly taught to students. The challenges, however, are not only related to students but also involve teachers' readiness to effectively implement character education.

This phenomenon of moral decline presents a distinct challenge for educational institutions. Educational systems that still emphasize cognitive aspects have proven insufficient in fostering holistic character development (Muliastri & Handayani, 2023). This highlights the importance of developing curricula and learning methods that focus not only on cognitive achievement but also on moral and ethical formation. According to Kwartawaty et al. (2024), digital-based character education management holds significant potential in the era of the Fourth Industrial Revolution. Therefore, the education system, particularly at the elementary level, needs to create a learning ecosystem that consistently and contextually supports the cultivation of character in line with contemporary developments.

Character education serves as a highly relevant and necessary approach to addressing the complex moral challenges of the digital age. It not only focuses on teaching values but also cultivates awareness and habitual ways of thinking, behaving, and acting in accordance with noble values (Almagor, 2022). As the main actors within the school environment, teachers play an essential role as role models, mentors, and creators of a positive school culture (Rahmasari et al., 2023). Therefore, this study aims to reflect on the importance of character education in building students' moral resilience in the era of the Fourth Industrial Revolution.

RESEARCH METHOD

This study employed a literature review method with a qualitative-descriptive approach. The review was conducted by exploring and analyzing various relevant scholarly works related to the topics of character education, moral resilience, and pedagogical challenges in the era of the Fourth Industrial Revolution. The data sources in this study were derived from national and international journal articles indexed in Google Scholar, ScienceDirect, DOAJ, and Sinta,

covering publications from the last five years (2019–2024) to ensure the relevance and currency of the review.

The literature reviewed was selected based on the following inclusion criteria: (1) articles discussing the concepts and implementation of character education in the context of learning or curriculum; (2) articles examining phenomena of moral decline, value disorientation, or character crisis among students; and (3) articles addressing pedagogical approaches and learning models that support students' character formation. In addition, articles that were not relevant to the context of basic education or that lacked theoretical and practical discussions within the learning context were excluded from the analysis.

The search keywords used in the literature exploration process included: *“character education,” “moral resilience,” “students,” “character curriculum,” “values-based learning model,” “educational challenges in the 4.0 era,” “character education in the digital age,” “moral crisis in education,” “values-based learning,”* and *“curriculum development for character building.”* The collected literature was then thematically analyzed to identify patterns, approaches, challenges, and strategic recommendations related to strengthening character education as a solution to the phenomenon of demoralization in today's educational context. This article did not directly involve human subjects; therefore, ethical approval was not required.

RESULTS AND DISCUSSION

Based on the results of the analysis conducted on several literature related to character education as a solution to moral decline. The following is a table of the results from the literature review.

Table 1. Literature Review Results on the Importance of Character Education

Author, Title, Journal	Year	Method	Research Results
Fahdini, D. et al., "The Role of Character Education in Overcoming Students' Moral Crises." Jurnal Publik (Jurnal Ilmu Administrasi).	2021	Literature Study	The research results confirm that the moral crisis among students is caused by the lack of character education taught in schools. Character education can be a solution to form good citizens who have morality in accordance with the values of the Indonesian nation.
David, R. et al., "The Contribution of Character Education and Anti-Corruption Education in Facing the Moral Problems of Generation Z."	2023	Literature Study	The research results conclude that character education has a role in developing moral values such as honesty, responsibility, and empathy, which help Generation Z

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Prihatmojo, A., & Badawi, A. "Character Education as an Effort to Prevent Moral Degradation of Elementary School Students." Jurnal Dinamika Character.	2020	Literature Study	The research results explain that moral degradation in elementary schools is increasingly concerning due to behavioral deviations by students, such as fights, bullying, and drug abuse. They suggest that character education in elementary schools can prevent this moral degradation.
Zahroh, U. et al., "The Urgency of Character Education in Overcoming Moral Decadence Towards the 2045 Golden Generation." Jurnal Triwikrama	2023	Literature Study	The research results state that character education can overcome the moral challenges that arise in the current technological development. Character education is considered very important in tackling moral degradation in adolescents towards the 2025 golden generation.

Student Morality Challenges in the Industrial Revolution 4.0 Era

The era of the Fourth Industrial Revolution has had a significant impact on social life and education. The rapid development of technology has shifted patterns of social interaction, transformed students' lifestyles, and created new challenges related to the decline of values and morality (Mumthaza et al., 2021). According to Mampuono et al. (2022), digitalization that is not accompanied by the cultivation of moral values can lead to an identity crisis, individualism, and decreased empathy among the younger generation. This change underscores the need for a new educational approach that focuses not only on technological mastery but also on the formation of strong social values.

Other issues such as a lack of politeness, low social concern, and the increasing misuse of digital media are prevalent among students (Tandana et al., 2022). Therefore, character education is essential in addressing moral decline and counterbalancing the negative effects of technological advancement. Character education aims not only to shape positive attitudes and behaviors but also to prepare young generations to adapt to social and technological changes (Neviyarni, 2023).

Character Education as an Answer to Moral Decline

Character education is a planned process aimed at shaping students' personality and morality through the integration of noble values within the learning process (Faturrahman et al., 2022).

The appropriate approach can help students develop positive attitudes and a sense of responsibility. According to Rangkuti et al. (2022), it is essential to adopt a systemic approach in building a school culture that supports character development, which includes the involvement of all parties, from teachers to parents.

In Indonesia, the concept of character education has been integrated into the national curriculum. However, its implementation still faces various challenges, such as the lack of teacher training in value-based pedagogy and the low level of value integration in daily learning activities (Hanafi, 2021). This creates difficulties in establishing a learning environment that optimally supports students' character development. Therefore, strengthening teacher capacity is a key element in the successful implementation of character education.

Pedagogical Strategies and Models in Character Strengthening

An effective pedagogical approach in character education emphasizes contextual, reflective, and values-based learning (Syakur et al., 2022). Models such as value clarification, experiential learning, and project-based learning have been proven to encourage the internalization of values into students' real-life behavior (Suprpto et al., 2021). The following literature review presents several pedagogical strategies that can be applied to strengthen character education.

Table 2. Literature Review Results on Pedagogical Strategies in Character Strengthening

Author, Title, Journal	Year	Method	Research Results
Simovic <i>et al.</i> , The Impact of Attitudes, Beliefs, and Cognitive Reflection on the Development of Critical Thinking Skills in Online Students, <i>Online Learning Journal</i> .	2022	G*Power Analysis	The research results state that reflective learning is important in forming moral awareness. Through activities such as personal journals, moral dilemma discussions, or group reflections, students are invited to assess actions, understand consequences, and develop empathy. This strategy not only shapes attitudes but also sharpens critical thinking skills.
Maulana, A. et al., "The Value Clarification Technique Learning Model to Improve Students' Critical Thinking Skills and Social Skills." <i>Jurnal Pendidikan: Teori, Penelitian, Dan Pengembangan</i> .	2019	Classroom Action	The research results explain that the Value Clarification Model is one of the value-based learning models that invites students to explore, realize, and determine personal values through dialogue, discussion, and solving moral

			dilemmas. This model helps students develop self-awareness and value integrity.
Al-Hanif Adnan, H. F., & Mustolikh, M. "The Influence of the Project-Based Learning (PjBL) Method on High School Students' Learning Outcomes in Geography Subjects." Proceedings of Pendidikan Geografi Universitas Muhammadiyah Purwokerto.	2022	Literature Review	The research results explain that... Project-Based Learning (PjBL) through active involvement in social or environmental projects has a positive impact on students. They learn to cooperate, be responsible, and develop concern for problems in society and daily life.
Sundari, T., & Maruti, E. S. "The Experiential Learning Method and Its Implementation in Social Studies Subjects for Students at SDN 3 Bedrug in the 2022/2023 Academic Year." Didaktik: Jurnal Ilmiah PGSD STKIP Subang.	2023	Quantitative Approach	The research results state that Experiential Learning or learning based on real experiences in society can strengthen the appreciation of values due to direct student involvement in the learning process.
Marasabessy, Abd. C., et al., "Internalization Values of Character Education as a Solution for Degradation of Civility of the Nation." Cetta: Jurnal Ilmu Pendidikan	2022	Qualitative Approach and Literature Review	The research results state that teachers become role models in attitudes, communication, and interactions shown to students.

According to Fahdini et al. (2021), the development of the times, family environment, peers, school environment, and social surroundings greatly influence students' moral degradation. Therefore, it is necessary to implement character education strategically at every level of education, along with collaboration among schools, families, and communities.

According to Ginting et al. (2022), at the elementary school (SD) level, character education strategies focus on the habituation of fundamental values such as honesty, responsibility, and cooperation. Teachers, as role models, play a direct role in providing good examples for students. Through various activities, students are taught to apply these values in their daily lives, thereby forming positive character traits from an early age (Fithriani et al., 2021). At this stage, character formation requires a holistic and consistent approach. Every learning activity becomes an opportunity for value internalization. Teachers serve as moral guides who create a conducive classroom atmosphere for instilling positive values, such as through routine activities like collective prayers, group work, classroom duties, and giving appreciation for good behavior (Vieira & Feldens, 2021). These values are cultivated through experience and habituation in real-life contexts.

In addition to daily routines, the integration of character values can also be implemented through thematic approaches within the curriculum. Teachers can incorporate moral messages into various subjects (Mufidah et al., 2023). For example, in folk tales, students can be encouraged to discuss values such as honesty and courage. In social studies (IPS), students can be introduced to social roles and responsibilities within community life. This approach allows value learning to become an inseparable part of the academic process, providing contextual meaning for students in understanding and practicing character values in everyday life.

According to Mulyadi et al. (2022), at the junior high school (SMP) level, students begin to experience a transitional phase and identity crisis. Therefore, character education strategies should emphasize discussions, debates, and case studies. Active learning, problem-solving, and project-based learning can be used to instill responsibility and social awareness.

At this stage, students begin to show independent thinking but remain vulnerable to environmental influences and digital media (Kieserling & Melle, 2019). Therefore, character education at this level should be designed to strengthen moral awareness through approaches that stimulate students' critical thinking and empathy (Suprianto et al., 2020). Teachers can use debate and group discussion methods to address social issues relevant to adolescents, such as bullying, intolerance, or technology misuse (Sutriyawan & Sari, 2020). Through these forums, students are not only trained to express opinions rationally but also encouraged to respect differences and understand the consequences of their actions.

Project-based learning (PjBL) has proven to be an effective strategy for internalizing character values among junior high school students (Reid-Griffin et al., 2020). In projects involving teamwork, such as anti-bullying campaigns or school environmental clean-up projects, students learn to take responsibility, collaborate, and develop care for others. Furthermore, this approach enables students to directly experience how character values are applied in real-life situations (Soboleva & Karavaev, 2020). Such activities not only enhance cognitive understanding of moral values but also strengthen affective and psychomotor aspects, which are crucial components of character development.

At the senior high school (SMA) level, students require character education that can build moral resilience in facing global challenges, digitalization, and value crises. Ansori & Jaelani (2022) explain that the prophetic pedagogical approach is highly effective in shaping the character of high school students, as it emphasizes three main pillars: humanization (human values), liberation (freedom of thought), and transcendence (connection with spiritual values).

Educators who can serve as role models have a significant impact on shaping a generation that is not only intellectually intelligent but also morally and spiritually strong.

In high school learning processes, character education can be designed creatively so that it does not seem rigid or monotonous. Teachers can develop activities that relate to students' daily lives, such as creating vlogs with themes like "inspiring stories about honesty" or holding moral debate simulations on topics like ethics in social media use. These activities not only make students more active but also encourage them to think critically while shaping wiser attitudes in facing modern challenges.

Project-based learning can also be utilized to instill values such as collaboration, empathy, and responsibility. For instance, students can be engaged in simple social projects such as anti-bullying campaigns or environmental initiatives at school. Through these projects, students learn to plan, cooperate, resolve conflicts, and evaluate their work outcomes. Such activities form part of contextual and enjoyable character education, with teachers acting primarily as facilitators who guide rather than dominate the learning process.

Moreover, reflection moments can be designed in meaningful and personal ways, for example, through heartfelt sharing sessions or reflection circles where students can share their experiences, challenges, or life values they encounter in daily life. Teachers simply need to create a safe and supportive atmosphere. This approach brings the transcendental aspect of character education to life, as students learn to understand life values through their own experiences and emotions. They do not merely study values, they experience them in a learning process that is rich with meaning.

Table 3. Conceptual Chart: Staged Approach to Character Education

Education Level	Main Focus	Key Pedagogical Strategies	Ultimate Goal
Elementary School	Habituation of Fundamental Values (Honesty, Responsibility, Cooperation)	Role modeling by teachers, Routine daily activities (prayers, duties), Thematic value integration in subjects	Forming Positive Character Traits from an early age
Junior High School	Strengthening Moral Awareness and Critical Thinking	Discussions and Debates (on social issues), Case studies, Project-Based Learning (PjBL) for teamwork and social concern	Developing Moral Awareness and Critical Response to social/digital pressures
Senior High School	Building Resilience	Prophetic Pedagogical Approach, Vlogs/Simulations	Establishing Strong Moral Resilience (intellectual, moral,

Transcendental Values	social media), circles/Personal sessions	Reflection sharing	spiritual) global challenges	to face challenges
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CONCLUSION AND SUGGESTIONS

Based on the study results, character education is proven to be a strategic and essential solution to the moral decline of students in the Industrial Revolution 4.0 era, which is marked by identity crises, individualism, and weakened empathy due to rapid digitalization. The key finding is that character education must be implemented in stages according to the student's developmental phase: value habituation at the Elementary School (SD) level, strengthening moral awareness in Junior High School (SMP) through discussions and social projects, and building moral resilience in Senior High School (SMA) through reflection and contextual learning.

For this to be successful, teachers need to be trained as value facilitators, and a collaborative commitment between schools, families, and communities is essential in creating an educational ecosystem that supports the strengthening of student character. Learning must be designed creatively and touch on students' real lives so that value internalization occurs completely and meaningfully.

Implications for Policy and Practice:

1. Pedagogical Training: Educational policies must prioritize sustained and high-quality value-based pedagogy training for teachers to equip them with the skills to facilitate reflection and ethical dilemma discussions.
2. Curriculum Integration: The government is expected to strengthen policies and supervision of the implementation of character education in schools, ensuring it moves beyond mere administrative compliance to have a real and measurable impact on forming a generation that is intellectually, emotionally, and spiritually intelligent.
3. Collaborative Mandate: Policymakers should establish a clear mandate for structured collaboration among the school, family (parenting education), and community to provide a consistent moral environment across all settings, thereby supporting the student's moral development across all educational stages.

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