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Exploring E-Learning Implementation as a Digital Learning Resource: Teachers' Practices and Students' Challenges at UPT SMP Negeri 3 Baranti

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Abstrak : Integrasi teknologi digital dalam pendidikan menengah telah membuka peluang untuk mendiversifikasi praktik pembelajaran, memperluas akses terhadap sumber daya pendidikan, serta mendukung kemandirian belajar siswa. E-learning semakin menjadi komponen penting dalam pendidikan berbasis teknologi yang memungkinkan guru dan siswa mengakses materi pembelajaran melalui berbagai platform digital. Namun, keberhasilan implementasi e-learning bergantung pada kompetensi digital guru, kesiapan teknologi siswa, ketersediaan fasilitas pembelajaran, serta penerapan strategi pembelajaran yang tepat. Penelitian ini bertujuan untuk mengeksplorasi implementasi e-learning sebagai sumber belajar digital dengan berfokus pada praktik pembelajaran guru, pengalaman belajar siswa, serta berbagai tantangan yang berpotensi muncul di UPT SMP Negeri 3 Baranti, Kabupaten Sidenreng Rappang, Indonesia. Penelitian ini dirancang menggunakan pendekatan kualitatif deskriptif dengan teknik pengumpulan data melalui observasi kelas, wawancara semi-terstruktur, dan dokumentasi untuk mengkaji integrasi sumber belajar digital dalam proses pembelajaran. Penelitian ini berpedoman pada tiga dimensi analisis utama, yaitu strategi guru dalam memilih dan memanfaatkan sumber belajar digital, keterlibatan siswa dalam aktivitas pembelajaran berbasis teknologi, serta hambatan institusional dan individual dalam implementasi e-learning. Data akan dianalisis menggunakan analisis tematik yang didukung oleh triangulasi dari berbagai sumber data. Penelitian terdahulu menunjukkan bahwa sumber belajar digital dapat mendukung fleksibilitas pembelajaran, pembelajaran berbasis multimedia, dan kemandirian belajar siswa. Meskipun demikian, kesenjangan akses teknologi, keterbatasan literasi digital, serta kurangnya pendampingan pedagogis dapat menghambat optimalisasi pemanfaatannya dalam pendidikan. Temuan penelitian terdahulu tersebut menjadi landasan teoretis bagi penelitian yang direncanakan dan tidak diposisikan sebagai hasil empiris dari UPT SMP Negeri 3 Baranti. Penelitian ini diharapkan dapat memberikan kontribusi berupa bukti kontekstual mengenai implementasi e-learning pada jenjang sekolah menengah pertama di Indonesia serta menghasilkan rekomendasi praktis untuk meningkatkan pengembangan profesionalisme guru, aksesibilitas sumber belajar digital, dan penerapan strategi pembelajaran yang berpusat pada siswa.
Kata Kunci: E-learning; sumber belajar digital; praktik pembelajaran guru; keterlibatan siswa; literasi digital; pendidikan menengah.

Abstract : The integration of digital technology into secondary education has created opportunities to diversify instructional practices, expand access to educational resources, and support students' independent learning. E-learning has increasingly become an important component of technology-supported education, enabling teachers and students to access instructional materials through various digital platforms. However, the successful implementation of e-learning depends on teachers' digital competencies, students' technological readiness, the availability of learning facilities, and appropriate instructional strategies. This study aims to explore the implementation of e-learning as a digital learning resource, focusing on teachers' instructional practices, students' learning experiences, and potential challenges at UPT SMP Negeri 3 Baranti, Sidenreng Rappang Regency, Indonesia. A descriptive qualitative research design is proposed, employing classroom observations, semi-structured interviews, and documentation to investigate the integration of digital learning resources into classroom instruction. The study is guided by three analytical dimensions: teachers' strategies for selecting and utilizing digital resources, students' engagement with technology-supported learning activities, and institutional and individual barriers to e-learning implementation. Data will be analyzed using thematic analysis, supported by triangulation across multiple sources. Previous research suggests that digital learning resources can support instructional flexibility, multimedia-based learning, and learner autonomy, although technological inequalities, limited digital literacy, and insufficient pedagogical guidance may constrain their educational value. These established findings provide the theoretical foundation for the proposed investigation but are not presented as empirical findings from UPT SMP Negeri 3 Baranti. The study is expected to contribute contextual evidence concerning e-learning implementation in Indonesian junior high schools and provide practical recommendations for strengthening teacher professional development, digital resource accessibility, and student-centered instructional practices.
Keywords: E-learning; digital learning resources; teacher practices; student engagement; digital literacy; secondary education

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Introduction

The rapid development of information and communication technology has significantly transformed educational systems worldwide. Digital technologies have introduced new possibilities for delivering instructional content, facilitating communication, supporting collaborative learning, and providing access to diverse educational resources. Consequently, schools are increasingly expected to integrate technological innovations into their instructional practices to respond to changing educational demands. The integration of e-learning has become particularly relevant because it allows educational activities to extend beyond conventional classroom boundaries and provides opportunities for flexible, accessible, and interactive learning experiences.

E-learning generally refers to educational processes supported by electronic technologies, including internet-based platforms, digital applications, multimedia resources, and online communication systems. Its implementation may involve learning management systems, educational websites, instructional videos, interactive assessment applications, and digital communication tools. Unlike traditional instruction that primarily relies on printed textbooks and face-to-face explanations, e-learning enables students to access learning materials in different formats and potentially revisit instructional content according to their individual learning needs. Nevertheless, the availability of technology does not automatically ensure meaningful learning. Its educational value depends on the quality of instructional design, teacher guidance, learner participation, and contextual conditions.

The emergence of digital learning environments has encouraged educational institutions to reconsider the role of teachers and students in instructional activities. Teachers are no longer expected to function exclusively as transmitters of knowledge but also as facilitators, learning designers, and guides who help students navigate educational information. Students, meanwhile, are increasingly encouraged to participate actively in constructing knowledge, evaluating digital information, and developing independent learning strategies. This transformation requires pedagogical approaches that combine technological resources with meaningful classroom interaction.

The theoretical foundations of technology-supported education emphasize the importance of aligning digital tools with learning objectives and instructional strategies. Mishra and Koehler (2006) introduced the Technological Pedagogical Content Knowledge framework, which highlights the interrelationship between technological knowledge, pedagogical knowledge, and content knowledge. Their framework suggests that successful technology integration requires teachers to understand not only how digital tools operate but also how those tools can support the teaching of particular subject matter. Similarly, Davis (1989), through the Technology Acceptance Model, emphasized perceived usefulness and perceived ease of use as important factors influencing individuals' acceptance of technological systems.

In Indonesian education, digital transformation has become increasingly important as schools seek to improve educational quality and respond to

technological developments. The experience of distance learning during the COVID-19 pandemic accelerated the adoption of online platforms and electronic learning resources. However, it also revealed disparities in technological infrastructure, internet accessibility, digital competence, and students' readiness for independent learning. These challenges demonstrate that educational technology integration must be understood not merely as a technical process but also as a pedagogical, social, and institutional undertaking.

Previous Indonesian research provides valuable insights into these issues. Hermansyah and Natsir (2023) investigated the use of an Android-based English learning application among junior high school students, highlighting the relevance of mobile technologies in language instruction. Wahyuddin et al. (2024) examined the integration of digital literacy and blended learning in English language education, emphasizing the importance of technological competencies in supporting learning activities. Surgawie et al. (2024) also explored the role of social media in autonomous English learning, identifying both opportunities for independent learning and challenges associated with distractions and limited instructional guidance. These studies illustrate that digital technologies offer educational possibilities, but their successful implementation requires appropriate pedagogical support

Although existing studies have investigated digital applications, blended learning, and technology-supported language instruction, further contextual investigation is needed to understand how teachers integrate e-learning into everyday classroom activities and how students experience digital learning resources in particular school environments. Much of the discussion surrounding educational technology emphasizes its potential benefits, whereas actual implementation may be influenced by school infrastructure, teaching practices, learner characteristics, and institutional support. Therefore, investigating e-learning at the school level can provide a more comprehensive understanding of the conditions shaping its educational use.

UPT SMP Negeri 3 Baranti, located in Sidenreng Rappang Regency, South Sulawesi, Indonesia, is selected as the proposed research setting. The school provides a relevant context for examining how digital learning resources may be incorporated into junior high school instruction. However, the current availability of digital infrastructure, the extent of e-learning implementation, and teachers' and students' experiences at this school have not yet been established by the materials available for this manuscript. These conditions must be documented through direct field investigation rather than assumed from findings obtained in other educational settings.

The present study is conceptually informed by Nurhaliza's (2021) investigation of e-learning as a learning resource in elementary education. That research examined the implementation of e-learning and identified technological access, internet connectivity, and learner motivation as important issues in the original research setting. While the earlier study offers a useful conceptual foundation, its findings cannot automatically be generalized to junior high school students in another geographical and institutional context. Differences in learners' developmental characteristics, curricular expectations, teaching strategies, and technological conditions justify a new empirical investigation.

One important consideration in the implementation of e-learning concerns teachers' instructional practices. Teachers must determine which digital resources are appropriate for particular learning objectives, how technological materials should be introduced, and how students' understanding should be assessed. The selection of digital learning resources also requires attention to accessibility, content accuracy, student engagement, and the compatibility of technology with existing classroom practices. Teachers with limited technological confidence or insufficient professional development opportunities may encounter difficulties incorporating digital resources into meaningful instructional activities.

Students' experiences constitute another essential dimension. Although digital learning resources can provide opportunities for interactive learning, students may differ in their ability to access technological devices, manage online learning activities, evaluate digital information, and maintain learning motivation. Some students may benefit from multimedia explanations and flexible access to materials, while others may require additional instructional support. Consequently, examining students' experiences is necessary to determine whether e-learning functions as an accessible and educationally meaningful learning resource.

Furthermore, institutional conditions may influence the sustainability of digital learning initiatives. Reliable internet connectivity, suitable technological facilities, school leadership, technical assistance, and teacher collaboration can shape how digital learning activities are organized. Without sufficient institutional support, the implementation of e-learning may depend heavily on individual teachers' initiatives and students' personal access to technological devices. Understanding these contextual factors is important for developing realistic recommendations for school-based educational innovation.

Against this background, the proposed study aims to explore the implementation of e-learning as a digital learning resource at UPT SMP Negeri 3 Baranti. Specifically, it seeks to investigate teachers' practices in selecting and integrating digital learning resources, examine students' experiences and engagement with technology-supported learning activities, and identify the challenges and supporting conditions associated with e-learning implementation.

The study addresses three research questions: (1) How do teachers implement e-learning as a digital learning resource in classroom instruction? (2) How do students experience and engage with digital learning resources? (3) What challenges and supporting factors influence the implementation of e-learning at UPT SMP Negeri 3 Baranti?

The significance of the study lies in its potential to contribute context-specific evidence to the literature on digital learning implementation in Indonesian secondary education. Theoretically, it seeks to extend discussions of technological integration by connecting teachers' pedagogical practices, students' learning experiences, and institutional conditions. Practically, the findings may assist teachers in designing accessible technology-supported instruction, support school administrators in identifying professional development priorities, and inform strategies for strengthening students' digital learning experiences. By examining these interconnected dimensions, the study seeks to provide a contextual understanding

of how e-learning can be meaningfully integrated into junior high school education

Literature Review

E-learning has become an important concept in contemporary educational research because it represents the integration of electronic technologies into teaching and learning activities. The term encompasses various forms of technology-supported instruction, including online learning platforms, digital instructional materials, educational applications, multimedia presentations, and internet-based communication systems. Its primary purpose is not simply to replace conventional teaching methods but to expand educational opportunities through technological resources that facilitate knowledge acquisition, interaction, and independent learning.

According to Garrison and Anderson (2003), e-learning environments can provide opportunities for meaningful educational experiences through the integration of cognitive, social, and teaching presence. Their Community of Inquiry framework emphasizes that effective digital learning requires meaningful interaction among learners, instructional content, and teachers. Cognitive presence refers to learners' ability to construct meaning through reflection and inquiry, social presence concerns communication and participation, and teaching presence involves the design and facilitation of educational experiences.

Anderson (2008) further explains that online learning environments should accommodate different forms of interaction, including student–content, student–teacher, and student–student interactions. These interactions are essential because learning is not determined solely by access to technological resources. Students must also have opportunities to interpret information, ask questions, receive feedback, and participate in collaborative activities. E-learning may be implemented through synchronous or asynchronous learning activities, and both approaches offer educational opportunities depending on instructional objectives and technological conditions.

Digital learning resources refer to electronic materials and technological tools that support instructional processes. They may include educational videos, electronic textbooks, interactive exercises, digital presentations, online simulations, educational websites, and learning management systems. These resources provide alternative ways of presenting information and can support different learning preferences and instructional needs.

Mayer (2021) argues that multimedia learning can be enhanced when verbal and visual information are combined according to evidence-based instructional principles. Multimedia materials may help learners understand complex concepts when information is appropriately organized and unnecessary cognitive demands are minimized. However, the inclusion of images, animations, and videos does not automatically improve learning. Instructional effectiveness depends on how these elements contribute to learners' cognitive processing.

Digital resources can also provide opportunities for repeated exposure to instructional materials. Students who experience difficulties understanding classroom explanations may revisit videos, reread electronic texts, or complete additional exercises. Such flexibility can support independent learning, particularly when teachers provide clear guidance concerning learning objectives and expected activities. Hermansyah and Natsir (2023)

examined Android-based learning in a junior high school context, while Surgawie et al. (2024) discussed social media for autonomous English learning. Teachers should nevertheless consider content accuracy, curriculum alignment, readability, technological accessibility, and student safety.

Teachers play a central role in determining how digital technologies are integrated into educational activities. Effective e-learning implementation requires more than the ability to operate electronic devices. Teachers must understand how technological resources can support particular instructional objectives, facilitate learning activities, and provide appropriate feedback.

Mishra and Koehler (2006) introduced the Technological Pedagogical Content Knowledge (TPACK) framework to explain the knowledge required for meaningful technology integration. The framework consists of technological knowledge, pedagogical knowledge, and content knowledge, together with their intersections. Teachers who integrate these dimensions can make more informed decisions concerning digital instructional design. Ertmer and Ottenbreit-Leftwich (2010) emphasize that teachers' beliefs, knowledge, confidence, and institutional culture influence technology integration. Professional development should address instructional planning, classroom management, assessment, accessibility, and evaluation of digital resources.

Student engagement is an important indicator of the quality of educational experiences. Fredricks et al. (2004) conceptualize engagement through behavioral, emotional, and cognitive dimensions. Behavioral engagement involves participation in learning activities, emotional engagement concerns students' feelings and attitudes toward learning, and cognitive engagement refers to the mental effort invested in understanding educational content.

E-learning environments can potentially support these dimensions by offering interactive activities, multimedia explanations, and flexible learning opportunities. However, students' engagement with technology should not be confused with engagement in learning. Frequent use of digital devices does not necessarily indicate meaningful academic participation. Teachers must ensure that technological activities encourage critical thinking, comprehension, reflection, and appropriate interaction.

Self-regulated learning also plays an important role in digital environments. Zimmerman (2002) explains that self-regulated learners actively manage their learning through goal setting, monitoring, and reflection. Surgawie et al. (2024) identified the importance of structured guidance in autonomous digital learning. For junior high school students, independent learning skills may still be developing, so digital learning activities should incorporate clear instructions, manageable tasks, teacher feedback, and opportunities for reflection.

Digital literacy refers to the knowledge and skills required to access, understand, evaluate, communicate, and create information using digital technologies. It extends beyond operational competence because learners must also demonstrate critical judgment, ethical awareness, and responsible technology use. Ng (2012) describes digital literacy as a multidimensional concept involving technical, cognitive, and social-emotional competencies. Wahyuddin et al. (2024) investigated digital literacy integrated with blended learning in English language education.

Technology acceptance also influences the adoption of e-learning. Davis (1989) proposed that perceived usefulness and perceived ease of use are significant factors shaping individuals' acceptance of information systems. Venkatesh et al. (2003) extended research on technology acceptance through performance expectancy, effort expectancy, social influence, and facilitating conditions. Teachers and students may experience e-learning differently, and actual use must be distinguished from favorable attitudes.

Despite its educational potential, e-learning implementation may encounter technological, pedagogical, institutional, and individual barriers. Technological barriers include inadequate internet connectivity, limited access to digital devices, insufficient technical support, and incompatible applications. Pedagogical barriers concern instructional planning, digital assessment, classroom management, and the selection of suitable educational resources. Institutional barriers include limited professional development and insufficient resources. Individual barriers may involve students' limited digital literacy, low motivation, difficulty managing learning activities, and distractions.

Hodges et al. (2020) distinguish carefully designed online learning from emergency remote teaching. UNESCO (2023) emphasizes that educational technology should be evaluated in relation to equity, educational quality, appropriateness, and conditions of use. Nurhaliza (2021) identified limitations involving devices, internet access, and student motivation in the original elementary school setting. These issues may inform the interview guide but cannot establish the conditions at UPT SMP Negeri 3 Baranti.

Existing literature provides substantial evidence concerning digital learning technologies, teacher competencies, student engagement, and barriers to educational technology integration. However, the relationships among these dimensions require contextual investigation at the school level. The proposed study examines teachers' instructional practices, students' learning experiences, and contextual conditions influencing implementation. Teachers' technological and pedagogical decisions may shape resource use, while infrastructure, institutional support, and learner readiness may facilitate or constrain participation. These relationships are analytical considerations rather than predetermined causal findings.

Research Method

This study is designed as descriptive qualitative research to explore the implementation of e-learning as a digital learning resource at UPT SMP Negeri 3 Baranti, Sidenreng Rappang Regency, South Sulawesi, Indonesia. A qualitative approach is appropriate because the study aims to understand educational practices, participants' experiences, and contextual challenges rather than measure causal relationships between predetermined variables. Creswell and Poth (2018) explain that qualitative inquiry enables researchers to investigate how individuals interpret experiences within particular social and institutional contexts.

The proposed research will be conducted at UPT SMP Negeri 3 Baranti. Before data collection begins, the researchers will conduct a preliminary assessment to identify available digital learning facilities, relevant instructional activities, and the school's existing practices concerning technology-supported learning. The duration of fieldwork will be determined

according to school permission, academic schedules, and participant availability. Multiple instructional sessions should be observed to identify recurring practices and contextual variations.

Participants will consist of teachers and students who have direct experience with digital learning resources at the selected school. Purposive sampling will identify information-rich participants. Teacher selection criteria will include involvement in technology-supported instruction and willingness to discuss experiences. Student participants will be selected from classes in which relevant learning activities are observed. The final sample size will be determined by information richness and adequacy for answering the research questions; no participant number is claimed at this stage. Parental or guardian consent and student assent will be obtained where required.

Three principal data collection techniques will be employed: classroom observation, semi-structured interviews, and documentation. Observations will focus on digital resources used, instructional strategies, student participation, learning interactions, and observable implementation challenges. An observation guide will include indicators of resource appropriateness, clarity of instructions, accessibility, interaction, and teacher feedback.

Interviews will explore teachers' instructional planning, resource selection, technological competence, perceived educational benefits, and implementation challenges. Student interviews will address accessibility, perceived usefulness, ease of use, engagement, independent learning, and difficulties with digital resources. Semi-structured interviews permit consistency across topics while allowing participants to describe unexpected experiences.

Documentary evidence may include lesson plans, teaching modules, digital instructional materials, classroom assignments, screenshots of educational applications, school technology policies, and other relevant instructional records. Only documents obtained with appropriate permission will be included in the analysis.

The researcher functions as the primary qualitative instrument. Supporting instruments will include an observation checklist, interview guides, and a documentation review sheet. The interview guides will contain open-ended questions aligned with the research objectives and will be reviewed before fieldwork for clarity and age appropriateness. The documentation sheet will record the type, purpose, source, and relevance of each item.

Data will be analyzed using thematic analysis informed by Braun and Clarke (2006). First, researchers will familiarize themselves with transcripts and observation notes. Second, initial codes will identify meaningful data segments. Third, related codes will be grouped into candidate themes, such as instructional strategies, learning engagement, accessibility, technological barriers, and institutional support. Fourth, themes will be reviewed against the dataset. Fifth, themes will be defined and named. Finally, an interpretive report will be developed using anonymized quotations, observations, and documentary evidence. Literature-derived categories will serve as sensitizing concepts, not rigid classifications.

3.7. Trustworthiness and Data Validation

Trustworthiness will be addressed through credibility, transferability, dependability, and confirmability (Lincoln & Guba, 1985). Credibility will be strengthened through triangulation of interviews, observations, and documents. Transferability will be supported by detailed

contextual descriptions. Dependability will be enhanced through systematic documentation of procedures. Confirmability will be addressed through reflective notes and an audit trail linking interpretations to evidence.

3.8. Ethical Considerations

Researchers will obtain school permission before fieldwork. Participation will be voluntary, and participants will receive clear information about the research purpose and data use. Personal identities will be protected through anonymization. Interviews and observations will minimize disruption to learning and avoid collecting unnecessary personal information or private digital communications.

Results

This section provides a structured reporting framework rather than verified findings from UPT SMP Negeri 3 Baranti. The original study by Nurhaliza (2021) was conducted at SDN 032 Tembilahan, and its results must not be transferred to the new research location.

The proposed investigation examines teachers' instructional practices, students' learning experiences, and contextual factors affecting technology integration. The results should describe classroom observations, experiences reported by teachers and students, and the consistency between interviews and instructional documents. The following dimensions can organize the empirical evidence: teacher resource selection and lesson planning; types and functions of digital resources; behavioral, emotional, and cognitive student engagement; independent learning; technological and pedagogical challenges; and institutional support.

4.2. Teachers' Practices in Integrating E-Learning

The empirical analysis should examine the relationship between lesson planning, digital resource selection, classroom implementation, and assessment practices. Researchers should document whether teachers use digital materials to introduce concepts, supplement explanations, provide independent exercises, or evaluate understanding. Interviews should establish why teachers select technologies and how decisions relate to curriculum requirements and student characteristics. Observations should determine whether reported strategies correspond to actual instructional practices. The results must distinguish occasional technology use from systematic pedagogical integration.

The investigation should classify verified resources according to instructional purposes. Potential categories include videos, electronic textbooks, digital presentations, interactive exercises, educational websites, and learning management systems. Their presence at UPT SMP Negeri 3 Baranti must be confirmed. The analysis should identify whether materials support explanations, assessment, collaboration, communication, or independent learning, as well as frequency of use, access conditions, and instructional guidance.

Student engagement should be examined through behavioral, emotional, and cognitive dimensions. Behavioral engagement includes participation, task completion, and interaction with resources. Emotional engagement involves reported interest, confidence, motivation, or frustration. Cognitive engagement concerns the effort students invest in understanding, reviewing, and applying content. Interviews should explore accessibility, relevance, and difficulties navigating applications. Both positive

and negative experiences, including contradictory evidence, should be represented.

Challenges should be differentiated as technological, pedagogical, individual, and institutional. Potential technological challenges include connectivity, device limitations, and technical support. Pedagogical challenges may involve resource selection, instructional planning, assessment, and classroom management. Student-related difficulties may concern digital literacy, attention management, and independent learning readiness. Institutional challenges may include limited training, infrastructure, or coordination. These categories are prompts for investigation, not confirmed barriers at the school.

The final analytical dimension concerns conditions that facilitate implementation, potentially including teacher initiative, access to suitable resources, student familiarity with devices, teacher collaboration, and administrative support. Evidence from interviews, observations, and documents should be compared to determine whether reported support is reflected in classroom practices.

The final results should connect the identified themes rather than present unrelated categories. Researchers should investigate how teachers' competencies interact with resource availability, how instructional strategies shape engagement, and how institutional support influences sustainability. The report should include anonymized quotations, observed instructional episodes, and relevant documents. No percentages, participant counts, effectiveness claims, or school-specific conclusions should be inserted without corresponding evidence.

Discussion

The integration of e-learning into junior high school education can be understood as part of a broader transformation in educational practices. Digital technologies expand instructional resources and opportunities for flexible learning, multimedia-based instruction, and communication beyond conventional classroom boundaries. However, transformation should not be evaluated solely through the availability or frequency of technology use. A more meaningful evaluation considers how resources contribute to instructional objectives, participation, and knowledge development.

The proposed study at UPT SMP Negeri 3 Baranti seeks to examine technology integration through actual classroom practices rather than technological availability alone. Garrison and Anderson (2003) emphasize that effective e-learning environments require cognitive, social, and teaching presence. A central question for interpreting eventual findings is whether e-learning functions primarily as a means of distributing materials or as an environment supporting meaningful interaction and learning.

Teachers' instructional practices are central to meaningful e-learning implementation. Technology integration involves decisions about resource selection, lesson organization, instructional interaction, and assessment. The TPACK framework developed by Mishra and Koehler (2006) provides a theoretical foundation for interpreting these practices. Technological knowledge alone is insufficient: teachers must also understand pedagogical requirements and subject matter. Videos may support visual explanations, while interactive quizzes may support formative assessment when their results inform feedback.

Ertmer and Ottenbreit-Leftwich (2010) highlight the importance of teachers' beliefs, knowledge, confidence, and educational culture. Teacher interview data should be examined in relation to these factors. Reported difficulties selecting applications or organizing digital activities may point to professional development needs, whereas observed examples of purposeful instruction may illustrate the integration of technology with pedagogy. Such interpretations must remain grounded in collected data.

One important potential contribution of e-learning is its support for student-centered instruction. Digital resources can enable students to access information, review materials, and complete activities according to individual needs. Mayer (2021) explains how appropriately designed verbal and visual information can facilitate comprehension. Yet excessive visual elements, irrelevant information, and poorly structured activities may increase cognitive demands rather than improve understanding.

The investigation should therefore evaluate instructional quality, not merely resource availability. Hermansyah and Natsir (2023) provide an example of Android-based learning in a junior high school English context, but their findings should not be generalized automatically to different schools, subjects, or instructional settings. The new study can contribute contextual evidence about how resource selection relates to students' experiences.

Student engagement is essential in evaluating technology-supported education. Fredricks et al. (2004) distinguish behavioral, emotional, and cognitive engagement. Students may appear actively involved in technological activities without demonstrating deep understanding. Completing quizzes can indicate participation, but further evidence is needed to determine whether students comprehend the concepts assessed. Engagement should be examined through observation, interviews, and learning documents.

Zimmerman (2002) explains that self-regulated learning involves goal setting, monitoring, and reflection. These processes are especially relevant when students access resources independently. However, younger learners may require structured guidance. Teachers can support autonomy through clear objectives, manageable assignments, regular feedback, and reflection. Surgawie et al. (2024) discuss opportunities for autonomous English learning through social media alongside distraction and insufficient guidance. Students' experiences at the research school should be interpreted in light of the support actually provided.

Digital literacy is an essential condition for meaningful e-learning participation. Students and teachers need operational skills and the ability to evaluate information, communicate responsibly, and use technology for learning. Ng (2012) identifies technical, cognitive, and social-emotional dimensions. Familiarity with smartphones does not necessarily imply competence in structured academic work. Wahyuddin et al. (2024) examined digital literacy within blended English learning, reinforcing its relevance to contemporary education.

Davis's (1989) Technology Acceptance Model offers another perspective. Teachers and students may be more willing to adopt tools they perceive as useful and easy to use. However, positive attitudes do not guarantee successful implementation when connectivity, devices, or instructional guidance are inadequate. The eventual analysis should distinguish expressed attitudes from documented use.

Technological barriers may create unequal learning opportunities through differences in internet access, devices, technical assistance, and digital competence. Nurhaliza (2021) identified device access, connectivity, and motivation as challenges at the original elementary school. These findings offer comparison points, not evidence about UPT SMP Negeri 3 Baranti. UNESCO (2023) emphasizes evaluating technology according to appropriateness, accessibility, and equity. Schools should not assume technology-based instruction is automatically more inclusive or effective than conventional approaches.

Institutional readiness may require infrastructure, teacher training, technical support, and responsible-use policies. Where students have unequal access, teachers may need alternatives and flexible participation arrangements. The proposed study should identify the barriers most relevant to its school and document how teachers and administrators respond.

The literature suggests several implications. Teacher professional development should integrate technological skills with instructional design and assessment. Schools should evaluate digital access before requiring particular platforms, considering devices, connectivity, and alternatives. Digital literacy should be incorporated into instruction through information evaluation, task management, privacy, and responsible use. Administrators can encourage teacher collaboration and resource sharing. Finally, technology integration should be evaluated continuously through classroom observations, student feedback, and assessment of instructional needs. These recommendations should be refined using verified school-specific evidence.

The proposed study seeks to contribute a contextual understanding of e-learning through teachers' practices, students' experiences, and implementation conditions. Unlike research focusing exclusively on learning outcomes or individual applications, it emphasizes educational processes and institutional contexts. A single-school qualitative design will not support statistical generalization. Interviews may reflect participant perceptions, and observations may capture selected sessions. Triangulation, contextual description, and transparent analytical reporting can improve trustworthiness. Above all, conclusions about UPT SMP Negeri 3 Baranti must be based on actual field evidence.

Conclusion

The integration of e-learning as a digital learning resource represents an important opportunity for strengthening technology-supported instruction in junior high school education. The literature indicates that digital resources can expand access to materials, support multimedia explanations, facilitate interactive learning, and provide opportunities for student independence. Meaningful implementation nevertheless depends on teachers' technological and pedagogical competencies, students' digital literacy and self-regulation, and adequate institutional support. The proposed investigation at UPT SMP Negeri 3 Baranti is designed to examine these dimensions through classroom observations, interviews, and documentary analysis. Because school-specific field data have not yet been provided, no empirical conclusions can presently be drawn regarding implementation levels, effectiveness, or challenges at the research location.

The study is expected to contribute contextual evidence to discussions of digital learning integration in Indonesian secondary education. Practical implications include strengthening teacher professional development, improving access to appropriate digital resources, supporting responsible technology use, and developing instructional strategies that combine innovation with meaningful interaction. Future research may extend the investigation through comparative school studies, mixed methods, or longitudinal analysis. The final manuscript should incorporate verified findings from UPT SMP Negeri 3 Baranti before submission to a SINTA 4 journal.

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