

Teaching Materials of Local Wisdom-Based E-Book in Digital Learning: A Systematic Literature Review

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Abstract

The growing demand for culturally responsive digital learning highlights the importance of developing local wisdom-based e-book teaching materials to enrich online education and strengthen students' cultural identity. Following PRISMA guidelines, this study presents a systematic literature review of local wisdom-based e-book teaching materials in digital learning. Articles included were published between 2017 and 2024, written in English, relevant to the topic, and indexed by at least SINTA. Literature searches were conducted through ScienceDirect, ERIC, Google Scholar, Springer, Scopus, and Web of Science databases. The findings show that strategies for developing these materials include integrating e-learning, gamification, augmented reality (AR), and virtual reality (VR); using project-based challenges involving cultural practitioners; and incorporating portfolios and local wisdom content. The impact of local wisdom-based e-books includes strengthening students' character (love of the homeland, peace-loving attitudes, and social care), enhancing critical thinking, scientific reasoning, and conceptual understanding, and improving digital literacy, science literacy, creative writing, and communication skills. This study concludes that local wisdom-based e-book teaching materials have strong potential to enhance student engagement and foster cultural identity in digital learning environments.

Keywords

Digital Learning; E-Book; Local Wisdom; Systematic Literature Review; Teaching Materials

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1. INTRODUCTION

Technological advancements have brought enormous developments in the field of education, making learning more dynamic and adaptable (Fajari & Meilisa, 2022). Advances in digital devices such as computers, tablets, and smartphones open new opportunities for more interactive learning materials with much wider internet coverage to access various learning resources without spatial and temporal limitations (Barella, 2021; Pela et al., 2023). This change not only involves changing teaching practices but also inspires new methods of presenting teaching materials that are appropriate for students in the modern digital world (Syaputra & Hasanah, 2022).

This change in the education paradigm has also increased demand for teaching materials appropriate for digital developments (Nasution & Batubara, 2021). Learning materials available in



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digital form provide ease and allow enrichment using multimedia elements such as video, animation, and interactive simulation (Sariyatun et al., 2018). Instructional materials based on digital also provide higher student engagement since they can provide a more participatory and contextual learning process (Rusli et al., 2020). Therefore, developing new learning materials becomes a significant aspect of optimizing the impact of technology-based learning.

The most widely used digital learning materials include e-books. Use of e-books in learning continues to grow with increasing needs for flexible and accessible learning materials (Noveria et al., 2021). An e-book, or an electronic book, is a digital version of a printed book that can be read using electronic devices such as computers, tablets, or smartphones (Aini & Yanti, 2023). E-book types are static e-books, that is, identical to paper books with static texts and pictures; interactive e-books, that allow readers to interact with material through such functions as hyperlinks, comments, and searches; multimedia e-books, which involve audio, video, and animation elements to support deeper reading understanding by users; and adaptive e-books, that customize the presentation of material based on reader demands and reading comprehension levels (Kadek et al., 2021; Rosyidah et al., 2023). These various types of e-books enable a more interactive, flexible, and suitable reading experience for modern learning needs (Saripudin et al., 2022).

E-books are superior to paper-based versions because they have advantages like enhanced distribution efficiency and greater accessibility. E-content can be updated quickly without the need for reprinting, making materials current and relevant with curriculum developments (Setianingrum et al., 2023). In addition, e-books are generally facilitated with interactive features such as text searching, annotation, and pointers to websites that enrich the learning process of the students (Rahmadiningrum & Wulandari, 2024). From the economic perspective, the utilization of e-books does away with the need for paper and printing and thereby becomes a more hospitable and economical approach from the production and distribution aspects (Aini & Yanti, 2023). Besides efficiency, e-books also assist in enhancing students' skills through the presentation of more interactive and dynamic content. The presence of visual, audio, and animation elements in e-books helps to simplify the explication of abstract concepts that prove challenging to explicate with textual presentation alone (Kadek et al., 2021). Adaptive functions in some e-books also enable students to learn independently and at their own pace, and learning styles (Rahmadiningrum & Wulandari, 2024; Setianingrum et al., 2023).

Not only are e-books sources of information, but also tools that enable the building of core competencies for students in the digital age. E-books can enable students' digital literacy (Saripudin et al., 2022). They not only educate the students to understand the content but also make them accustomed to how to apply technology to study (Rasyid et al., 2023; Setyorini et al., 2022). This trains them to search better, analyze, and manipulate information (Ali & Zaini, 2023; Rosyidah et al., 2023). In addition to that, e-books also have the potential to create analytical and critical abilities, which have been refined through interactive aspects, facilitating students to look at additional sources, associate concepts, and see information autonomously (Lestari & Nugraheni, 2022; Ridho et al., 2021). E-books can also provide collaborative note-taking features or built-in online dialogue, allowing students to share understanding with instructors and other students (Asrial et al., 2021; Kadek et al., 2021). E-books have proven very effective in independent learning because they provide flexible access to information so students can control their learning pace as needed (Nurdianasari et al., 2023).

E-books as learning media have become a primary choice across various levels of education. However, most of the content in educational e-books tends to be generic, globally oriented, and often fails to represent local values that are closely tied to students' everyday lives (Rahmadiningrum & Wulandari, 2024). As a result, cultural alienation may occur in the learning process, potentially reducing the relevance and depth of students' understanding of the material. Education is not only aimed at transferring knowledge but also at shaping students' character and cultural identity (Indrawati et al., 2022; Nurdianasari et al., 2023). Most studies on e-books in digital learning still focus on technological aspects, interactive design, or the effectiveness of e-book use on learning outcomes (Arwin et al., 2022;

Rini & Irwina, 2022). There has been a lack of research explicitly addressing the integration of local wisdom values into e-book content (Asrial et al., 2021). Moreover, no systematic literature review has yet been found that specifically compiles, compares, and analyzes how local wisdom has been adopted in various e-book development initiatives for learning.

The incorporation of local wisdom into modern education has become a critical aspect in making learning culturally and identity-specific to students (Kencana et al., 2024). The computer era, which is replete with technology, still needs education that is deeply rooted in cultural values derived from the past (Winangun, 2024). Local wisdom not only represents the identity of a community but also builds the character of students (Yuliani & Irham, 2022). Local wisdom-backed education makes the younger generation still hold on to their culture while being prepared to face global issues (Kadek et al., 2021). Culture-inclined content can re-emphasize feelings of belongingness, heighten appreciation of tradition, and build a strong sense of identity amid globalizing waves (Asrial et al., 2021; Yuliana et al., 2023).

The application of e-books with local material in studying not only increases the attractiveness of the material but also allows students to understand concepts through examples that are closer to everyday life (Widayanti et al., 2022). The effect of teaching materials obtained from local wisdom towards studying is significant, especially towards increasing the understanding of concepts and student motivation (Setyorini et al., 2022). Content delivered in a culture-based approach allows the students to connect theory with practice, giving them a more enhanced learning experience (Rasyid et al., 2023; Setianingrum et al., 2023). Besides, including pictures, myths, or teaching according to the local norms in e-books can help increase learning interest and improve contextual concept recall (Rahmawati et al., 2024). This also encourages innovation in the learning process so that the instructor can develop more appropriate methods based on students' social realities (Setiawan et al., 2017; Sofyan et al., 2020).

A critical examination of past research is necessary as it enables the identification of trends, effectiveness, and challenges of employing culturally grounded teaching materials. Knowledge of the patterns of development and innovations attained can enable the development of a sound foundation for formulating more effective approaches that meet current educational needs. This study hopes to briefly bridge the existing lacuna in the literature on using local wisdom to construct digital learning in e-books. The findings are anticipated to serve as a reference material for policymakers, curriculum planners, and teachers to utilize technology maximally in learning without compromising the essence of cultural wisdom, which constitutes part of the country's identity. Therefore, research questions in this study are: (1) what are trends of local wisdom-based e-book teaching materials in digital learning; (2) what are the implementation strategies for local wisdom-based e-book teaching materials in digital learning; and (3) what is the effect of local wisdom-based e-book teaching materials on the quality of digital learning.

2. METHODS

Research Design

To investigate the trends, tactics, and effects of e-books based on local wisdom in digital learning, this study primarily employs the Systematic Literature Review (SLR) method. In contrast to other literature studies, this method allows the research to methodically find, evaluate, and synthesize several scholarly sources, providing a broader range of understanding (Chong et al., 2022). The SLR methodology's transparency and reproducibility are among its best features since they guarantee that each data search, selection, and analysis stage is conducted impartially and reproducibly. This approach also enables researchers to find gaps not filled by earlier research and offer more evidence-based suggestions, increasing the impact of their contribution to evidence-based, culturally sensitive digital education policy and practice.

To guarantee quality and rigor in literature screening and literature processing analysis, this study adheres to the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) guidelines. To minimize selection bias, maximize methodological clarity, and guarantee that every step of the literature review is conducted methodically so that other researchers can replicate it, PRISMA was used in this study (Fajari et al., 2023). The PRISMA diagram in this study illustrates the literature selection process, from source identification, initial screening, and eligibility assessment, to the final step of study selection for analysis, which ultimately gives credibility and validity to the study results.

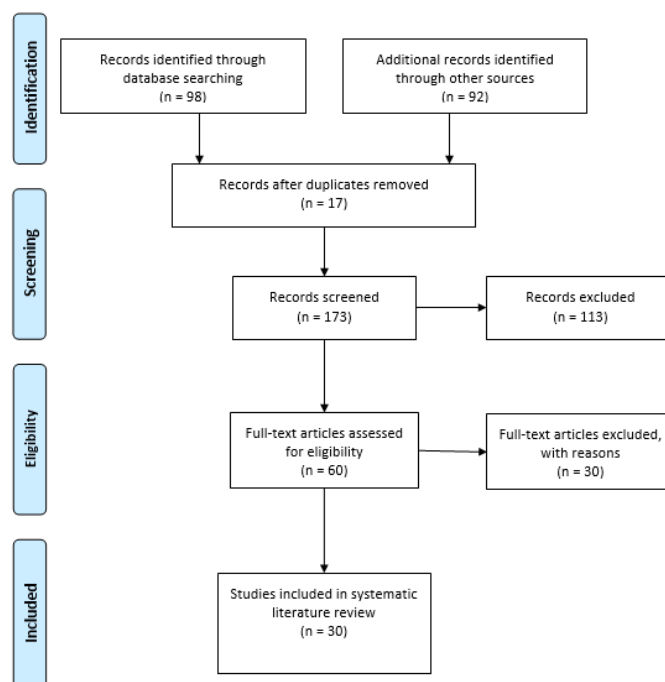


Figure 1. PRISMA diagram

In the initial phase, 190 articles were identified from two major academic databases. After removing 17 duplicate entries, 173 records remained for screening. From this pool, 113 articles were excluded based on title and abstract screening. The remaining 60 articles were assessed for full-text eligibility, resulting in 30 articles being excluded for various reasons. Ultimately, 30 studies were deemed eligible and included in the final systematic literature review.

Inclusion and Exclusion Criteria

This study has strict inclusion and exclusion criteria for article selection to ensure that high-quality and pertinent sources are included in this SLR. The inclusion criteria are established so that articles that particularly discuss local wisdom-based e-books as a component of digital learning are included, so only those studies were included that were pertinent to the research focus. Furthermore, the research papers must have been published between 2017 and 2024 to ensure that the data used is recent and captures the latest developments in this field. The review also covers only papers published in English to increase accessibility and allow for cross-country comparability of results. In terms of indexing, selected publications must be indexed in SINTA, ensuring accepted academic validity and standards.

Conversely, exclusion criteria filter out sources not academically graded or less relevant to the research focus. Articles that are not specifically discussing the issue of local wisdom-based e-books in digital education are not examined to maintain focus. Studies based on the SLR, meta-analysis, or bibliometric approach are also excluded because this study aims to synthesize empirical results directly and not statistical or methodological synthesis alone. Additionally, articles not published in English are excluded for consistency in analysis and to avoid limitations in data interpretation. Articles lacking

explicit indexing or not listed in credible academic databases are also excluded, as the importance of source validity in generating reliable findings is considered.

Data Collection Techniques

Article collection in this study is done through several well-known international journal databases to confirm the credibility and validity of the sources. Some of the leading reference databases in literature studies include ScienceDirect, ERIC, Google Scholar, Springer, Scopus, and Web of Science. The choice of keywords is well strategized to suit the research subject and represent several words used in previous research. The main keywords used include terms such as "local wisdom-based e-book," "digital learning materials," "interactive e-book for education," "technology-enhanced learning," and "culturally responsive teaching materials," each of which represents different aspects in the development and implementation of local wisdom-based e-books. Additionally, combining keywords with Boolean operators such as AND, OR, and NOT is applied to narrow or broaden the search scope according to analytical needs.

Data Analysis Techniques

The data analysis technique in this study employs thematic data analysis techniques in qualitative research, proposed by (Braun & Clarke, 2006). The 6-phase coding framework for thematic analysis will be used to identify themes and patterns in the data, including: (1) familiarization of data; (2) generation of codes; (3) combining codes into themes; (4) reviewing themes; (5) determining the significance of themes; and (6) reporting of findings. The researcher first reads and understands the entire data to realize initial patterns. Second, major parts are coded according to their nature. Similar codes are then merged into broader themes. Next, the themes developed are read again to ensure they fit the data. Each theme established is further analyzed to determine its importance. Finally, the analysis results are tabulated into a report stating the research findings.

3. FINDINGS AND DISCUSSIONS

Findings

This study considers 30 articles on the use of e-books based on local wisdom in digital learning. The research studies under consideration are at different levels of education, research types, and research variables, providing a comprehensive picture of trends, effectiveness, and challenges in using teaching materials with local values. The table below captures significant data from the various research studies considered in this study.

Table 1. Recapitulation of research on local wisdom-based e-books in digital learning

| No | Name | Year | Subject | Level | Method | Index | Type | Related Variables |
|----|-------------------------------------|------|---------|--------------------|--------------------------|----------------|----------------------------|-------------------|
| 1 | Ramdiah, Abidinsyah & Royani (2020) | 2020 | 64 | Senior High School | Research and Development | Scopus Q2 | South Kalimantan language | Learning Outcomes |
| 2 | Saripudin, Fauzi & Nugraha (2022) | 2022 | 34 | Senior High School | Research and Development | Scopus Q2 | Local History of West Java | Digital Literacy |
| 3 | Setiawan et al. (2017) | 2017 | 15 | Junior High School | Research and Development | Scopus Q3 | Mouth Kelud Eruption | Science Literacy |
| 4 | Hastuti et al. (2023) | 2023 | 56 | University | Quasi Experiment | Web of Science | Environmental Local Wisdom | Creative Writing |

| No | Name | Year | Subject | Level | Method | Index | Type | Related Variables |
|----|---|------|---------|--------------------|--------------------------|----------------------------|-------------------------------------|--------------------------------------|
| 5 | Syahril et al. (2023) | 2023 | 30 | Elementary School | Descriptive Qualitative | Scopus Proceeding | Jambi Malay Marriage Custom | Character of Love for the Motherland |
| 6 | Usmaldi & Amini (2020) | 2020 | 60 | Junior High School | Quasi Experiment | Scopus Proceeding | Environmental Local Wisdom | Cognitive and Affective Domain |
| 7 | Tressyalina et al. (2021) | 2021 | 30 | Elementary School | Descriptive Qualitative | Web of Science Proceedings | Minangkabau Culture | Learning Engagement |
| 8 | Nabila, Yulinda & Putri (2023) | 2023 | 34 | Junior High School | Research and Development | Index Copernicus | Biotechnology Local Wisdom | Learning Outcomes |
| 9 | Aini & Yanti (2023) | 2023 | 5 | Senior High School | Research and Development | SINTA 2 | The Bengkulu Ceremony | Learning Quality |
| 10 | Rahmawati, Margunayasa & Lasmawan (2024) | 2024 | 40 | Elementary School | Research and Development | SINTA 2 | Plants, the Source of Life on Earth | Learning Outcomes |
| 11 | Setyaningrum et al. (2023) | 2023 | 32 | Junior High School | Research and Development | SINTA 2 | Gamelan | Love of Local Culture |
| 12 | Ali & Zaini (2023) | 2023 | 600 | Senior High School | Research and Development | SINTA 2 | Local Community Habits | Higher Order Thinking Skills |
| 13 | Yuliana, Fathurohman & Siahaan (2023) | 2023 | 69 | Junior High School | Descriptive Qualitative | SINTA 2 | South Sumatra Culture | Student Understanding |
| 14 | Rasyid, Kurniaman & Guslinda (2023) | 2023 | 9 | Elementary School | Research and Development | SINTA 2 | Traditional Games | Reading Skills |
| 15 | Asrial et al. (2022) | 2022 | 44 | Elementary School | Quasi Experiment | SINTA 2 | Ngubat Padi Local Wisdom | Peace-Loving Character |
| 16 | Widayanti et al. (2022) | 2022 | 5 | Junior High School | Research and Development | SINTA 2 | Toraja Folklore | Learning Motivation |
| 17 | Setyorini, Haryani & Susilaningsih (2022) | 2022 | 7 | Senior High School | Research and Development | SINTA 2 | Spice Drinks Local Wisdom | Science Literacy |
| 18 | Yuliani & Irham (2022) | 2022 | 35 | Elementary School | Research and Development | SINTA 2 | Sumbawa Local Wisdom | Learning Quality |

| No | Name | Year | Subject | Level | Method | Index | Type | Related Variables |
|----|------------------------------------|------|---------|--------------------|--------------------------|---------|------------------------------------|-----------------------------|
| 19 | Asrial, Kurniawan & Saputri (2021) | 2021 | 30 | Elementary School | Associative Quantitative | SINTA 2 | Ngubat Padi Local Wisdom | Social Care Character |
| 20 | Dewi & Agung (2021) | 2021 | 3 | Elementary School | Research and Development | SINTA 2 | Balinese Local Wisdom | Learning Quality |
| 21 | Winangun (2024) | 2024 | 60 | University | Quasi Experiment | SINTA 2 | Upakara Balinese Animal Types | Learning Outcomes |
| 22 | Erni, Azhar & Vai (2023) | 2023 | 33 | University | Research and Development | SINTA 2 | Songket (Traditional Batik Craft) | Cultural Awareness |
| 23 | Kencana, Utami, Yuneva (2024) | 2024 | 129 | University | Research and Development | SINTA 3 | Bengkulu Local Wisdom | Learning Outcomes |
| 24 | Nurdianasari et al. (2023) | 2023 | 120 | Elementary School | Research and Development | SINTA 3 | Jember Local Wisdom | Learning Quality |
| 25 | Ridho, Wardani & Saptono (2021) | 2021 | 65 | Junior High School | Research and Development | SINTA 3 | Java Traditional Food | Critical Thinking Skills |
| 26 | Rosyidah et al. (2023) | 2023 | 35 | Senior High School | Research and Development | SINTA 3 | Gresik Ponds Fish | Scientific Reasoning Skills |
| 27 | Indrawati, Prawati & Aruan (2022) | 2022 | 30 | Senior High School | Quasi Experiment | SINTA 4 | Kuantan Singingi Local Wisdom | Writing Skills |
| 28 | Barella (2021) | 2021 | 15 | University | Research and Development | SINTA 4 | West Kalimantan Marriage Culture | Reading Skills |
| 29 | Rahmadiningrum & Wulandari (2024) | 2024 | 71 | Junior High School | Quasi Experiment | SINTA 4 | Coban Binangun Natural Environment | Learning Outcomes |
| 30 | Pela et al. (2023) | 2023 | 40 | Elementary School | Quasi Experiment | SINTA 5 | Lampung Batik | Scientific Attitude |

The trend of scholarly papers on e-books based on local wisdom-inspired local e-books for digital education has shown rapid progress in the past few years. The data provided here portrays the dynamic evolution of this issue, where the number of studies began to pick up from the year 2020 and went high in the year 2023. The growth indicates heightened research interest in reflecting local culture into digital textbooks. The decline in the number of studies conducted in 2024 may be attributed to several factors, e.g., a shift in focus on research or limited access to resources. The trend in publication by year of study is presented in the table below.

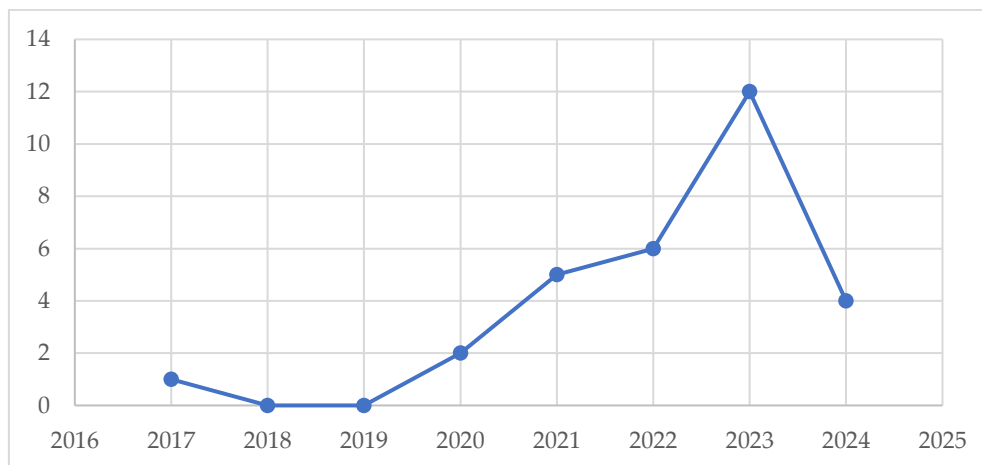


Figure 2. Publication trends based on the year of study

Moreover, considering the distribution of studies based on education levels provides data on the central theme of studies conducted. The data provide the distribution of studies at the elementary, junior high, senior high, and higher education levels and represent scholarly interest in studying various facets of learning, one at each level. The publication trend by research topic can be observed from the following graph.

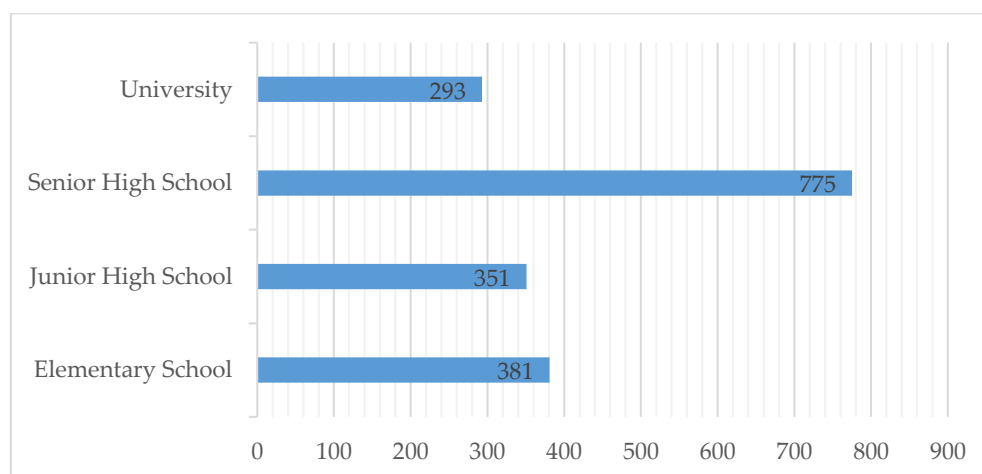


Figure 3. Publication trends based on research subjects

The distribution of research subjects by educational level shows that most participants come from the Senior High School (SMA) level, totalling 775 students. The number of subjects from Elementary School (SD) is 381 students, while those from Junior High School (SMP) is 351 students. The number of research subjects at the higher education level reaches 293 students. Overall, the total number of research subjects involved across various educational levels is 1,800 students.

Next, an analysis of research methods used in various studies is conducted. This data reflects the researchers' tendency to choose methods for developing, testing, or describing the investigated phenomena. The dominance of specific methods may indicate their effectiveness in exploring the studied topics, while less commonly used methods may offer opportunities for further research. The following diagram shows the distribution of research method trends.

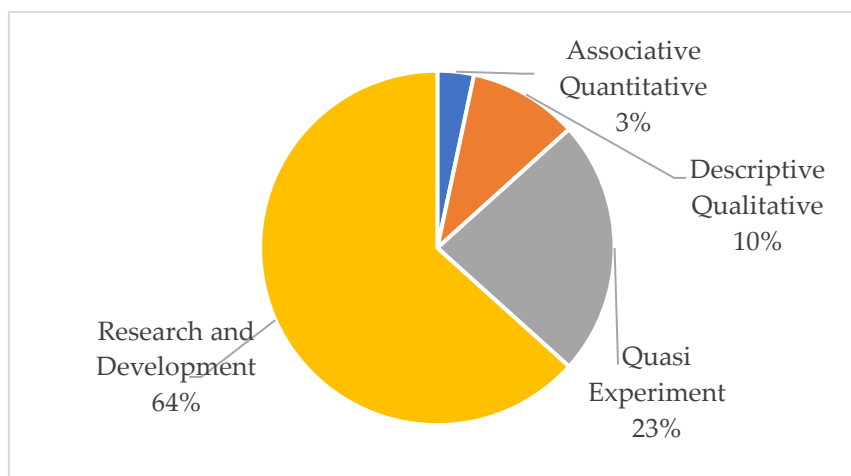


Figure 4. Publication trends based on research methods

Based on Figure 4, it is evident that the distribution of research methods indicates the Research and Development approach is the most widely used, with a total of 19 studies. The Quasi-Experiment method ranks second with seven studies. Meanwhile, the Descriptive Qualitative approach is used in 3 studies. The Associative Quantitative method is the least applied, appearing in only 1 study. Furthermore, journal indexing is one of the indicators of publication quality in academic research. The following data shows the distribution of research based on indexing, covering various international and national databases. Some studies have been indexed in reputable databases such as Scopus and Web of Science, while others are indexed in SINTA with various levels. This distribution provides an overview of the research's academic recognition level. The following is the frequency distribution of indexing in the analyzed studies.

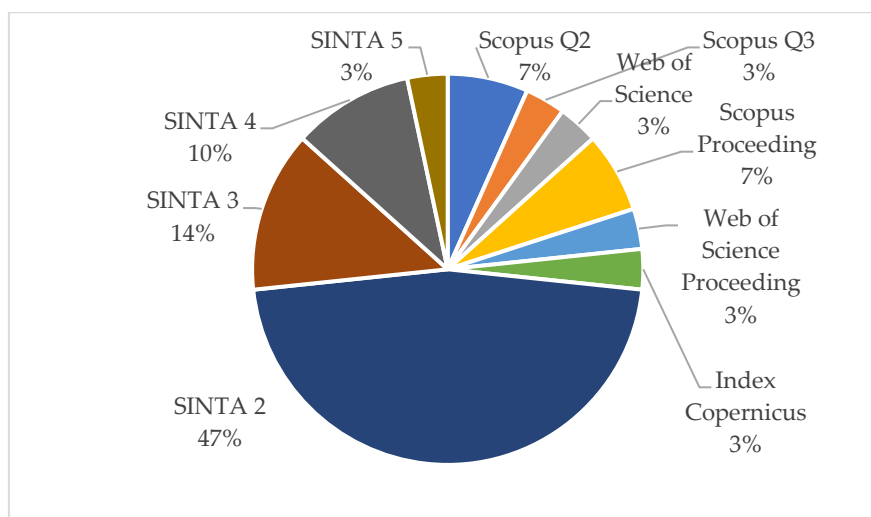


Figure 5. Publication trends based on article indexing

Based on Figure 5, it is found that two studies are indexed in Scopus Q2, while one study is in Scopus Q3. Web of Science records one study, two published in Scopus proceedings, and one in Web of Science proceedings. One study is also indexed in Index Copernicus. Most studies, totalling 14 publications, are indexed in SINTA 2, followed by four studies in SINTA 3, three in SINTA 4, and one in SINTA 5. This distribution indicates that most studies fall into the category of national indexing, with some achieving reputable international standards. Moreover, this research data presents the distribution of studies related to various forms of local wisdom in Indonesia, including marriage culture, traditional food, natural environment, arts, and local community habits.

Table 2. Types of local wisdom

| Local Wisdom Type | Frequency |
|-------------------------------------|------------------|
| Balinese Local Wisdom | 1 |
| Bengkulu Local Wisdom | 1 |
| Biotechnology Local Wisdom | 1 |
| Coban Binangun Natural Environment | 1 |
| Environmental Local Wisdom | 2 |
| Gamelan | 1 |
| Gresik Fish Ponds | 1 |
| Jambi Malay Marriage Custom | 1 |
| Java Traditional Food | 1 |
| Jember Local Wisdom | 1 |
| Kuantan Singingi Local Wisdom | 1 |
| Lampung Traditional Batik | 1 |
| Local Community Habits | 1 |
| Local History of West Java | 1 |
| Minangkabau Culture | 1 |
| Mouth Kelud Eruption | 1 |
| Ngubat Padi Local Wisdom | 2 |
| Plants, the Source of Life on Earth | 1 |
| Songket (Traditional Batik Craft) | 1 |
| South Kalimantan Language | 1 |
| South Sumatra Culture | 1 |
| Spice Drinks Local Wisdom | 1 |
| Sumbawa Local Wisdom | 1 |
| The Ark Bengkulu Ceremony | 1 |
| Toraja Folklore | 1 |
| Traditional Games | 1 |
| Upakara Balinese Animal Types | 1 |
| West Kalimantan Marriage Culture | 1 |
| Total | 30 |

The variables examined in this study encompass cognitive, affective, and thinking skill dimensions relevant to using e-books as a learning medium. Focusing on these variables is expected to enhance the quality of learning while strengthening awareness of local wisdom in the educational context. The following table presents the frequency distribution of each variable that becomes the focus of this research.

Table 3. Related variables of local wisdom-based e-books

| Related Variable | Frequency |
|--------------------------------------|-----------|
| Character of Love for the Motherland | 1 |
| Cognitive and Affective Domain | 1 |
| Creative Writing | 1 |
| Critical Thinking Skills | 1 |
| Cultural Awareness | 1 |
| Digital Literacy | 1 |
| Higher Order Thinking Skills | 1 |
| Learning Engagement | 1 |
| Learning Motivation | 1 |
| Learning Outcomes | 6 |
| Learning Quality | 4 |
| Love of Local Culture | 1 |
| Peace-Loving Character | 1 |
| Reading Skills | 2 |
| Science Literacy | 2 |
| Scientific Attitude | 1 |
| Scientific Reasoning Skills | 1 |
| Social Care Character | 1 |
| Student Concept Understanding | 1 |
| Writing Skills | 1 |
| Total | 30 |

Discussion

Trends in Local Wisdom-Based E-Books in Digital Learning

Based on the findings, there has been a rising trend in the publication of studies on local wisdom-based e-books in digital learning since 2020, peaking in 2023, with a decline noted in 2024. This rise and fall in 2024 can be explained through the issue-attention cycle theory by Peters & Hogwood (1985), which suggests that public attention (including in academic research) toward an issue tends to follow a cyclical pattern of increase and decrease over time, depending on urgency, funding priorities, or shifts in national education policy. Regarding research subjects, the distribution of studies spans elementary, junior high, senior high, and higher education levels, indicating an academic interest in exploring various aspects of learning at each educational stage. This phenomenon reflects growing academic awareness of integrating local cultural values into contextual learning. Contextual Teaching and Learning (CTL) emphasizes the relevance between instructional content and students' real-life experiences (Bustami et al., 2018). Using local wisdom in e-books is a strategic instrument to enhance learning engagement, content relevance, and character education from early childhood through adulthood (Aini & Yanti, 2023). Furthermore, most studies on local wisdom-based e-books employ the Research and Development approach and are published in journals indexed in SINTA. Referring to Sugimoto et al. (2017), Journals with high-level indexation tend to favor general global themes, meaning local research requires specific strategies to gain acceptance in international academic forums.

The distribution of types of local wisdom in digital learning e-book research encompasses 30 topics, ranging from regional cultures (such as Minangkabau, Toraja, and Bali), natural environments, to traditional games and wisdom based on food or wedding customs. This indicates that e-book development emphasizes educational aspects and serves as a medium for preserving diverse local cultures. Studies conducted by Nabila et al. (2023) & Sofyan et al. (2020) also affirm that integrating local wisdom into digital learning materials can enhance relevance, students' emotional engagement, and strengthen cultural identity in education. Furthermore, among the 30 variables examined in local wisdom-based e-book research, *Learning Outcomes* emerged as the most dominant, with six findings, followed by *Learning Quality* with four occurrences. Other variables, such as Reading Skills, Science Literacy, Critical Thinking, and Digital Literacy, appeared with lower frequencies, reflecting the diversity of focus areas in culture-based digital learning. The dominance of the *Learning Outcomes* variable reflects the education sector's strong orientation toward learning results as a benchmark for the effectiveness of digital learning interventions (Rahmadiningrum & Wulandari, 2024; Winangun, 2024).

Strategy for Implementing Local Wisdom-Based E-Books in Digital Learning

The study concludes that there are various ways to introduce local wisdom-based e-books into e-learning systems. E-books can be integrated into e-learning through a systematic Learning Management System that allows students access to the content (Noveria et al., 2021). Also, gamified e-books can motivate learners through rewards like badges and points, and competition established through quizzes (Saripudin et al., 2022). Challenges in the e-book can engage students in projects that entail applying local wisdom to real-life activities, thus making learning contextual and meaningful (Winangun, 2024). Assignments may also demand that students invite resource persons such as cultural practitioners or village leaders. E-books that include Augmented Reality (AR) and Virtual Reality (VR) technology will allow students more interactivity with cultural artifacts (Kadek et al., 2021). E-books can also provide a portfolio that helps to ascertain students' conceptual understanding as well as reflective and critical thinking skills, where students can document their learning experiences and outputs electronically (Rasyid et al., 2023; Setianingrum et al., 2023).

Local wisdom extends to several aspects of incorporating local wisdom e-books. Findings from the study point to instances where marriage customs such as the Jambi Malay Marriage Tradition, the Minangkabau Culture, South Sumatra Culture, and the West Kalimantan Marriage Culture, as well as ceremonial customs, like Ark-Bengkulu Ceremony and Upakara Balinese Animal Types, are all examples of local wisdom. The local custom and regional culture fortify social peace, enable the bearing witness of local wisdom, uphold community identity and characteristics through time-old conventions (Noveria et al., 2021; Saripudin et al., 2022). Students also learn traditional skills such as Songket (Traditional Batik Craft) and Gamelan. Such local knowledge in the arts, including music, dance, and crafts, can pride the community as traditional arts embody a certain region's identity and values (Pela et al., 2023; Setianingrum et al., 2023).

Third, from the perspective of the natural resources and surrounding environment, research highlights ecological local wisdom, such as the Mouth of Kelud Eruption, the Coban Binangun Natural Environment, Environmental Local Wisdom, and Plants as the Source of Life on Earth. Fourth, research is also conducted on local wisdom rooted in agriculture and fisheries, such as Gresik Fish Ponds and Ngubat Padi Local Wisdom. Fifth, several studies, including "Local Community Habits" and "Local History of West Java," focus on the traditions and customs of the local population, as well as traditional games, which are represented by "Traditional Games." Local wisdom encompasses culture and demonstrates how the community manages its environment and natural resources sustainably (Asrial et al., 2021; Saripudin et al., 2022; Yuliani & Irham, 2022). Guidelines for preserving ecosystem balance and the sustainability of natural resources are frequently derived from local values passed down through the generations (Asrial et al., 2021).

Sixth, typical regional products such as Java traditional food, Lampung traditional batik, and local

wisdom spice drinks are also given consideration. These regional products are a part of the cultural heritage that demonstrates the creativity and knowledge of the community. Introducing these products to students boosts their sense of pride, concern for local culture, and awareness of the potential for economic development (Kadek et al., 2021; Syahrial et al., 2023). Lastly, some studies look at language and folklore, like the South Kalimantan Language and Toraja Folklore, as well as science and technology-based wisdom, like Biotechnology Local Wisdom. Learning local languages is crucial because they are the primary means of transmitting the community's cultural values, traditions, and knowledge (Nabila et al., 2023). In addition to being tools for communication, languages also represent thought processes, environmental perceptions, and social interaction patterns that have changed over time (Kencana et al., 2024; Rasna & Tantra, 2017). Since the number of speakers of many local languages is declining in the age of globalization, it is strategically important to support their education and ensure their survival (Naryatmojo, 2019). Students can understand the original meaning of cultural concepts that are difficult to fully translate into other languages when they use local languages to learn local wisdom (Utari et al., 2023).

The Impact of Local Wisdom-Based E-Books on The Quality of Digital Learning

Moreover, employing multimedia in e-books-sound recordings, documentary videos, and pictures-will not only enhance learning experiences but also facilitate students' understanding and absorption of Indonesia's diverse and rich culture (Asrial et al., 2021; Syahrial et al., 2023). As far as possible, topics on local wisdom should comprise cultural practices, arts and crafts, traditional foods, and local history to motivate students to relate to and comprehend the traditions in cultural values passed from their forefathers (Kadek et al., 2021; Setianingrum et al., 2023). Examples of such content will be case studies of peaceful conflict resolution, local tales for peace, and harmonious social life stories (Kencana et al., 2024; Saripudin et al., 2022). Such ways must encourage people to think more about their environment by enclosing interesting case studies in an e-book about the role of individuals in helping others, factual stories about social care across regions, and traditional practices that show solidarity in communities (Sofyan et al., 2020; Winangun, 2024). Further, interactive e-books including discussion boards, reflection exercises, and community-based social projects empower students to understand social care and practice it (Ali & Zaini, 2023; Rahmawati et al., 2024; Rosyidah et al., 2023).

Critical thinking, higher-order thinking, scientific reasoning, and conceptual understanding can also be developed using e-books based on local wisdom; that is, they would further strengthen reasoning and analysis. E-books based on local wisdom will teach students to appreciate, interpret, and apply cultural values and traditional solutions to community problems (Lestari & Nugraheni, 2022; Ridho et al., 2021). Logical thinking and scientific reasoning develop from understanding local wisdom, like traditional farming methods, culturally based strategies for disaster mitigation, or community-based economic systems. By forcing the students to apply traditional knowledge in modern days, exploring local wisdom nurtures creativity and innovation, and empowers them to create solutions pertinent to society (Ali & Zaini, 2023; Noveria et al., 2021; Winangun, 2024).

Literacy and communication encompass digital literacy, scientific literacy, reading skills, and creative and academic writing, strengthening students' understanding and expression (Sofyan et al., 2020). The local wisdom with its traditional ecological knowledge might include scientific literacy in that it has a certain interpretation of the environment and its management, such as the Subak irrigation system in Bali or soil conservation techniques (Setyorini et al., 2022). E-books enable students to trace the relationship between scientific notions and everyday life (Rasyid et al., 2023). Folklore, myths, and local historical texts presented in e-book format complemented by exciting texts, interactive dialogues, and reflective or analytical writing challenges may thus enhance students' creative reading and writing by stimulating exploration of language and articulation of ideas in an array of written forms (Kencana et al., 2024; Saripudin et al., 2022). E-books that foster cooperative project work or case-based discussions allow students to express ideas argumentatively while paying attention to the cultural context (Barella, 2021; Rasyid et al., 2023).

4. CONCLUSION

Several inferences can be made in light of the research findings and the preceding discussion. Through gamification, project-based challenges, augmented reality (AR) and virtual reality (VR) technologies, and integration with e-learning, local wisdom-based e-book teaching materials can be successfully applied in digital learning. Portfolios serve as evaluation instruments, and community leaders or cultural practitioners may be enlisted as project resource persons. This e-book is not only a learning tool but also a tool for cultural preservation because of the various components of local wisdom, which range from traditional arts and wedding customs to environmental issues. The use of this e-book has a positive impact on strengthening character, including love for one's homeland and social awareness, as well as developing critical thinking skills, scientific reasoning, and conceptual understanding. This e-book also supports digital literacy, science literacy, and creative and academic reading and writing skills. This research demonstrates that local wisdom-based e-book teaching materials have significant potential to enhance student engagement and foster cultural identity through digital learning.

This study focuses solely on systematic literature reviews, without direct implementation testing on students. Moreover, limited access to some primary reference sources restricts the scope of more in-depth analysis. Differences in cultural contexts and educational policies in various regions may also affect the relevance of findings in actual implementation. Based on these research limitations, several recommendations are as follows. Teachers must integrate local wisdom-based e-books into digital learning to enhance students' understanding of regional culture. Policy makers are encouraged to promote the development of policies that support the integration of local wisdom-based teaching materials into the national education system. Additionally, support in the form of funding and training programs for teachers and e-book developers is also necessary to ensure optimal implementation. Furthermore, future research can explore the effectiveness of local wisdom-based e-books in improving learning outcomes through experimental methods.

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