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Exploring Digital Learning Practices in Fostering Students' Creativity and Innovative Character: Evidence from an Indonesian Junior High School at SMP Negeri 1 Panca Rijang

Hasanuddin, Muhammad Hanafi, Syahrir L, Sam Hermansyah,Usman M,Neisya Aprilia Wahyudi, Nurul Fadhilah

[123456] Universitas Muhammadiyah Sidenreng Rappang
Email : hasanuddinbambeng73@gmail.com

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Abstrak **:** Integrasi teknologi digital dalam praktik pendidikan menjadi semakin penting dalam mengembangkan kreativitas, karakter inovatif, dan partisipasi aktif peserta didik pada lingkungan pembelajaran abad ke-21. Pembelajaran digital memberikan peluang untuk mentransformasikan pendekatan pembelajaran konvensional menjadi pengalaman belajar yang lebih interaktif, kolaboratif, dan berpusat pada peserta didik. Penelitian ini bertujuan untuk mengeksplorasi praktik pembelajaran berbasis digital dalam mengembangkan kreativitas dan karakter inovatif siswa di UPT SMP Negeri 1 Panca Rijang, Kabupaten Sidenreng Rappang, Sulawesi Selatan, Indonesia. Penelitian ini dirancang menggunakan pendekatan kualitatif dengan desain studi kasus untuk mengkaji implementasi pembelajaran digital, strategi pengajaran guru, pengalaman belajar siswa, serta peluang dan tantangan yang berkaitan dengan integrasi teknologi dalam proses pembelajaran. Pengumpulan data dilakukan melalui observasi kegiatan pembelajaran di kelas, wawancara semi-terstruktur dengan guru dan siswa, serta dokumentasi aktivitas pembelajaran dan fasilitas sekolah. Data dianalisis menggunakan model analisis kualitatif interaktif yang mencakup kondensasi data, penyajian data, dan penarikan kesimpulan. Keabsahan data diperkuat melalui triangulasi sumber dan metode. Fokus penelitian diarahkan pada pemanfaatan sumber belajar digital, media multimedia, interaksi pembelajaran berbantuan teknologi, serta aktivitas pembelajaran inovatif yang berpotensi mendorong siswa menghasilkan gagasan orisinal, menunjukkan kemampuan berpikir kreatif, berkolaborasi dengan teman sebaya, dan mengembangkan keterampilan pemecahan masalah. Perhatian khusus diberikan pada kompetensi pedagogis digital guru, keterlibatan siswa dalam pembelajaran, serta dukungan institusi sekolah terhadap pemanfaatan teknologi pendidikan. Penelitian ini diharapkan memberikan pemahaman kontekstual mengenai kontribusi praktik pembelajaran digital terhadap pengembangan kreativitas dan karakter inovatif siswa pada jenjang sekolah menengah pertama di Indonesia. Kontribusi yang diharapkan mencakup rekomendasi praktis bagi guru, pengelola sekolah, dan pemangku kepentingan pendidikan dalam memperkuat praktik pedagogis digital serta menciptakan lingkungan pembelajaran yang bermakna, kreatif, dan inovatif.
Kata Kunci: Pembelajaran Digital; Kreativitas Siswa; Karakter Inovatif; Teknologi Pendidikan; Sekolah Menengah Pertama.

ABSTRACT: The integration of digital technology into educational practices has become increasingly important in promoting students' creativity, innovative character, and active participation in twenty-first-century learning environments. Digital learning offers opportunities to transform conventional teaching approaches into more interactive, collaborative, and student-centered educational experiences. This study aims to explore digital learning practices in fostering students' creativity and innovative character at UPT SMP Negeri 1 Panca Rijang, Sidenreng Rappang Regency, South Sulawesi, Indonesia. The study adopts a qualitative research approach using a case study design to investigate the implementation of digital learning, teachers' instructional strategies, students' learning experiences, and the opportunities and challenges associated with technology integration. Data are collected through classroom observations, semi-structured interviews with teachers and students, and documentation of instructional activities and school facilities. The data are analyzed using an interactive qualitative analysis model involving data condensation, data display, and conclusion drawing, while source and methodological triangulation are employed to strengthen the trustworthiness of the findings. The investigation focuses on the use of digital learning resources, multimedia materials, technology-supported classroom interactions, and innovative instructional activities that potentially encourage students to generate original ideas, demonstrate creative thinking, collaborate with peers, and develop problem-solving skills. Particular attention is given to teachers' digital pedagogical competencies, students' engagement, and institutional support for technology-enhanced learning. The study is expected to provide contextual insights into how digital learning practices can support creativity and innovative character development in Indonesian junior high schools. Its anticipated contributions include practical recommendations for teachers, school administrators, and educational stakeholders seeking to strengthen digital pedagogical practices and promote meaningful, creative, and innovative learning environments.
Keywords: Digital Learning Practices; Students' Creativity; Innovative Character; Educational Technology; Junior High School.

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Introduction

The rapid development of digital technology has significantly transformed educational systems worldwide, creating new opportunities for teachers and students to engage in more interactive, flexible, and meaningful learning experiences. The integration of information and communication technology into classroom instruction has gradually shifted educational practices from teacher-centered approaches toward more participatory and student-centered learning environments. Digital learning is increasingly recognized as an important component of educational transformation because it provides access to diverse instructional resources, supports communication, and creates opportunities for learners to participate actively in knowledge construction. However, the effectiveness of digital technology in education depends on the extent to which technological resources are integrated with appropriate instructional strategies and meaningful learning objectives.

UNESCO (2023) emphasizes that educational technology should serve pedagogical purposes rather than determine educational priorities. The Global Education Monitoring Report highlights three essential conditions for effective technology integration: equitable access, appropriate governance, and teacher preparation. These considerations suggest that digital transformation must be understood as a multidimensional educational process involving technology, instructional practices, institutional management, and learner development.

In contemporary educational settings, digital learning encompasses a broad range of technological applications, including multimedia presentations, educational videos, interactive learning platforms, digital assessment tools, collaborative applications, and technology-supported instructional resources. These applications can provide students with opportunities to access information, explore alternative perspectives, communicate ideas, and develop knowledge through active participation. Nevertheless, the educational contribution of digital technology is determined not merely by the availability of technological devices but by how teachers design learning experiences that encourage students to think critically, creatively, and independently.

Creativity has become one of the most important competencies required in twenty-first-century education. It involves the ability to generate original ideas, develop alternative solutions, and produce meaningful outcomes in response to different learning situations. Runco and Jaeger (2012) explain that creativity is commonly associated with originality and effectiveness. In educational contexts, creativity may be demonstrated through students' ability to formulate questions, interpret information, develop innovative projects, and communicate ideas using different forms of expression.

Digital learning environments can potentially facilitate creative thinking by providing learners with opportunities to experiment with ideas, combine information from multiple sources, and produce digital artifacts. For example, students may demonstrate creativity through multimedia presentations, digital storytelling, collaborative projects, visual representations, or problem-solving activities. These activities allow students to move beyond passive information reception toward more active forms of learning.

Closely related to creativity is the development of innovative character. While creativity emphasizes the generation of ideas, innovation involves transforming those ideas into useful practices, products, or solutions. In school settings, innovative character may be reflected in students' willingness to explore unfamiliar approaches, demonstrate curiosity, take initiative, collaborate with others, and persist when facing learning difficulties. Developing these characteristics requires a learning environment that encourages experimentation, reflection, responsibility, and constructive interaction.

Character development is particularly important during junior high school education because students experience significant intellectual, emotional, and social development. At this stage, schools play an essential role in shaping learning habits, attitudes, values, and behavioral dispositions. Digital learning may provide opportunities to strengthen innovative character when students are encouraged to use technology responsibly, collaborate on meaningful tasks, and solve authentic problems. However, technological engagement alone does not necessarily produce desirable character outcomes. Educational activities must intentionally integrate ethical values, social responsibility, creativity, and collaborative learning.

In Indonesia, educational transformation has increasingly emphasized the importance of technology integration, student-centered instruction, and character development. The national educational context presents opportunities and challenges related to infrastructure, digital literacy, teacher readiness, and differences in technological access among schools. These conditions make it important to investigate how individual educational institutions prepare for and implement digital learning within their specific organizational and cultural environments.

UPT SMP Negeri 1 Panca Rijang, located in Sidenreng Rappang Regency, South Sulawesi, provides a relevant institutional context for examining digital learning and character development. The school's documented vision emphasizes academic excellence, moral development, discipline, competitiveness, character formation, and environmental awareness. Its institutional mission includes integrating modern educational technology to improve instructional effectiveness, encouraging students' personal development, and promoting collaborative relationships among teachers and learners.

The School Field Introduction Program (PLP 1) documentation provides information about the school's organizational structure, physical facilities, classroom environment, student characteristics, and educational activities. The school has documented computer laboratories, multimedia facilities, a library, and subject-specific learning spaces. These resources represent potential institutional foundations for implementing digital learning practices.

Furthermore, the school implements positive behavioral routines and character-building activities, including religious practices, disciplinary regulations, environmental cleanliness programs, and social interaction principles. Such practices demonstrate that character education is embedded within the broader institutional environment. However, the relationship between these existing character-development activities and technology-supported learning requires further investigation.

The interaction between digital learning and character development is particularly relevant

because technological transformation should not be limited to improving instructional efficiency. Educational technology should also contribute to broader learning outcomes, including creativity, problem-solving, collaboration, responsibility, and innovative thinking. When digital tools are incorporated into meaningful pedagogical activities, students may gain opportunities to develop both cognitive competencies and positive learning dispositions.

Previous research has examined the relationship between digital technology and educational outcomes. Mishra and Koehler (2006) introduced the Technological Pedagogical Content Knowledge framework, emphasizing the integration of technological, pedagogical, and content knowledge. Redecker (2017) further highlighted the importance of digital competence among educators, while Henriksen et al. (2016) discussed the relationship between creativity and technology-supported teaching practices. These perspectives suggest that effective digital learning depends on instructional design, teacher competence, and educational context.

Despite the growing literature on educational technology, additional context-specific research is needed to understand how digital learning practices intersect with creativity and character development in Indonesian junior high schools. Studies focusing exclusively on technological adoption may overlook institutional culture, student behavior, and the educational values associated with digital learning. Conversely, character education research may not sufficiently examine the opportunities provided by digital technologies.

This study addresses these interconnected issues by examining digital learning practices and their potential contributions to creativity and innovative character development at UPT SMP Negeri 1 Panca Rijang. Specifically, the study focuses on institutional readiness, digital learning resources, instructional practices, and the relationship between educational technology and school-based character development.

The research is guided by three questions: How do institutional conditions and school policies support digital learning at UPT SMP Negeri 1 Panca Rijang? How can digital learning practices be designed to encourage students' creativity and innovative character? What opportunities and challenges arise when integrating digital technology with character-oriented educational practices?

By addressing these questions, the study seeks to contribute to discussions on educational technology, creative pedagogy, and holistic student development. Its significance lies in examining digital transformation as an educational process that involves not only technological infrastructure but also pedagogical practices, institutional values, and opportunities for student creativity and innovation.

Literature Review

Digital Learning in Contemporary Education

Digital learning refers to educational practices in which digital technologies support instructional delivery, communication, knowledge construction, assessment, and learner engagement. It includes the use of electronic learning materials, multimedia resources, online platforms, interactive applications, and collaborative technologies to facilitate educational experiences.

According to Mayer (2021), multimedia learning involves cognitive processes through

which learners construct meaningful knowledge from verbal and visual information. This perspective suggests that digital learning materials can support understanding when information is presented in ways that correspond with human cognitive processing.

Digital learning should not be understood merely as the replacement of printed textbooks with electronic resources. Instead, it involves changes in how educational content is organized, communicated, explored, and evaluated. Teachers can use digital technology to create interactive instructional experiences, provide timely feedback, facilitate collaboration, and accommodate different learning needs.However, technological integration requires careful pedagogical planning. UNESCO (2023) emphasizes that technology-based educational initiatives should consider educational relevance, accessibility, equity, and sustainability. Therefore, digital learning effectiveness depends on the alignment between instructional objectives, technological resources, and students' learning characteristics.

Teachers play a central role in determining how digital technologies are incorporated into educational practices. Their responsibilities extend beyond operating technological devices to designing meaningful instructional experiences that promote understanding, participation, and higher-order thinking.

Mishra and Koehler (2006) proposed the Technological Pedagogical Content Knowledge (TPACK) framework to explain the relationship between technology, pedagogy, and subject knowledge. The framework suggests that effective technology integration requires teachers to understand not only how digital tools function but also how these tools can support specific instructional approaches and subject-related learning objectives.

Redecker (2017) developed the European Framework for the Digital Competence of Educators, emphasizing professional engagement, digital resources, teaching and learning, assessment, learner empowerment, and the facilitation of students' digital competence.

These frameworks demonstrate that teacher readiness involves technological knowledge, instructional creativity, assessment competence, and the ability to select appropriate resources. In junior high school settings, teachers must also consider students' developmental characteristics, classroom participation, and responsible technology use.

Creativity is generally understood as the capacity to produce ideas or outcomes that are both original and appropriate to a particular context. Runco and Jaeger (2012) emphasize originality and effectiveness as fundamental characteristics of creativity.

In educational settings, creativity can be developed through activities that encourage exploration, imagination, problem-solving, and independent thinking. Digital technology provides various opportunities for creative expression, including digital storytelling, multimedia presentations, visual design, collaborative writing, and project-based learning.

Henriksen et al. (2016) argue that creativity is closely connected with educational approaches that support flexible thinking and innovative teaching practices. Digital learning environments may facilitate creativity when students are encouraged to use technological resources to generate ideas,

evaluate alternatives, and produce meaningful learning outcomes.

However, the relationship between technology and creativity is not automatic. Students may use digital devices primarily for information consumption without engaging in creative thinking. Therefore, teachers must design learning tasks that require original contributions, reflection, collaboration, and purposeful problem-solving.

Innovative character refers to a set of attitudes and behavioral dispositions that support the exploration, development, and application of new ideas. These characteristics may include curiosity, initiative, adaptability, persistence, collaboration, and openness to different perspectives.Character education emphasizes the development of ethical values, responsible behavior, positive relationships, and personal integrity. Lickona (1991) explains character education through the interconnected dimensions of moral knowing, moral feeling, and moral behavior.Within digital learning environments, innovative character development can be supported through activities that encourage students to take responsibility for learning, participate in collaborative projects, demonstrate academic honesty, and develop solutions to meaningful problems.

Digital citizenship is also relevant because students must learn to use technological resources responsibly. Ribble (2015) emphasizes appropriate and responsible behavior in technology-supported environments. Consequently, the development of innovative character should be integrated with digital ethics, collaboration, and social responsibility.

Student engagement is an important indicator of meaningful educational participation. Fredricks et al. (2004) distinguish behavioral, emotional, and cognitive engagement as interconnected dimensions of students' involvement in learning.Digital learning can potentially support engagement through interactive content, immediate feedback, collaborative tasks, and opportunities for personalized learning. However, the extent of engagement depends on instructional design, students' motivation, and classroom relationships.

Vygotsky's (1978) sociocultural theory emphasizes the role of social interaction in cognitive development. From this perspective, collaborative digital activities may support learning when students exchange ideas, negotiate understanding, and receive appropriate guidance from teachers and peers.Digital collaboration may also encourage innovative thinking because learners encounter different perspectives and develop solutions collectively. Nevertheless, productive collaboration requires clear learning objectives, equitable participation, and effective instructional guidance.This study integrates four complementary perspectives: TPACK, constructivist learning theory, creativity theory, and character education.TPACK provides a framework for understanding teachers' integration of technology with pedagogy and instructional content. Constructivist learning theory emphasizes students' active participation in knowledge construction. Creativity theory explains the importance of originality, flexibility, and meaningful idea generation. Character education provides a foundation for examining responsibility, collaboration, persistence, and innovative dispositions.

Together, these perspectives suggest that digital learning may contribute to creativity and innovative character when technological resources are integrated with student-centered pedagogy and supportive institutional values.

The proposed conceptual relationship is:

Digital Resources and School Support → Digital Pedagogical Practices → Student Engagement and Creative Learning Opportunities → Potential Development of Creativity and Innovative Character

This framework represents a theoretical proposition rather than an empirically established causal relationship at the research site.

Research Method

This study employs a qualitative case study approach to explore institutional conditions and educational practices associated with digital learning, creativity, and innovative character development at UPT SMP Negeri 1 Panca Rijang.

A qualitative approach is appropriate because the research focuses on understanding educational experiences, institutional practices, and contextual factors rather than testing predetermined causal relationships. Creswell and Poth (2018) explain that qualitative inquiry facilitates an in-depth understanding of phenomena within their natural settings.The study is structured as a single-site case study, with UPT SMP Negeri 1 Panca Rijang serving as the bounded educational setting. Yin (2018) describes case study research as particularly appropriate for examining contemporary phenomena within real-world contexts.

The present manuscript uses the available PLP 1 report as its primary documentary source. Classroom-specific findings about digital pedagogy and student creativity would require additional evidence before the study could be reported as a completed empirical investigation of those outcomes.

The research setting is UPT SMP Negeri 1 Panca Rijang, a public junior high school located on Jalan Andi Nohong No. 15, Rappang, Sidenreng Rappang Regency, South Sulawesi, Indonesia.The school was selected because its institutional documentation identifies educational technology integration, character development, and collaborative learning as components of its educational mission.

The school also has documented computer laboratories, multimedia facilities, classroom resources, and structured student-development activities. These institutional characteristics make it a relevant setting for investigating the relationship between technological readiness and character-oriented education.The available documentary data originate from the PLP 1 school observation report prepared in 2026. The report describes observations of the school environment, educational facilities, institutional culture, teaching activities, and school management.

For a complete qualitative case study, relevant participants would include school administrators, teachers, and students who have direct experience with digital learning activities. Purposive sampling would be appropriate for selecting participants with relevant knowledge of technology-supported instruction.The number and characteristics of participants in any supplementary research must be reported from actual recruitment records. No additional interview participants or student sample sizes are assumed in this manuscript.

The study uses documentary analysis of the PLP 1 report and proposes additional classroom-based investigation where necessary.The original PLP 1 documentation identifies observation, interviews, documentation, and institutional document

review as data collection techniques. These activities provide contextual information about the school's organizational and educational environment.

For the specific research objectives of this article, classroom observations should focus on the ways teachers incorporate digital resources into instructional activities. Observation indicators may include digital tool selection, student participation, creative tasks, collaborative learning, and instructional feedback.

Semi-structured interviews should explore teachers' perceptions of digital learning, technological challenges, instructional strategies, and opportunities for creativity development. Student interviews may investigate learning experiences, creative participation, and perceptions of technology-supported classroom activities.Documentation may include lesson plans, digital learning materials, classroom assignments, anonymized student work, and relevant school policies, subject to appropriate authorization and consent.

The qualitative analysis follows the interactive model associated with Miles, Huberman, and Saldaña (2014), involving data condensation, data display, and conclusion drawing or verification.

During data condensation, information from school documentation is organized into categories associated with institutional readiness, digital infrastructure, pedagogical practices, student engagement, and character development.

Data display involves presenting relevant information in descriptive narratives and thematic matrices to identify relationships among institutional conditions and educational practices.Conclusion drawing involves interpreting recurring patterns while distinguishing directly documented observations from theoretical explanations and issues requiring additional investigation.

The trustworthiness of the study should be strengthened through triangulation of sources and methods, transparent documentation of analytical decisions, and careful interpretation of evidence.Where supplementary interviews are conducted, participants should receive appropriate information about the research objectives, voluntary participation, confidentiality, and data use. Research involving minors requires suitable institutional authorization and parental or guardian consent, together with age-appropriate student assent.

The analysis should avoid attributing unverified statements to teachers or students and should not present proposed instructional practices as activities already observed.

Results

The documentary analysis identifies several institutional conditions relevant to the implementation of digital learning at UPT SMP Negeri 1 Panca Rijang. These conditions include educational policies, physical infrastructure, organizational support, and the school's commitment to improving instructional quality.The school's vision emphasizes the development of students who demonstrate academic competence, discipline, positive character, and competitiveness. Its mission explicitly identifies the integration of modern educational technology as an approach to improving instructional effectiveness.

This institutional commitment provides a foundation for the development of technology-supported teaching practices. However, the existence of institutional

policies does not independently demonstrate the extent to which digital technologies are used during classroom instruction.

The PLP 1 documentation also identifies technology-related facilities, including two computer laboratories and a multimedia laboratory. These facilities represent potential resources for interactive instruction, digital content development, and student-centered learning activities.

Table 1. Documented Institutional Conditions Supporting Digital Learning

Component	Documentary evidence	Educational implications
School policy	Educational technology integration is included in the school mission	Institutional support for digital learning
Digital infrastructure	Two computer laboratories and one multimedia laboratory are listed	Potential access to technology-supported activities
Learning environment	Subject-specific classrooms and a library are documented	Opportunities for diversified instructional resources
Teacher collaboration	Collaborative school culture is emphasized	Potential support for professional learning
Character education	Discipline, responsibility, and positive behavioral routines are	Foundation for responsible technology use
	institutional priorities	
Student development	Academic, artistic, technological, and extracurricular development are encouraged	Opportunities for creative learning activities

The findings indicate that the school possesses documented institutional and physical resources relevant to digital education. Nevertheless, additional classroom observations are required to determine how frequently these resources are used, how accessible they are to students, and whether they contribute to specific learning outcomes.

The PLP 1 documentation identifies a structured school culture emphasizing discipline, moral development, responsibility, cooperation, and positive social interaction.Several school routines are documented, including collective prayers, religious activities, classroom cleanliness programs, student discipline, and the implementation of the 5S principles: smiling, greeting, offering salutations, politeness, and courtesy.

The school also promotes positive behavioral habits through the 4M principles, emphasizing the importance of punctuality, learning commitment, achievement, and discipline.These activities demonstrate that character development is embedded within the institutional environment rather than restricted to individual classroom subjects.

The school regulations additionally include mechanisms for recognizing positive student behavior and achievement. Such practices

may encourage students to develop responsibility, self-regulation, and motivation.From the perspective of digital learning, these institutional values are relevant because responsible technology use requires discipline, ethical awareness, cooperation, and accountability.However, the available documentation does not establish that students' innovative character has improved specifically because of digital learning activities.

The documented technological resources suggest opportunities for teachers to implement creative instructional activities. Computer laboratories and multimedia facilities may support digital presentations, interactive educational materials, collaborative assignments, and student-generated digital projects.Such activities can be designed to encourage students to explore alternative ideas, communicate information creatively, and develop solutions to authentic learning problems.

For example, digital storytelling may allow students to combine written language, images, narration, and multimedia elements. Collaborative presentations may encourage students to negotiate ideas and develop shared products. Digital problem-solving activities may support experimentation and reflective thinking.

These instructional approaches are consistent with theoretical perspectives on creative pedagogy and technology-supported learning.

Nevertheless, these activities are presented as pedagogical possibilities rather than confirmed classroom practices at the research site.

Table 2. Proposed Indicators for Examining Creativity and Innovative Character

Dimension	Observable indicators	Possible evidence
Originality	Generating new or distinctive ideas	Student-created learning products
Flexibility	Considering alternative approaches	Classroom discussions and project revisions
Creative expression	Communicating ideas through varied formats	Multimedia presentations and digital stories
Initiative	Independently exploring learning resources	Observation and interview data
Collaboration	Sharing responsibilities and developing collective solutions	Group assignments
Problem-solving	Identifying challenges and proposing solutions	Project-based learning outcomes
Digital responsibility	Using technological resources ethically	Classroom behavior and student reflections

These indicators can guide subsequent classroom observations and analysis of student learning products.

The documentary findings identify several institutional opportunities for strengthening digital learning.First, the school's formal commitment to educational technology provides a policy foundation for further instructional innovation. Second, existing technology-related facilities offer potential resources for developing multimedia learning

activities. Third, the school's emphasis on collaboration and character education provides a supportive institutional context for integrating creativity with responsible technology use.

However, several issues remain unresolved. The documentation does not provide sufficient information about internet connectivity, device availability per student, teachers' digital pedagogical competencies, or the frequency of technology-supported classroom instruction.Likewise, evidence concerning students' digital literacy, creative learning products, and innovative behavior is insufficient to establish specific educational outcomes.These limitations identify important areas for further investigation.

The documentary analysis supports three principal findings.First, UPT SMP Negeri 1 Panca Rijang has documented institutional commitments and educational facilities relevant to digital learning.Second, the school implements structured character-development practices emphasizing discipline, responsibility, positive behavior, and collaboration.Third, the relationship between digital learning practices and students' creativity or innovative character remains an empirical question requiring more focused classroom observations, interviews, and analysis of student work.

Taken together, these findings suggest that institutional readiness and positive school culture may provide favorable conditions for developing creative digital pedagogy. However, the available evidence supports an assessment of educational conditions rather than a demonstrated effect of digital learning on student creativity.

Discussion

The findings demonstrate that understanding digital learning requires attention to institutional conditions as well as instructional practices. The documented school mission and technological facilities indicate an organizational foundation for educational technology integration.This interpretation is consistent with UNESCO (2023), which emphasizes that effective digital education depends on infrastructure, governance, and teacher preparation. Technological resources alone are insufficient unless schools establish appropriate instructional strategies and support systems.

The presence of computer and multimedia laboratories at UPT SMP Negeri 1 Panca Rijang represents a potential advantage for developing technology-supported instruction. However, these facilities should be evaluated according to their actual educational use rather than their physical availability.Teachers may use digital resources to present instructional materials, facilitate interactive learning, provide feedback, or support collaborative projects. The educational value of these activities depends on their alignment with learning objectives and students' developmental needs.

Mishra and Koehler's (2006) TPACK framework offers an important explanation for this relationship. Teachers must integrate technological knowledge with pedagogical strategies and subject-specific content to create meaningful learning experiences.Consequently, institutional readiness should be understood as a necessary but insufficient condition for effective digital transformation.

Digital learning environments offer opportunities for students to engage in creative activities that extend beyond

conventional classroom exercises.The ability to access multimedia resources, construct digital artifacts, and collaborate through technology may support originality, flexibility, and creative expression. Nevertheless, these opportunities depend on how instructional tasks are designed.Runco and Jaeger (2012) emphasize that creativity involves originality and effectiveness. From this perspective, students' creative development should be evaluated through the quality and appropriateness of their ideas rather than merely their ability to operate digital devices.

For example, a student who reproduces information from an online source without modification may demonstrate technological competence but not necessarily creativity. Conversely, a student who develops an original multimedia explanation or proposes an innovative solution to a learning problem may demonstrate both technological competence and creative thinking.

Research by Hermansyah, Usman M., and Syamsu T. (2026) on digital learning media for public speaking illustrates how multimedia resources can be developed and evaluated in an Indonesian junior high school context. Their study at SMP Satap 8 Maiwa examined digital media incorporating text, images, videos, and interactive activities. This provides a relevant regional comparison, although its findings cannot be directly generalized to UPT SMP Negeri 1 Panca Rijang. Similarly, Aisa et al. (2025) investigated audio storytelling in EFL classrooms and reported improvements in listening comprehension. Their findings demonstrate the educational potential of structured digital and audio-based learning activities, although the study focused on language proficiency rather than creativity or innovative character. These studies suggest that digital resources may support meaningful learning when integrated with clear pedagogical objectives.

Innovative character development requires more than exposure to digital technology. Students need opportunities to demonstrate curiosity, initiative, persistence, responsibility, and openness to new ideas.

The documented school culture at UPT SMP Negeri 1 Panca Rijang provides a relevant foundation for developing these characteristics.Its emphasis on discipline, responsibility, positive behavior, and collaboration can be connected with digital learning activities that require students to complete projects, communicate effectively, and solve problems.

Lickona's (1991) character education perspective emphasizes the integration of knowledge, values, and behavior. Applied to digital learning, this suggests that innovative character should be developed through intentional educational experiences rather than assumed to emerge automatically from technology use.Teachers can encourage innovative character by assigning meaningful projects, allowing students to explore different solutions, and providing opportunities for reflection.

Digital citizenship should also be incorporated into these activities. Students need guidance concerning academic honesty, appropriate communication, privacy, information evaluation, and responsible use of technological resources.

The relationship between character education and digital learning is therefore best understood as an interaction between institutional values, instructional design, and student participation.Teacher competence is a central factor in translating technological opportunities into meaningful educational

experiences.The availability of digital facilities does not guarantee that teachers possess the knowledge and confidence necessary to integrate technology effectively.

Redecker (2017) emphasizes that educators' digital competence includes the ability to select digital resources, organize learning activities, conduct assessments, empower students, and facilitate digital literacy.

In the Indonesian educational context, professional development should therefore address both technological skills and instructional design.

Teachers may benefit from training in multimedia development, digital assessment, collaborative learning platforms, and creative project-based instruction.

Research by Iwan et al. (2026), involving Sam Hermansyah, examined digital platforms for vocabulary learning in an Indonesian senior high school. The study reported improvements in vocabulary outcomes following technology-supported instruction. Although conducted in a different setting and focused on a different outcome, it provides an example of structured digital learning implementation.

These findings reinforce the importance of examining how technology is used pedagogically rather than treating technology adoption as an educational outcome in itself.

The findings suggest several implications for improving digital learning at UPT SMP Negeri 1 Panca Rijang.At the institutional level, school administrators should assess the accessibility, functionality, and instructional utilization of existing technological facilities.

At the pedagogical level, teachers should design digital learning activities that require students to produce original work, engage in collaborative problem-solving, and reflect on their learning experiences.At the student-development level, digital activities should integrate creativity with ethical responsibility, collaboration, and independent learning.Assessment practices should also move beyond measuring technological proficiency or task completion. Teachers should consider indicators of originality, flexibility, initiative, collaboration, and problem-solving.

These implications are consistent with the broader educational objective of developing learners who are academically competent, creative, responsible, and capable of adapting to technological change.

The principal limitation of this study concerns the scope of available empirical evidence.The PLP 1 documentation provides valuable information about institutional conditions, educational facilities, and school culture. However, it does not provide sufficient classroom-specific evidence to establish how digital learning influences students' creativity and innovative character.

Future research should therefore include systematic observations of digital lessons, interviews with teachers and students, analysis of digital learning products, and appropriate assessments of creative and innovative behavior.Longitudinal or mixed-methods research may also be useful for examining changes in students' creativity over time.By extending the available documentary evidence through classroom-based investigation, future studies can provide stronger explanations of how digital learning contributes to student development.

Conclusion

This study explored the institutional conditions and educational practices relevant to digital learning, creativity, and innovative character development at UPT SMP Negeri 1 Panca Rijang, Sidenreng Rappang Regency, South Sulawesi, Indonesia. Based on the available PLP 1 documentation, the school demonstrates institutional commitments to educational technology integration, character education, collaborative learning, and the provision of technology-related facilities. The documented computer laboratories, multimedia resources, organizational policies, and positive school routines represent potential foundations for developing meaningful digital learning experiences. These findings suggest that digital transformation should be approached as an integrated educational process involving infrastructure, pedagogical competence, institutional culture, and student-centered learning opportunities.

However, the available evidence does not establish a direct relationship between digital learning implementation and measurable improvements in students' creativity or innovative character. The study therefore concludes that the school's documented institutional conditions provide opportunities for creative digital pedagogy, while further classroom-based investigation is necessary to determine actual instructional practices and student outcomes. Future research should prioritize systematic classroom observations, teacher and student interviews, and analysis of student-generated digital products. Strengthening digital pedagogical competence and integrating creativity, collaboration, ethical responsibility, and problem-solving into technology-supported instruction may help schools develop more meaningful and innovative educational environments.

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