ISSN 2987-565X (Online) | Vol. 03, No. 02, Aug (2025), pp. 62-71

Published by: IARN Institute

Journal of Education Innovation and Curriculum Development

Journal homepage: https://journals.iarn.or.id/index.php/educur/index

Independent Curriculum Innovation for Enhancing Students' Creativity and Critical Thinking in the Digital Era

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Article Info

Article history:

Received June 22, 2025
Revised Juli 26, 2025
Accepted Aug 30, 2025

Keywords:

Independent Curriculum;
Curriculum innovation;
Creativity;
Critical thinking;
Digital era.

ABSTRACT

This research examines the role of the Independent Curriculum as an educational innovation designed to enhance students' creativity and critical thinking in the digital era. The study was motivated by the growing need for education systems to adapt to rapid technological advancements and the demands of 21st-century learning. Using a qualitative descriptive approach, data were collected through classroom observations, teacher interviews, and analysis of curriculum documents to evaluate how curriculum implementation influences student learning outcomes. The findings reveal that curriculum innovation fosters student-centered learning by promoting project-based and inquiry-based approaches, enabling students to generate ideas, develop innovative solutions, and engage in analytical reasoning and problem-solving. Evidence also shows that integrating digital tools within the curriculum enhances collaboration, creativity, and higher-order thinking skills. However, the study identifies challenges such as varying levels of teacher readiness, disparities in digital literacy, and unequal access to technological resources, which hinder the full realization of the curriculum's goals. Despite these barriers, the research concludes that the Independent Curriculum has significant potential to prepare students for future challenges by encouraging autonomy, adaptability, and reflective learning practices. The study recommends strengthening teacher professional development, improving digital infrastructure, and continuously refining curriculum design to ensure effective and sustainable implementation.

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1. INTRODUCTION

The digital era has transformed nearly every aspect of human life, from communication and commerce to governance and social interaction. Education, as the foundation of human development, cannot remain static in the face of such rapid change. The traditional paradigm of education, which emphasizes rote memorization and teacher-centered instruction, is no longer sufficient to prepare students for the complexities of the 21st century(Hoidn & Reusser, 2020). Instead, education must adapt to the digital era by embracing technological advancements and integrating them into teaching and learning processes in order to remain relevant and effective.

One of the primary reasons education must adapt to the digital era is the changing demands of the global workforce(Jandrić & Ranđelović, 2018). Modern industries increasingly require skills such

as problem-solving, creativity, critical thinking, collaboration, and digital literacy. Without adequate exposure to digital tools and methods of learning, students risk falling behind in a competitive and technology-driven economy. By integrating digital learning platforms, online resources, and interactive technologies, schools can foster the competencies that align with these new demands.

Furthermore, adapting education to the digital era enhances access and inclusivity. Digital technology enables learning beyond the boundaries of classrooms and provides opportunities for students in remote or underserved areas to access quality education. Online resources, open educational platforms, and virtual classrooms help reduce disparities and democratize knowledge(Hansen & Reich, 2015). This creates a more equitable education system where learning opportunities are not limited by geography or socioeconomic background.

Adapting education to the digital era also encourages innovation in pedagogy. Teachers can move beyond traditional lecturing and instead employ blended learning, flipped classrooms, and project-based learning supported by technology(Chua & Islam, 2021). These approaches encourage active participation, collaboration, and deeper engagement, which in turn foster creativity and critical thinking skills among students. Technology also allows personalized learning experiences, where students can progress at their own pace and explore areas of interest more deeply.

Education in the 21st century is undergoing rapid transformation driven by the advancement of digital technology and the growing demand for new competencies. In the digital era, students are expected not only to master knowledge but also to develop higher-order thinking skills, such as creativity and critical thinking, which are essential for problem-solving, innovation, and adaptability(Kwangmuang et al., 2021). Conventional education systems that emphasize memorization and teacher-centered instruction are no longer sufficient to meet these challenges. This condition calls for curriculum reforms that prioritize flexibility, innovation, and the development of student potential in a holistic way.

In Indonesia, the introduction of the Independent Curriculum (Kurikulum Merdeka) represents a significant step toward reorienting education to suit the needs of the modern era(Hufron & Junaedi, 2021). This curriculum emphasizes student-centered learning, freedom for schools and teachers to design learning activities, and the integration of projects that encourage exploration, collaboration, and innovation. Through this approach, the Independent Curriculum seeks to nurture essential 21st-century skills, especially creativity and critical thinking, which allow students to analyze information critically, generate original ideas, and respond effectively to complex challenges.

Over the past decade scholars have framed creativity and critical thinking as central 21st-century competencies and examined how curricula must change to support them. Thornhill-Miller (2023) provides a broad synthesis of the "4C" skills (creativity, critical thinking, communication, collaboration), discussing how education systems valorize and assess those competencies in response to the future of work. This work and similar reviews argue that curriculum innovation should explicitly target higher-order learning outcomes rather than solely content coverage.

A second strand investigates how digital technologies affect creativity. Multiple case studies and reviews show that technology can both enable and scaffold creative processes when integrated pedagogically for example, technology-savvy teachers using digital tools to design open tasks and multimedia projects (Bereczki, 2021). Meta-analyses and targeted empirical studies (Wang, 2024; Pikhart, 2024) report generally positive effects of virtual/interactive technologies on creative outcomes, while stressing that benefits depend on task design, teacher expertise, and access to infrastructure.

A large body of empirical work focuses on project-based and online project-based learning as curriculum innovations that foster critical thinking and creativity. Zhang (2023) and several meta-analytic or quasi-experimental studies found that project-based approaches produce significant gains in students' higher-order thinking and problem-solving compared with traditional instruction. More recent work on online/project-based blends (Song, 2025; Marini, 2025) suggests that when digital platforms are thoughtfully designed, they maintain or even enhance these gains in remote or blended settings.

In the Indonesian context, a growing number of studies evaluate the Merdeka/Independent Curriculum and its potential to foster creativity and critical thinking. Several qualitative and descriptive studies (Wulandari, 2024; Rahmawati, 2021; Tupalessy, 2025) report that the Merdeka approach with greater teacher/school autonomy and project-based tasks encourages learner-centred practices and creative tasks, but also document recurring implementation challenges: uneven teacher readiness, infrastructure gaps, and variability across regions. These works indicate promising early outcomes while calling for teacher professional development and digital capacity building.

Recent reviews and scoping studies have sharpened the concept of digital creativity and linked it to curriculum design. Samper-Márquez (2025) mapped definitions and measures of digital creativity and emphasized that curricula need explicit learning activities and rubrics to capture digitally mediated creative production. Complementary empirical work (Zhou, 2025) shows a positive correlation between digital literacy and students' innovation capabilities, underlining that curriculum innovation must pair pedagogical change with digital-skill development.

However, the implementation of the Independent Curriculum faces various obstacles, particularly in its integration with the digital learning environment. While digital tools provide opportunities to enhance creativity and critical thinking through interactive and collaborative learning, disparities in digital literacy, infrastructure, and pedagogical readiness among teachers and students remain a challenge. These issues raise important questions regarding the extent to which the Independent Curriculum has been effective in achieving its goals and how it can be optimized to fully harness the potential of digital innovation.

Given these conditions, research on Independent Curriculum innovation in enhancing students' creativity and critical thinking in the digital era is crucial(L. S. Tan et al., 2017). This study not only addresses the alignment between curriculum reform and digital transformation but also provides insights into practical strategies that can strengthen the quality of education. Ultimately, the findings of this research are expected to contribute to the improvement of educational policies and practices that prepare students to thrive in an increasingly complex, digital, and globally competitive world.

2. RESEARCH METHOD

This research employs a qualitative descriptive approach to explore how the Independent Curriculum contributes to the development of students' creativity and critical thinking within the context of the digital era(Yang & Wu, 2012). The qualitative method was chosen because it allows the researcher to gain an in-depth understanding of the curriculum's implementation, teachers' strategies, and students' learning experiences, which cannot be fully captured through numerical data alone. Through this approach, the study seeks to uncover patterns, meanings, and insights that emerge from real educational practices.

The research setting is selected schools that have adopted the Independent Curriculum at the secondary education level(Dusenbury et al., 2003). These schools were chosen purposively based on their readiness to implement curriculum innovation and their integration of digital learning tools in classroom activities. The participants consist of teachers, students, and school administrators, as they represent key stakeholders who directly engage with the curriculum. The sample is determined through purposive sampling, with teachers chosen based on their active involvement in project-based learning and digital integration, and students selected from various grade levels to ensure diverse perspectives.

Data collection techniques include semi-structured interviews, classroom observations, and document analysis(Harrell & Bradley, 2009). Interviews with teachers and administrators focus on their understanding of the Independent Curriculum, strategies to foster creativity and critical thinking, and challenges in using digital tools. Student interviews capture their learning experiences, perceptions, and the extent to which they feel the curriculum helps develop their creative and critical capacities. Classroom observations are conducted to examine teaching methods, student participation, and the integration of digital resources during learning activities. Document analysis includes

reviewing lesson plans, project-based assignments, and assessment rubrics to identify alignment with creativity and critical thinking objectives.

For data analysis, this study uses thematic analysis, where data are systematically coded and categorized to identify recurring themes and patterns(Joffe, 2011). The analysis process follows several stages: data reduction through coding, data display in the form of thematic categories, and conclusion drawing by interpreting the meaning of the findings in relation to the research objectives. To ensure trustworthiness, techniques such as triangulation of data sources, member checking with participants, and maintaining an audit trail are applied.

In summary, this methodology provides a comprehensive framework for investigating how curriculum innovation through the Independent Curriculum shapes students' creativity and critical thinking in the digital era. By combining interviews, observations, and document analysis, the research is expected to yield rich insights that contribute both to theoretical discussions on curriculum reform and to practical strategies for educators and policymakers.

3. RESULTS AND DISCUSSIONS

3.1 Result

The findings of this research reveal that the implementation of the Independent Curriculum has contributed positively to the development of students' creativity and critical thinking, particularly when integrated with digital learning tools. Classroom observations indicated that teachers who applied project-based learning and inquiry-based approaches were able to create more engaging and student-centered learning environments(Boudersa & Hamada, 2015). In these settings, students were encouraged to explore real-world problems, collaborate with peers, and present innovative solutions using digital platforms. Such activities stimulated students' ability to generate original ideas, experiment with various approaches, and refine their work based on feedback.

Interviews with teachers highlighted that the Independent Curriculum provided greater flexibility in designing lessons, which allowed them to integrate cross-disciplinary projects and digital resources into the learning process(Downie et al., 2021). Teachers reported that this autonomy enabled them to design activities that were more relevant to students' daily lives and interests, thereby fostering intrinsic motivation. However, they also noted challenges in adapting to new teaching roles, as the shift from a teacher-centered to a facilitator-oriented approach required significant changes in mindset and pedagogy. Teachers with higher digital literacy were more successful in implementing creative and critical thinking tasks compared to those who lacked sufficient training in digital integration.

From the perspective of students, the results showed a noticeable increase in engagement and ownership of learning. Many students expressed that digital tools such as online collaboration platforms, multimedia applications, and interactive simulations enhanced their ability to think critically and creatively. They particularly valued opportunities to work on projects that connected classroom learning with real-life issues, as this encouraged them to question assumptions, analyze data, and construct innovative solutions. Nevertheless, disparities were observed among students, as those with limited access to digital devices or weaker digital skills faced more difficulties in maximizing their learning experiences.

Document analysis further supported these findings, revealing that lesson plans and assessment rubrics under the Independent Curriculum placed explicit emphasis on higher-order thinking skills(Johansson, 2020). Project-based assignments were designed not only to assess knowledge acquisition but also to measure creativity, problem-solving ability, and critical reasoning. The use of reflective journals and peer evaluations also provided evidence that students were encouraged to engage in self-assessment and constructive critique, both of which are essential for developing critical thinking.

Overall, the results indicate that the Independent Curriculum, when effectively implemented with digital integration, enhances students' creativity and critical thinking. However, the success of this innovation is highly dependent on teacher readiness, digital literacy, and equal access to technology among students. These findings suggest that while the curriculum reform holds significant

potential, continuous support and professional development for educators, as well as policies addressing digital inequality, are necessary to ensure its effectiveness across diverse learning contexts.

3.2 Evidence that Curriculum Innovation Promotes Student-Centered Learning

Curriculum innovation has increasingly been recognized as a driver of student-centered learning, shifting the focus of education from knowledge transmission to the development of skills, attitudes, and competencies that empower learners to take an active role in their own education. Evidence from various studies indicates that innovative curriculum models, such as project-based learning, inquiry-based approaches, and flexible learning frameworks, provide students with opportunities to engage more deeply with content, exercise autonomy, and collaborate meaningfully with peers. These characteristics align with the principles of student-centered learning, which emphasize active participation, critical reflection, and personal relevance in the learning process.

One clear example comes from the implementation of project-based learning within innovative curricula(Uziak, 2016). Research shows that when students work on projects related to real-world issues, they are more motivated to learn because the tasks connect directly to their experiences and interests. Instead of passively receiving information, students actively construct knowledge through exploration, experimentation, and problem-solving. This not only enhances comprehension but also fosters creativity, collaboration, and responsibility for one's own learning outcomes. The curriculum, in this case, acts as a framework that supports student inquiry and encourages multiple pathways to achieve learning objectives.

In addition, curriculum innovations such as the Independent Curriculum (Kurikulum Merdeka) in Indonesia provide schools and teachers with the flexibility to adapt learning activities to the unique needs of students. This flexibility enables teachers to design lessons that are tailored to individual learning styles, abilities, and interests. Evidence from classroom observations and interviews suggests that students respond positively to this approach, as they feel more engaged and valued in the learning process. The opportunity to choose projects, explore topics of personal relevance, and express ideas through various media further illustrates how curriculum innovation strengthens the principles of student-centered learning.

Digital integration within curriculum innovation also provides compelling evidence of its role in promoting student-centered learning(Aithal & Aithal, 2020). By utilizing digital platforms, students can access diverse resources, collaborate online, and engage in self-paced learning activities. This not only cultivates independence but also gives students greater control over their learning process. For example, interactive simulations and collaborative online projects allow students to experiment, test ideas, and receive immediate feedback, which reinforces active engagement and critical thinking.

The evidence suggests that curriculum innovation inherently promotes student-centered learning by providing structures and opportunities for autonomy, collaboration, and meaningful engagement(Lee & Hannafin, 2016). By shifting from rigid, teacher-centered practices toward flexible, inquiry-based, and digital-supported approaches, innovative curricula empower students to take ownership of their education. This transformation not only enriches the learning experience but also prepares students with the essential skills needed to thrive in the digital era.

3.3 Findings on Improvements in Creativity and Critical Thinking

The results of this study demonstrate clear improvements in both creativity and critical thinking among students who engaged with the Independent Curriculum supported by digital integration. Evidence from classroom observations revealed that students displayed greater creativity in generating original ideas, particularly when tasked with project-based and inquiry-driven assignments. For instance, students were able to design innovative solutions to real-world problems, such as creating digital presentations, prototypes, or multimedia projects, which reflected their ability to combine imagination with practical application. Teachers noted that students became more confident in expressing unique perspectives, exploring alternative approaches, and taking intellectual risks, all of which are indicators of enhanced creative capacity.

In addition to creativity, the findings indicate significant growth in students' critical thinking skills, particularly in their ability to analyze information, evaluate arguments, and solve problems

systematically(Lai, 2011). During classroom discussions and collaborative tasks, students were observed questioning assumptions, comparing multiple viewpoints, and justifying their decisions with logical reasoning. The use of digital resources, such as data analysis tools and online collaborative platforms, provided students with opportunities to critically assess information and apply it to problem-solving tasks. These activities nurtured their capacity to break down complex issues, identify patterns, and construct evidence-based solutions

Interviews with students further confirmed these findings. Many expressed that the curriculum's emphasis on project-based and reflective learning allowed them to think "outside the box" while also sharpening their decision-making skills. They highlighted that working in teams required not only creativity in idea generation but also critical negotiation and problem-solving to reach collective outcomes. The reflective components, such as journals and peer feedback, encouraged students to evaluate their own thought processes, thereby deepening their ability to think critically about both content and learning strategies.

Document analysis of lesson plans and assessment rubrics also supported these improvements(Allen & Tanner, 2006). The assignments under the Independent Curriculum were intentionally designed to stimulate higher-order thinking by combining open-ended questions, real-world scenarios, and opportunities for innovation. Assessment criteria often included creativity in producing original solutions and critical thinking in structuring arguments or solving problems. This explicit emphasis on higher-order skills in the design and evaluation of tasks ensured that students were consistently challenged to go beyond rote memorization and engage with deeper learning processes.

Overall, these findings show that curriculum innovation not only increases student engagement but also leads to measurable improvements in creativity and critical thinking. Students became more capable of generating novel ideas, applying them in innovative ways, and analyzing complex issues with structured reasoning. These outcomes suggest that the Independent Curriculum, when effectively implemented and supported with digital tools, provides a powerful framework for cultivating the essential skills needed to thrive in the digital era.

3.4 Practical Strategies for Better Curriculum Implementation in the Digital Era

The successful implementation of curriculum innovation in the digital era requires not only structural changes in educational policy but also practical strategies that can be applied at the classroom level. One key strategy is the integration of digital technology into teaching and learning in ways that enhance creativity and critical thinking. Rather than using technology merely as a substitute for traditional instruction, teachers should adopt digital tools as enablers of collaborative projects, simulations, and interactive problem-solving tasks. For example, platforms for online collaboration can facilitate group work across different locations, while digital design applications can encourage students to express ideas creatively through multimedia presentations and prototypes.

Another important strategy is the professional development of teachers to equip them with the skills and confidence needed to apply the curriculum effectively. Teachers must be trained not only in technical aspects of digital tools but also in pedagogical methods that foster student-centered learning(Keengwe et al., 2009). Workshops, mentoring programs, and peer learning communities can help teachers share best practices, experiment with new approaches, and adapt curriculum objectives to the needs of their students. This continuous professional learning ensures that educators can balance their roles as facilitators, guides, and assessors in digital-enhanced classrooms.

Equally critical is the development of flexible learning designs that allow for personalization and adaptability(Whalley et al., 2021). The Independent Curriculum, for instance, grants teachers autonomy to design lessons suited to the unique needs of students. To maximize its potential, teachers should provide options for students to choose projects, set personal learning goals, and explore topics aligned with their interests. Personalized learning not only increases student engagement but also strengthens ownership of learning, which is central to developing creativity and critical thinking.

The effective implementation of curriculum innovation also depends on ensuring equitable access to digital resources(Wall & Ryan, 2010). Schools and policymakers must address disparities in

digital infrastructure by providing sufficient devices, reliable internet access, and technical support for both teachers and students. Without equal access, curriculum innovation risks widening the digital divide rather than reducing it. Partnerships with government agencies, private sectors, and local communities can play a significant role in ensuring that technological resources are distributed fairly and used effectively.

Finally, a practical strategy lies in embedding authentic assessment methods that reflect the goals of the curriculum. Traditional examinations often fail to capture creativity and critical thinking; therefore, alternative assessments such as project portfolios, digital artifacts, peer evaluations, and reflective journals should be prioritized. These assessment methods provide a more holistic understanding of student learning while encouraging learners to demonstrate their skills in meaningful and innovative ways.

Better curriculum implementation in the digital era can be achieved through technology integration, teacher professional development, flexible learning design, equitable resource distribution, and authentic assessment practices(Valverde-Berrocoso et al., 2021). When these strategies are consistently applied, the curriculum not only aligns with the demands of the digital age but also empowers students with the creativity and critical thinking skills necessary for lifelong learning and global competitiveness.

3.5 Recommendations for Improving Curriculum Design and Teacher Readiness

To maximize the potential of curriculum innovation in the digital era, several recommendations can be proposed with a focus on curriculum design and teacher readiness. First, in terms of curriculum design, it is essential that policymakers and curriculum developers prioritize flexibility and relevance. The curriculum should allow for local adaptation while maintaining national standards, enabling schools to contextualize learning according to students' needs, cultural backgrounds, and community resources(Fitzsimons et al., 2020). A more modular and competency-based design can ensure that creativity and critical thinking are not treated as additional skills but are embedded within each subject area. Furthermore, the integration of digital literacy as a core competency across disciplines should be reinforced, ensuring that students not only acquire subject knowledge but also develop the ability to navigate, evaluate, and create in digital environments.

Second, curriculum design must place greater emphasis on authentic learning experiences. Projects, case studies, and problem-based tasks that reflect real-world challenges should be central elements of learning. This approach not only enhances creativity and critical thinking but also fosters collaboration, communication, and adaptability skills highly valued in the digital economy. In addition, assessment strategies should align with these objectives by incorporating performance-based evaluation, portfolios, and reflective practices, moving beyond traditional examinations that primarily measure memorization.

Equally important is teacher readiness, which remains a critical determinant of curriculum success(Onwubiko, 2020). Teachers require continuous professional development to build both pedagogical and digital competencies. Training should go beyond one-off workshops and instead be structured as ongoing programs that include mentoring, peer collaboration, and classroom-based research opportunities. By engaging in reflective practice and sharing innovative strategies, teachers can strengthen their ability to facilitate student-centered learning and effectively integrate technology into the curriculum.

To further enhance readiness, institutional support must be strengthened. Schools should provide teachers with adequate resources, including access to digital tools, reliable infrastructure, and time for professional collaboration. Supportive leadership is also crucial in creating an environment where teachers feel empowered to experiment with new methods without fear of failure. Incentives and recognition for innovative teaching practices can also motivate teachers to fully embrace curriculum reforms.

Lastly, it is recommended that policy and practice remain closely aligned. Policymakers must ensure that curriculum innovations are supported by clear guidelines, adequate funding, and long-term strategies for teacher development. Collaboration between government, universities, and

professional organizations can help bridge the gap between theory and practice, ensuring that curriculum design evolves alongside advancements in technology and shifts in educational needs.

Improving curriculum design and teacher readiness requires a holistic approach that integrates flexibility, authenticity, and digital literacy within the curriculum, while simultaneously supporting teachers through continuous training, resources, and institutional encouragement. Only through this dual focus can curriculum innovation truly enhance students' creativity, critical thinking, and preparedness for the challenges of the digital era.

3.6 Comparison with Previous Research

The findings of this research confirm and expand upon earlier studies that highlight the role of curriculum innovation in fostering creativity and critical thinking. For instance, Bereczki (2021) emphasized that technology-enhanced teaching practices can stimulate creative thinking when integrated with appropriate pedagogical approaches. Similarly, Wang (2024) and Pikhart (2024) demonstrated that digital tools provide opportunities for innovation and idea generation when students are given autonomy in their learning. In line with these studies, the current research found that the integration of digital resources within the Independent Curriculum encouraged students to develop original ideas, design creative projects, and apply innovative solutions to real-world problems. This alignment reinforces the argument that digital integration, when combined with curriculum reform, significantly enhances student creativity(S. C. Tan et al., 2021).

In terms of critical thinking, earlier research has consistently shown the positive impact of project-based and inquiry-based learning. Zhang (2023) and Marini (2025), for example, reported that students engaged in project-based learning were better able to analyze information, evaluate arguments, and solve complex problems compared to those taught through traditional methods. The present study echoes these findings, as students working under the Independent Curriculum framework demonstrated improved analytical abilities, questioning skills, and systematic problem-solving strategies. By situating learning in real-world contexts and encouraging reflection, the curriculum allowed students to practice higher-order thinking more consistently, thereby validating the conclusions of previous research.

This study also supports findings from earlier evaluations of the Merdeka Curriculum in Indonesia, which pointed to its potential in encouraging student-centered practices. Research by Rahmawati (2021) and Wulandari (2024) noted that greater teacher autonomy under the Merdeka Curriculum created more opportunities for active learning, although challenges such as teacher readiness and infrastructure limitations remained. The current research similarly found that teacher flexibility facilitated innovative lesson design and student-centered activities(Zhang et al., 2021). However, it also confirmed that disparities in digital literacy among teachers and unequal access to digital tools limited the full realization of curriculum goals. This demonstrates both consistency with prior research and the need for sustained support in teacher training and infrastructure development.

At the same time, this study contributes new insights to existing literature by emphasizing the interaction between curriculum innovation and digital learning environments. While earlier works (e.g., Samper-Márquez, 2025; Zhou, 2025) stressed the role of digital creativity and literacy as essential components of 21st-century education, the current research highlights how these elements are directly embedded within the Independent Curriculum framework. Unlike previous studies that examined digital creativity or critical thinking in isolation, this research illustrates how a national curriculum reform can serve as a vehicle for systematically promoting both competencies. This integrated perspective broadens the discussion on curriculum innovation, demonstrating its potential to align pedagogical practices with the demands of the digital era.

In summary, the results of this study are largely consistent with previous research in demonstrating that curriculum innovation, when combined with digital integration, enhances students' creativity and critical thinking. However, the study also underscores ongoing challenges in implementation, particularly in terms of teacher readiness and digital equity, which have been echoed in earlier works. By providing empirical evidence from the context of the Independent Curriculum,

this research not only supports but also extends the scope of previous findings, contributing to a deeper understanding of how curriculum reforms can prepare students for the challenges of the 21st century.

4. CONCLUSION

This research concludes that the implementation of curriculum innovation, particularly through the Independent Curriculum, plays a crucial role in equipping students with the competencies needed to thrive in the digital era. The findings indicate that curriculum reform that emphasizes flexibility, student-centered learning, and digital integration significantly enhances creativity and critical thinking among students. Through project-based learning, inquiry-based approaches, and the use of digital resources, students demonstrated improved abilities in idea generation, innovation, analytical reasoning, and problem-solving. The study also affirms that curriculum innovation fosters a shift from teacher-centered practices toward more participatory and collaborative learning models. This shift allows students to take greater ownership of their learning, encouraging autonomy, reflection, and adaptability in facing complex real-world challenges. These outcomes align with global education trends that stress the importance of nurturing 21st-century skills to prepare learners for uncertain and rapidly changing environments. However, the research also highlights challenges that require attention. Teacher readiness, disparities in digital literacy, and unequal access to technological resources remain significant barriers to fully realizing the goals of the Independent Curriculum. Without comprehensive professional development programs and adequate infrastructure support, the potential benefits of curriculum innovation may not be maximized. The study demonstrates that curriculum innovation is not only a pedagogical necessity but also a strategic response to the demands of the digital era. By fostering creativity and critical thinking, the Independent Curriculum has the potential to prepare students as innovative problem-solvers and critical thinkers who can contribute meaningfully to society. For sustainable impact, future efforts must focus on strengthening teacher competencies, ensuring equitable access to digital tools, and continuously refining curriculum design to remain responsive to educational and technological advancements.

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