

DOI: 10.5281/zenodo.122126592

A REVIEW OF LOCAL WISDOM RESEARCH TRENDS IN INDONESIAN ELEMENTARY EDUCATION JOURNALS: A COMPREHENSIVE REVIEW OF RESEARCH METHODOLOGY

Ahmad Wahid Fudhaily¹, Cica Nastika^{2*}, Diki Kurniawan³, Ratih Maulasari⁴, Syarful
Rahmawati⁵, Adil Aripin⁶, Lola Fadhilah⁷, Randi⁸, Suci Fadilla⁹, Tresa Febrianita¹⁰,
Rahmi Rahmadani¹¹

^{1,2,3,5} *Department of Primary Education, Universitas Pendidikan Indonesia, Bandung, Indonesia.*

⁴ *Department of Guidance and Counseling, Universitas Pendidikan Indonesia, Bandung, Indonesia.*

^{6,7} *Department of Curriculum Development, Universitas Pendidikan Indonesia, Bandung, Indonesia.*

^{8,9} *Department of English Language Education, Universitas Pendidikan Indonesia, Bandung, Indonesia.*

¹⁰ *Department of Sociology Education, Universitas Pendidikan Indonesia, Bandung, Indonesia.*

¹¹ *Department of Pancasila and Civic Education, Universitas Negeri Yogyakarta, Yogyakarta, Indonesia.*

Received: 01/12/2025

Accepted: 02/01/2026

Corresponding author: Cica Nastika

(cica.nastika@upi.edu)

ABSTRACT

Integrating local wisdom into primary education has become increasingly vital in line with national policies emphasizing culture-based character education, thereby stimulating research on the internalization of cultural values in learning. This study aims to review research trends on local wisdom in Indonesian elementary education journals, focusing on methodology, subjects, school subjects, instruments, and data analysis techniques. This review uses a systematic literature review design, drawing on articles from Science and Technology Index-accredited journals. The analysis results indicate the dominance of research and development and descriptive qualitative studies, with the most frequent subjects being fourth-grade students who are at an optimal stage of cognitive development. The most commonly utilized school subjects are thematic studies, Indonesian language, and civic education, while the predominant instruments include interviews, observations, and questionnaires. Data analysis is more often descriptive qualitative, although some studies have begun to employ advanced quantitative approaches. There remain significant opportunities to strengthen research methodologies while also expanding the application of local wisdom across diverse fields of study. These findings demonstrate that research on local wisdom not only describes cultural values but also contributes to the development of contextual teaching materials that meet the demands of the 21st century.

KEYWORDS: Elementary Education Journal, Local Wisdom, Research Methodology, Elementary Education.

1. INTRODUCTION

Elementary education plays a strategic role in shaping the character of future generations who love their homeland by transmitting cultural values. Elementary education is not only a place for transmitting knowledge but also a medium for instilling cultural values, particularly local wisdom (UNESCO, 2015). Issues related to this matter have become increasingly important amid the rapid pace of globalization, which threatens the preservation of local wisdom as a national identity (Sari, 2020; Tohri et al., 2022). In fact, local wisdom constitutes social capital that can strengthen students' character from an early age (Indah & Rohmah, 2022; Lyesmaya et al., 2020). Elementary education thus becomes a vital space for integrating local wisdom as the foundation of personality formation and reinforcement of national identity amid fast-paced social change (Fairus et al., 2024).

The development of a curriculum based on local wisdom is not merely an attempt to safeguard heritage but also a pedagogical strategy to equip students with relevant competencies in the global era (Afriyadi et al., 2024). Integrating local wisdom into elementary education is considered not only a process of cultural preservation but also an effective means of building 21st-century skills. A curriculum that incorporates local cultural values can enhance students' collaboration and solidarity skills (Hasan & Monita, 2024). This aligns with Vygotsky's (1978) view that socially contextual learning accelerates children's cognitive development. This is also supported by research, which found that literacy and healthy learning communities can be strengthened and nurtured through the implementation of local cultural values in elementary schools (Lyesmaya et al., 2020; Purwastuti, 2022).

Internalized local wisdom through learning has proven effective in strengthening character education (Hasan & Monita, 2024; Afriyadi et al., 2024; Badeni & Saparahayuningsih, 2023; Syamsi & Tahar, 2021; Yusuf, 2023). One example is the application of *Piil Pesenggiri* in Lampung, which demonstrates that values of mutual respect, cooperation, responsibility, hard work, politeness, and equality can improve students' prosocial behavior (Afriyadi et al., 2024; Ramlan et al., 2023). All of this affirms that local wisdom is an essential instrument in effective character education. This concept is consistent with character education theory, which emphasizes the simultaneous development of moral knowing, moral feeling, and moral action (Lickona, 1991). Research in elementary schools has also shown that traditional games based on local wisdom help build solidarity in inclusive schools (Murwaningsih et al., 2020; Syamsi

& Tahar, 2021). Local wisdom represents the lived experiences of communities, while education expresses knowledge that arises from those experiences (Sari, 2020).

Integrating elements of local culture into literacy in elementary schools can transform learning into a more contextual and meaningful process (Indah & Rohmah, 2022; Tohri et al., 2022). The integration of cultural values into school literacy programs enriches the learning process and increases students' interest in reading (Fairus et al., 2024). A literacy learning model grounded in local wisdom values has been shown to improve reading skills while simultaneously instilling cultural values (Lyesmaya et al., 2020). Local wisdom also contributes to strengthening literacy, which in turn reinforces SDG targets related to quality education and cultural preservation. Education should not be separated from cultural contexts because knowledge is constructed through interaction with the environment (Bruner, 1996). However, research on local wisdom in Indonesia shows considerable variation in methodology, with most studies still dominated by descriptive qualitative approaches or single case studies (Indah & Rohmah, 2022; Sari, 2020; Tohri et al., 2022). Moreover, the integration of local wisdom into elementary education is often examined through literature reviews without adequate empirical verification (Fairus et al., 2024). This indicates limitations in the validity and generalizability of findings (Hasan & Monita, 2024). Essentially, methodological choices are crucial to produce a more comprehensive understanding (Creswell, 2014). Therefore, there is an urgent need for a methodological review of local wisdom research in elementary education.

Although cultural values have been widely used in classroom learning, very few studies employ experimental designs to test their effectiveness (Siska et al., 2021). This methodological limitation contributes to the lack of innovation in locally wisdom-based learning. In fact, experimental research can provide stronger empirical evidence on the contribution of local wisdom to student learning outcomes (Ramlan et al., 2023). Educational innovations must be validated with empirical evidence to be widely adopted (Bransford, Brown, & Cocking, 2000). The tendency of descriptive research without intervention testing means that the potential of local wisdom as a pedagogical strategy remains underexplored (Fairus et al., 2024; Syamsi & Tahar, 2021). Furthermore, in terms of research instruments, most studies rely only on interviews, observations, or simple questionnaires (Fairus et al., 2024; Lyesmaya et al., 2020). Very few have developed valid and reliable instruments to measure the impact of local

wisdom on student learning outcomes, whereas instrument quality is a key factor in ensuring the reliability of educational research data (Fraenkel & Wallen, 2009). The absence of such specific instruments implies inconsistent measurement standards across studies (Indah & Rohmah, 2022; Tohri et al., 2022). Therefore, a comprehensive review of instruments used in local wisdom research in elementary education is crucial to produce a clear methodological map.

An analysis of methodological trends should also highlight the limited diversity of research subjects as a significant gap, as the range of subjects remains relatively underdeveloped. In fact, culturally based educational research should involve all stakeholders to capture the complexity of educational interactions (Bronfenbrenner, 1979). The majority of studies focus on particular groups (Hasan & Monita, 2024; Purwastuti, 2022). Inclusive research that integrates perspectives from various communities would enrich the understanding of how local wisdom values can be internalized in educational practice (Afriyadi et al., 2024; Syamsi & Tahar, 2021).

The integration of local wisdom should be viewed as a sustainability strategy in facing social change (Fairus et al., 2024). Globalization and the era of society 5.0 demand that elementary education be both adaptive and contextual. UNESCO (2015) also recommends preserving local wisdom as part of sustainable education. Otherwise, there is a risk of losing the cultural identity of younger generations. Research by Indah and Rohmah (2022) shows that local wisdom research in Indonesia has not yet evenly covered aspects of technology and educational innovation. Therefore, a comprehensive analysis of research methodologies in this field is necessary to formulate future research directions in the study of local wisdom in elementary education (Sari, 2020; Siska et al., 2021). Based on the above discussion, local wisdom has great potential as the foundation of elementary education, both for character building, literacy strengthening, and cultural preservation. However, methodological limitations in research hinder the full utilization of this potential. Thus, it is necessary to conduct a comprehensive study that reviews research trends on local wisdom in Indonesian elementary education journals, with particular focus on the methodologies employed. Previous studies tended to be descriptive, with limited instruments and restricted subjects, thereby necessitating comprehensive methodological mapping (Fairus et al., 2024; Indah & Rohmah, 2022). This review examines research trends on local wisdom in Indonesian elementary education journals, with a focus on the methodologies used. In this way, the contribution of local wisdom to

education can be more deeply understood while also providing direction for future research (Afriyadi et al., 2024; Lyesmaya et al., 2020; Tohri et al., 2022).

2. RESEARCH METHOD

This study employs a Systematic Literature Review (SLR) design to examine research trends regarding local wisdom in elementary education as published in Indonesian scholarly journals. SLR was chosen because it provides a comprehensive, systematic, and transparent overview of developments in a particular field through standardized procedures of searching, selecting, evaluating, and synthesizing the literature.

The articles used as research data were obtained from accredited Indonesian elementary education journals relevant to the topic of local wisdom. The collected articles came from various elementary education journals accredited by SINTA (Science and Technology Index) over the last 10 years (2016–2025). The accreditation can be accessed via sinta.kemdiktisaintek.go.id. A total of 35 elementary education journals were obtained from the SINTA database. From these 35 journals, articles addressing local wisdom in elementary schools were selected, yielding hundreds of preliminary articles. After classification, 94 articles focusing on local wisdom in elementary schools were identified.

The research instrument in this study consisted of an article classification sheet (extraction form) designed to document key information from each reviewed article systematically. This instrument functions not only as a classification guide but also as a tool to ensure traceability and transparency throughout the review process. It was adapted from the content analysis model used by Susetyarini and Fauzi (2020) but further developed to suit the objectives of this study, namely to review research trends in local wisdom methodologies in Indonesian elementary education journals.

The classification sheet contained several core aspects. First, the article identity, including title, author, year of publication, and journal name. Second, methodological aspects, covering research type (qualitative, quantitative, mixed methods, classroom action research, research and development, or literature study), research design (e.g., descriptive, experimental, ethnographic, case study), research subjects (students, teachers, textbooks, or communities), and sample size when available.

The third aspect was data collection instruments, classified into interviews, observations, questionnaires, tests, and documentation. The fourth aspect included data analysis techniques, such as qualitative descriptive analysis, descriptive statistics,

inferential statistics, thematic analysis, and mixed-methods approaches. The use of this instrument enabled the researcher to consistently extract and organize information from each article, thereby facilitating tabulation, distributional analysis, and the drawing of conclusions about research trends in local wisdom in elementary education.

Data analysis in this study followed the stages proposed by Miles and Huberman (1994): data reduction, data display, and conclusion drawing. The first stage, data reduction, involved screening all articles collected through the SLR procedure to ensure compliance with inclusion criteria. Eligible articles were then analyzed using the classification instrument. Key information, including year of publication, research type, research subjects, local wisdom themes, data collection instruments, and data analysis techniques, was extracted and summarized to produce a structured dataset. The second stage, data display, presented the reduced data in tables and graphs illustrating the distribution of articles across methodological categories. This stage aimed to facilitate the identification of patterns, such as annual publication trends, the dominance of certain research types, and variations in the instruments used in local wisdom studies in elementary education. The final stage, conclusion drawing, involved interpreting the patterns that emerged from the data display. The analysis was

conducted descriptively to identify methodological trends, strengths, and weaknesses of local wisdom research in Indonesian elementary education journals. In addition, the conclusions were supported by synthesizing relevant prior research, thereby providing a comprehensive overview of the methodological development of local wisdom research in elementary education.

3. RESULTS AND DISCUSSION

3.1. Results

3.1.1. Distribution of Publications by Year: Over the Past 10 Years

The number of published articles on local wisdom in Indonesian elementary education journals has varied from year to year. As shown in Figure 1, data collected at the start of the study period indicate that the number of published articles remained very limited. However, over time, the number of publications increased in certain years. This trend is clearly reflected in the graph showing the distribution of publications by year, where a significant surge is observed after 2020. This fact indicates that the issue of local wisdom is increasingly attracting the attention of researchers in elementary education and is beginning to be recognized as a topic worthy of in-depth investigation.

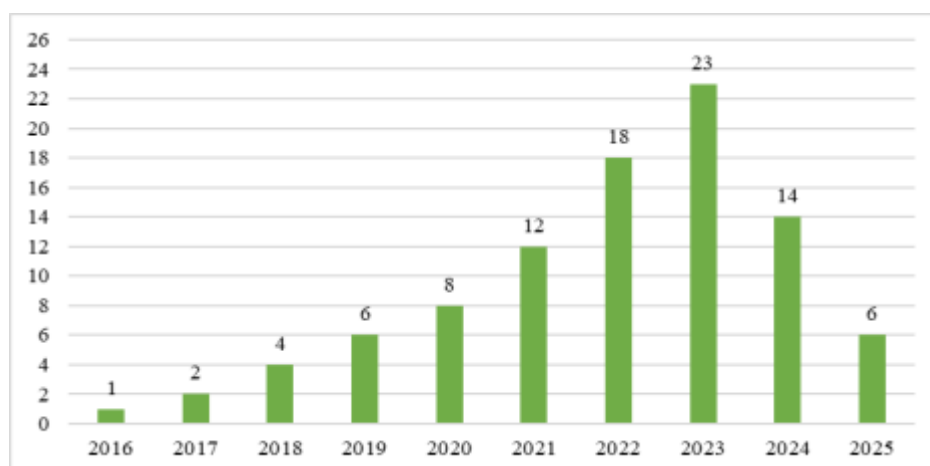


Figure 1: Distribution of Publications Over the Last 10 Years on Local Wisdom in Elementary Education Journals Indexed by SINTA.

Many studies are rooted in academics' sensitivity to emerging societal issues. This can be traced to national education policies that increasingly emphasize integrating local cultural values into learning. For example, the 2013 Curriculum explicitly mandates strengthening character education grounded in Indonesian culture, while the Merdeka Belajar (Freedom to Learn) policy provides broader opportunities for teachers and schools to integrate

local wisdom into regional contexts (Afriyadi et al., 2024; Salmia et al., 2024). This policy push has contributed to the growing number of studies focusing on the development of local wisdom-based learning models in elementary schools.

In addition to policy factors, the increase in publications is also linked to academics' growing awareness of the importance of preserving cultural identity in the era of globalization. The rising number

of publications reflects a shift in research orientation—from merely exploring cultural values toward systematically integrating them into the learning process (Fairus et al., 2024). Research on local wisdom is thus not only seen as a cultural preservation effort but also as an innovative strategy for building students' character from an early age.

3.1.2. Types of Research

The focus of a study is determined by the chosen research design (Susetyarini & Fauzi, 2020). The data in Figure 2 show that Research and Development (R&D) studies are the most dominant, with 54 publications. This indicates a growing trend in

Indonesian elementary education research that emphasizes product development, including modules, teaching materials, and learning media based on local wisdom. The integration of local wisdom into curriculum development and teaching materials positively impacts student engagement and the internalization of character values (Lestari et al., 2024). The dominance of R&D aligns with the global push for contextual learning that emphasizes culture-based innovation. The development of localized teaching resources, such as kinship terminology in regional languages, is highly suitable for strengthening students' cultural identity (Guslinda et al., 2024).

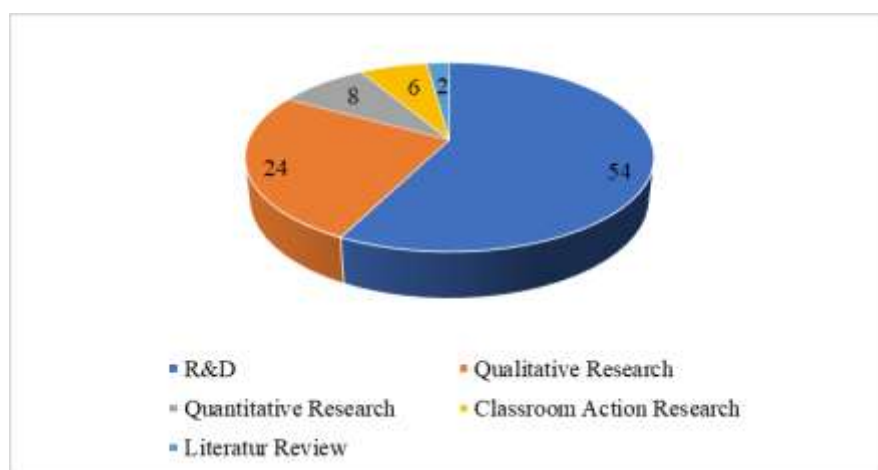


Figure 2: Types of Research Designs Used in the Past 10 Years on Local Wisdom in Elementary Education Journals Indexed by SINTA.

In addition to R&D, qualitative research also accounts for a significant proportion, with 24 publications. This approach is often chosen because it can explore complex, richly contextual cultural phenomena. It allows researchers to interpret cultural practices, community narratives, and student responses in depth. Local wisdom also serves as a pedagogical foundation in both primary and secondary education (Rahayu et al., 2025). Qualitative studies are widely used because local wisdom is inherently tied to cultural phenomena imbued with contextual significance, making it more accessible through qualitative approaches that describe how local values are integrated into learning and strengthen character education (Afriyadi et al., 2024; Siregar et al., 2023). The integration of local wisdom reinforces national identity in elementary schools through cultural literacy, school activities, and classroom learning (Fairus et al., 2024).

Meanwhile, quantitative research accounts for 8 publications. This type of research is generally used to test the effectiveness of teaching materials, learning models, or strategies based on local wisdom. Quantitative studies typically focus on improving student learning outcomes, attitudes, or character

following culture-based interventions. For example, quantitative research has shown that integrating local wisdom effectively strengthens character education in elementary schools (Humairoh et al., n.d.; Yusuf, 2023). This demonstrates that empirical, quantitative data-driven research still plays an important role in providing objective evidence of the success of implementing local wisdom in schools. Furthermore, classroom action research (CAR) accounts for 6 publications, while literature reviews are represented by only 2 publications. CAR is more commonly used by teachers to directly integrate local wisdom into classroom practices, thereby enhancing student participation and positive responses (Aningrum et al., 2024). In contrast, literature reviews remain limited, even though this method is crucial for providing a comprehensive synthesis of research trends on local wisdom (Verawati & Ramdani, 2024). The scarcity of literature reviews highlights the need for more systematic methodological analyses to strengthen the theoretical foundation in this field.

3.1.3. Research Methods

Figure 3 shows that the most frequently employed research methods are ADDIE (26 studies) and Borg

and Gall (13 studies). This reflects a strong tendency among researchers to adopt systematic development designs in producing local wisdom-based learning tools. Both models are frequently chosen due to their popularity and proven effectiveness in generating teaching products that are valid, practical, and effective for use in elementary schools to improve students' learning outcomes (Hamzah et al., 2021; Permatasari & Setyasto, 2024). Beyond development-oriented approaches, descriptive qualitative research (11 studies), the 4D model (10 studies), and case studies (4 studies) also occupy a significant proportion. These approaches are often selected for their capacity to explore the contextually rich meanings of local wisdom. Such approaches emphasize the interpretation of cultural values as

lived experiences rather than abstract concepts. In addition, these methods provide flexibility in capturing diverse perspectives from participants, including teachers, students, and community members. This flexibility is particularly important in culturally responsive research, where meanings are shaped by social interactions and local contexts. Through in-depth observation, interviews, and document analysis, qualitative research can capture the socio-cultural phenomena underlying educational practices rooted in local wisdom. Recent studies reaffirm that qualitative inquiry is essential for uncovering culturally grounded educational practices that cannot be fully explained through numerical data alone (Valentri et al., 2024).

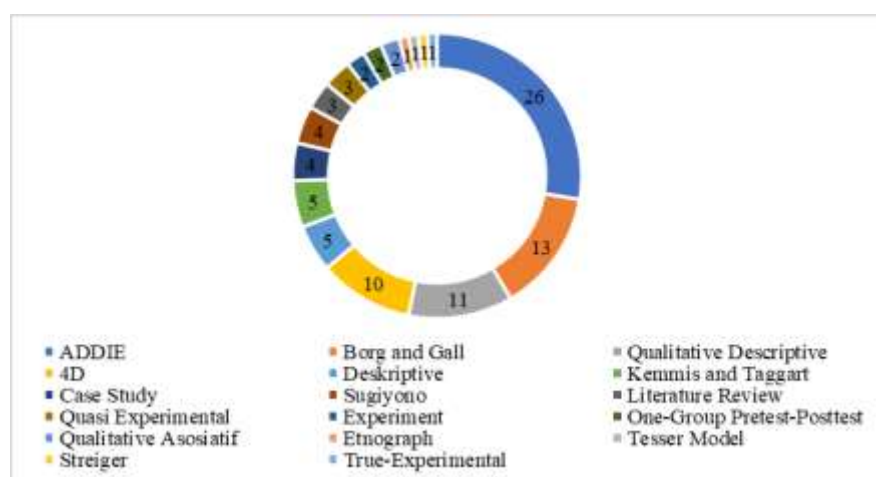


Figure 3: Research Methods Used in the Last 10 Years on Local Wisdom in Elementary Education Journals Indexed by SINTA.

Other methods, such as Sugiyono's model (4 studies) and several experimental designs, including quasi-experimental (3), one-group pretest-posttest (2), ethnography (1), and true experimental (1), were also employed. This variation illustrates researchers' efforts not only to develop teaching products but also to test their effectiveness empirically. The use of experimental methods provides stronger evidence on the impact of locally wisdom-based learning on students' outcomes and character. For instance, studies using the 4D model demonstrate that validated, locally grounded modules can significantly enhance elementary students' narrative writing skills (Valentri et al., 2024). Overall, the methodological trends reveal a dominant reliance on development models (ADDIE, Borg and Gall, 4D), complemented by qualitative and experimental approaches. This indicates that research on local wisdom in elementary education is not solely preservation-oriented but also aimed at producing pedagogical innovations tested systematically and empirically. With such methodological patterns, research in this field is increasingly capable of

addressing the needs of elementary education in ways that are both locally relevant and aligned with global scientific standards (Hamzah et al., 2021; Permatasari & Setyasto, 2024; Valentri et al., 2024).

3.1.4. Research Methods

The majority of local wisdom studies in elementary education selected fourth-grade students (42 studies) as the primary subjects. This choice is deliberate, as fourth graders are generally at the concrete operational stage of cognitive development according to Piaget, making them more receptive to culturally contextualized learning. Many studies developing locally wisdom-based teaching materials also involved elementary students as the main subjects to improve reading comprehension (Rasyid et al., 2023). In addition to grade 4, researchers frequently involved fifth-grade students (13 studies) and third graders (11 studies). This trend suggests that grades 3, 4, and 5 are most often chosen because, within the curriculum, they are considered ideal for both character reinforcement and the exploration of cultural values, consistent with developmental

theory. This phenomenon is evident in various studies demonstrating significant increases in learning activity and appreciation for local culture (Aningrum et al., 2024). Meanwhile, the higher the

grade (sixth grade), the lower the research frequency, likely because students are more focused on final exam preparation, as depicted in Figure 4.

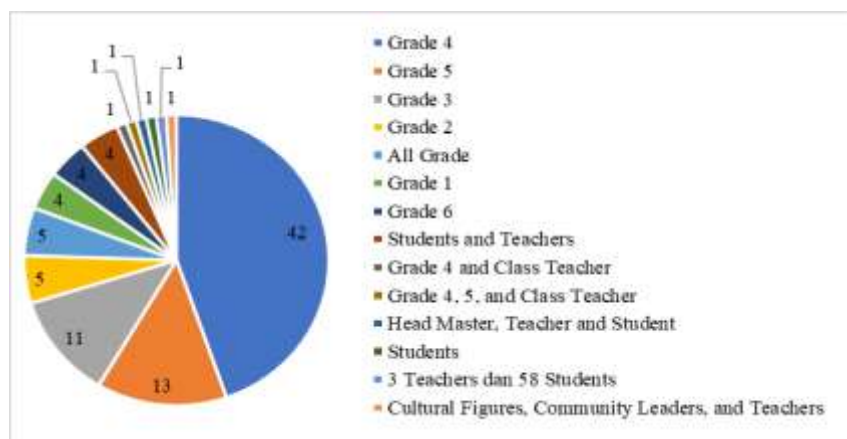


Figure 4: Research Subjects Used in the Last 10 Years on Local Wisdom in Elementary Education Journals Indexed by SINTA.

Figure 4 illustrates that the strongest trend in local wisdom research is evident in grades 4, 5, and 3, underscoring the critical role of teachers and communities in supporting culturally grounded learning. Beyond students, research also involved teachers, principals, and community leaders as additional subjects. Their involvement highlights that the integration of local wisdom is not solely the domain of students but part of the broader educational ecosystem. Teachers play a central role as facilitators, while communities and cultural figures safeguard the authenticity of the values being integrated. This indicates that successful implementation requires shared responsibility among all education stakeholders. Teachers not only deliver content but also interpret and adapt cultural values into meaningful learning experiences. At the same time, principals provide institutional support that ensures sustainability and consistency in program implementation. Community participation strengthens the relevance of learning by connecting classroom activities with real-life cultural practices.

Such collaboration ultimately fosters a more contextual and culturally responsive learning environment. Fairus et al. (2024) emphasize the importance of collaboration among teachers, schools, and parents in internalizing local wisdom within elementary learning. his collaboration helps create a consistent value system between school and home environments. It also enables the sharing of responsibilities in reinforcing cultural values through both formal and informal learning contexts. Moreover, active parental involvement can strengthen students' understanding and appreciation of local traditions. Several studies have also examined the dual involvement of teachers and students, even from a shared perspective on cultural values. Both teachers and students regard local wisdom as an essential source of values for character education, although teachers continue to face limitations in knowledge and resources to integrate it optimally (Sofiyah et al., 2025).

3.1.5. Subjects of Learning

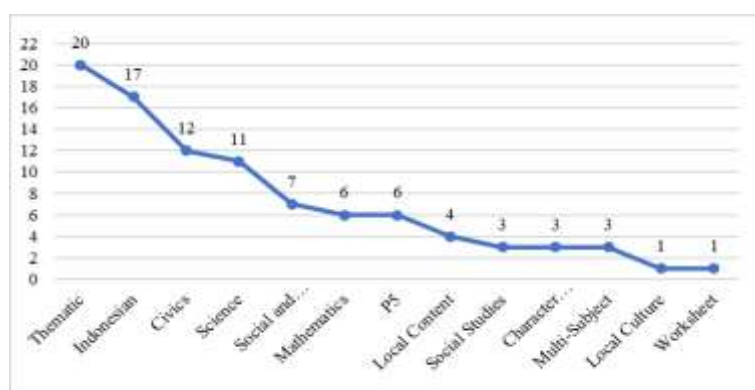


Figure 5: Integration of Local Wisdom into School Subjects in the Last 10 Years in Elementary Education Journals Indexed by SINTA.

Based on Figure 5, thematic subjects (20 studies) occupy the most dominant position in the integration of local wisdom at the elementary level. This is understandable, as thematic learning offers broader opportunities to connect interdisciplinary concepts with local cultural contexts closely related to students' daily lives (Munawir et al., 2024). Integrating local wisdom into thematic instruction has been proven to strengthen character values while also fostering 21st-century skills (Murwati et al., 2022). The successful integration of local wisdom into the Merdeka Curriculum through culture-based teaching modules has significantly improved student learning outcomes (Salmia et al., 2024).

In addition to thematic subjects, Indonesian Language (17 studies) and Civics (PKn) (12 studies) are also widely used to integrate local wisdom. This is because Indonesian Language—especially reading and writing—is easily enriched by folktales, proverbs, and oral traditions laden with cultural values. At the same time, Civics is inherently linked to national identity and local wisdom. Local wisdom-based research has demonstrated the ability to enhance literacy skills while simultaneously cultivating students' cultural pride (Setyowati et al., 2024). Meanwhile, science (11 studies) and Natural and Social Sciences (7 studies) have become effective platforms for teaching contextualized scientific knowledge, such as traditional environmental management, herbal medicine, and agricultural practices, which elementary students can study through scientific inquiry.

The Pancasila Profile Strengthening Project (P5)

Student (6 studies) and Character Education (3 studies) reflect specific attention to character development through the integration of local cultural values. This aligns with the direction of the Merdeka Curriculum, which positions P5 as an interdisciplinary learning avenue emphasizing diversity, cooperation, and independence rooted in Indonesian culture. Integrating local wisdom into Civics and P5 is urgent for building resilient character and national consciousness, particularly in the context of global challenges such as disasters and environmental crises (Susilawati et al., 2024).

Meanwhile, local content (*muatan lokal*) (4 studies), Social Studies (3 studies), and local culture (1 study) represent explicit efforts to preserve regional cultural identities through formal education. Local wisdom-based learning can serve as a foundation for contextual character education in elementary schools (Afriyadi et al., 2024). The integration of local wisdom across different subjects is therefore not only thematic but also specific, ranging from literacy to science to character education, illustrating the strategic role of the curriculum in linking local culture with 21st-century competencies.

3.1.6. Research Instruments

Research instruments play a crucial role in data collection, particularly in studies on integrating local wisdom into elementary education. As shown in Figure 6, the most widely used instruments are interview guides (54 studies), followed by observation sheets (53), questionnaires (48), and tests and documentation (31 each). Validation sheets (24) and not mentioned (3) are also included.

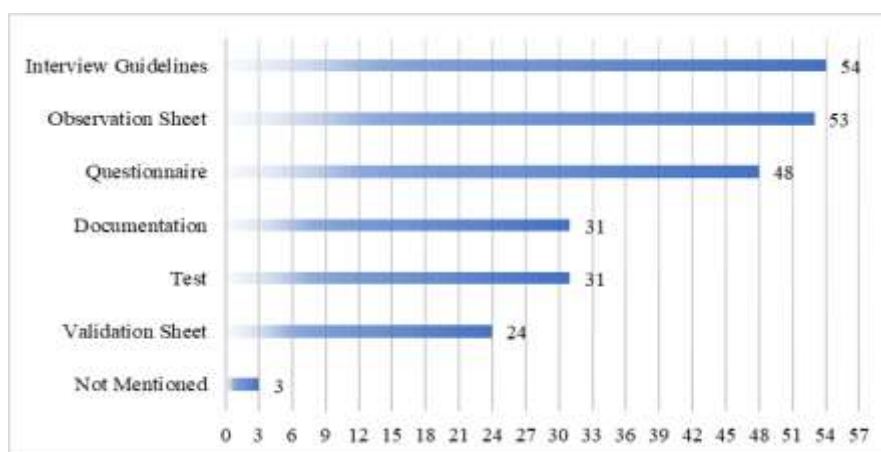


Figure 6: Research Instruments Used in the Last 10 Years on Local Wisdom in Elementary Education Journals Indexed by SINTA.

The dominance of interviews and observations indicates that researchers prioritize in-depth exploration and contextual understanding of local wisdom practices integrated into learning. The combined use of interviews, observations, and

questionnaires has proven effective for evaluating local wisdom-based learning media designed to enhance students' decision-making skills (Ardana & Yudiana, 2024). Questionnaires also play an important role, as they can measure attitudes,

perceptions, and responses of both students and teachers toward culture-based instruction. This is reinforced by Merika et al. (2022), who showed that instruments such as questionnaires, structured interviews, observations, and documentation are essential for developing performance assessment tools in thematic, local wisdom-based learning at the elementary level.

In addition, tests are vital for assessing students' cognitive achievements, although they are used less frequently than interviews and observations. Tests are often employed alongside documentation to provide a more comprehensive view of instructional effectiveness. For instance, a combination of interviews, observations, documentation, questionnaires, and tests has been used to measure improvements in social studies learning outcomes through Powtoon media based on local wisdom (Permatasari & Setyasto, 2024). However, a small portion of publications (3 studies) did not specify the instruments employed for data collection. This lack of clarity, along with the absence of validity and

reliability testing, undermines the credibility of the findings. These results highlight the need for greater methodological awareness among researchers in local wisdom-based education.

3.1.7. Data Analysis Techniques

The choice of data analysis techniques plays a vital role in ensuring the validity and depth of research findings (Olmsted, 2024). As shown in Figure 7, the most dominant technique is qualitative descriptive analysis (25 studies). This technique is considered suitable because most studies on local wisdom in elementary education focus on exploring meanings, values, and contextual practices that can only be uncovered through narrative approaches. Such an approach is widely adopted in cultural education studies as it allows for deeper exploration of complex meanings. Qualitative descriptive analysis enables researchers to systematically conduct data reduction, data presentation, and conclusion drawing, thereby mapping local wisdom values comprehensively within learning contexts (Umar Seno et al., 2022).

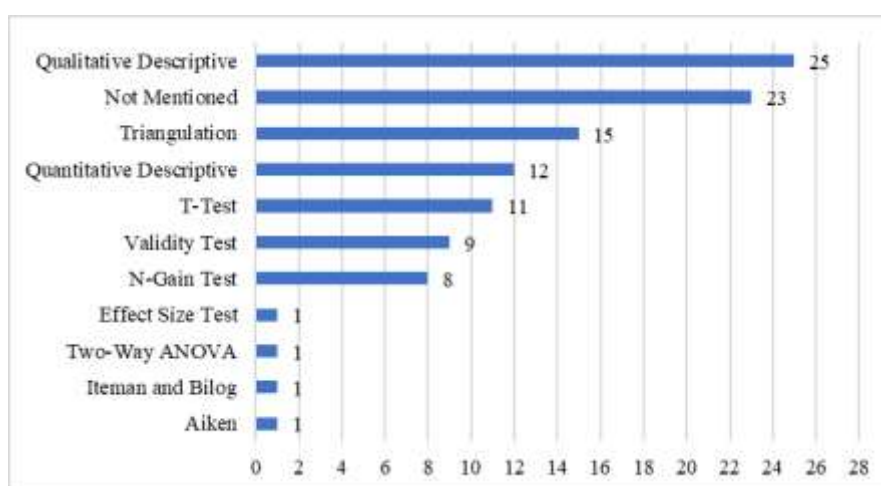


Figure 7: Data Analysis Techniques Used in the Last 10 Years on Local Wisdom in Elementary Education Journals Indexed by SINTA.

Other frequently used techniques include triangulation (15 studies), which is commonly used to validate qualitative data. This method strengthens validity by combining results from interviews, observations, and documentation, thereby ensuring consistency across sources (Rasdia & Hernah, 2024). In studies of local wisdom, triangulation is especially relevant, as the data often encompass multidimensional aspects, such as social, cultural, and even spiritual (Antara, 2023).

On the other hand, studies adopting quantitative approaches tend to use quantitative descriptive analysis (12 studies) and t-tests (11 studies). Quantitative analysis enables researchers to assess the effectiveness of locally wisdom-based learning models through group comparisons or score-based

metrics. For example, a study on local wisdom-based art education employed a t-test to evaluate improvements in student participation (Aningrum et al., 2024). Additionally, several studies (8) used N-Gain tests to measure learning progress, and some employed advanced analyses such as Two-Way ANOVA or effect sizes, although their use remains limited.

Nevertheless, around 23 publications did not explicitly specify the data analysis techniques used. This raises concerns about methodological transparency, as without these details, it is difficult to assess the reliability of the findings. This trend has been criticized in Munawir's study, which argued that insufficient reporting on analysis techniques reduces academic readability and the potential for

replication (Munawir et al., 2024). Therefore, comprehensive reporting of analysis methods is essential for scientific integrity.

The findings on data analysis techniques, as illustrated in Figure 6, reveal that local wisdom research in Indonesian elementary education is predominantly oriented toward qualitative descriptive approaches supported by triangulation, though quantitative trends using t-tests and N-Gain are gradually emerging. The choice of methods reflects researchers' efforts to balance statistical rigor with the contextual richness of cultural meanings. This aligns with the need to combine analytical approaches so that research outcomes are not only statistically valid but also culturally insightful (Noritasari et al., 2024).

3.2. Discussion

The development of research on local wisdom in Indonesian elementary education demonstrates a strengthening dynamic over the years. The research trend on local wisdom is driven not only by academic factors but also by national policy directives. Teachers and researchers are encouraged to integrate cultural values into learning, both through R&D models and qualitative studies. Innovations in culture-based learning increase the relevance of instruction to students' contexts (Hasan & Monita, 2024). This aligns with culture-based education theory, which emphasizes the role of the social environment in child development (Spring, 2021).

The dominance of R&D research design in elementary education publications reflects the practical need to produce contextual teaching materials. Development models grounded in local values have proven effective in instilling a collaborative character (Afriyadi et al., 2024). On the other hand, integrating local wisdom through innovative teaching materials strengthens students' understanding of abstract concepts (Fairus et al., 2024). From a constructivist perspective, culture-based learning enables students to construct meaning through real-life experiences (Shweder, 2020). This explains why development studies dominate over other research designs.

Qualitative descriptive methods are also widely used because they allow researchers to explore social, cultural, and spiritual meanings comprehensively. One study emphasized the importance of qualitative approaches in understanding cultural practices rich in contextual values (Parhan & Dwiputra, 2023). This indicates that methodological choices are aligned with the characteristics of the research object. Supporting evidence can be found in the study by Yampap and Haryanto (2023) on the *Bakar Batu*

tradition, which illustrates how local wisdom can be uncovered through observation and in-depth interviews. Educational anthropology also argues that cultural phenomena are difficult to interpret numerically alone; thus, narrative analysis is more appropriate (Spring, 2021).

The tendency to select fourth-grade students as research subjects reflects pedagogical considerations closely related to cognitive developmental stages. According to Piaget (Shweder, 2020), ages 9–10 mark the transition to concrete operations, a period when students begin to understand symbols and cultural values more deeply. For example, elementary students in Lampung internalized the value of gotong royong through culture-based learning (Afriyadi et al., 2024). This trend suggests that fourth grade is perceived as a strategic entry point for instilling character values rooted in culture. In addition to students, several studies also involve teachers and community leaders. The inclusion of diverse research subjects contributes to a more holistic understanding of culture-based education. Teachers act as primary mediators of cultural values within formal schooling (Syamsi & Tahar, 2021), while the presence of cultural figures enhances data authenticity and adds community perspectives. Collaboration between teachers and local leaders enriches culture-based learning (Tohri et al., 2022).

The subjects most frequently used as vehicles for integration are thematic learning, Indonesian Language, and Civics. Thematic instruction provides interdisciplinary integration that strengthens character values, channel's cultural identity through texts, and serves as a medium for cultural transmission (Shweder, 2020; Murwati et al., 2022; Setyowati et al., 2024). Research linking local wisdom with science and social studies shows that cultural integration is expanding in elementary schools. For instance, integrating local wisdom into Science, Social Studies, and Natural and Social Sciences not only enhances scientific literacy but also fosters environmental awareness (Afriyadi et al., 2024; Lestari et al., 2024). This is consistent with ecological education theory, which stresses the interconnectedness of humans, culture, and nature (Spring, 2021).

The dominant research instruments are interviews, observations, and questionnaires, which are considered most effective for uncovering cultural meaning. The prevalence of interviews and observations demonstrates researchers' sensitivity to social contexts, while questionnaires allow for broader quantitative data collection. Triangulation of instruments is crucial, as cultural phenomena are multidimensional (Antara, 2023). Qualitative validity

can be achieved through the use of multiple data collection instruments (Creswell, 2014). In data analysis, the prevalence of qualitative descriptive approaches suggests a tendency to present holistic portrayals of cultural phenomena. The choice of analysis techniques directly influences the validity of findings (Olmsted, 2024). However, only a minority of studies employ advanced statistical techniques such as ANOVA, which have been used, for example, to examine the relationship between cultural values and scientific understanding (Lestari et al., 2024). This suggests that methodological strengthening remains an open opportunity for future research.

Local wisdom research also reflects a shift in orientation from mere value exploration toward the development of instructional models (Purwastuti, 2022). Culture-based teaching products help students better grasp abstract concepts (Fairus et al., 2024). From a constructivist perspective, students develop a stronger understanding when learning through experiences connected to their own lives (Shweder, 1999). Equally important, the involvement of cultural leaders underscores the role of community contexts in education, ensuring that cultural values are genuinely instilled in students through community participation (Syamsi & Tahar, 2021; Yampap & Haryanto, 2023). This highlights that research on local wisdom must account for social dimensions beyond the classroom.

Research on local wisdom contributes significantly to nation-building through character education. Integrating local culture equips younger generations to navigate the era of disruption with a strong identity (Parhan & Dwiputra, 2023). Culture-based learning strategies enhance student motivation and participation (Fairus et al., 2024). Bronfenbrenner's perspective reinforces this by emphasizing that individual interaction with the environment is crucial to the educational process (Spring, 2021). However, research trends also reveal an imbalance in the application of more rigorous experimental designs. Methodological strength directly correlates with the credibility of findings (Olmsted, 2024). The scarcity of quasi-experiments and longitudinal studies highlights a limitation in providing robust empirical evidence. Culture-based research should therefore be complemented with quantitative validation to strengthen its claims (Tohri et al., 2022), an important consideration for future research directions.

From a policy perspective, research findings underscore the urgency of integrating local wisdom into instruction. Culture-based education policies are increasingly relevant and strategic, as revitalizing cultural values through learning innovation helps

safeguard national identity (Hasan & Monita, 2024). Integrating culture into instruction, such as in science learning, can shape students' ecological awareness from an early age (Lestari et al., 2024). Education grounded in local culture also strengthens social cohesion amid globalization (Spring, 2021).

Some limitations were noted in the studies, including the lack of reported instrument validity testing. Creswell (2014) emphasized the importance of validation to ensure data reliability. Furthermore, some studies stop at descriptive accounts of cultural values without testing their effectiveness in instructional practice. Yet, combining methods to produce more comprehensive data would yield stronger results (Parhan & Dwiputra, 2023). This means that future research should adopt mixed-method approaches to provide more convincing evidence for the integration of local wisdom.

Overall, this discussion demonstrates that research on local wisdom in elementary education is evolving toward more systematic and applicative orientations. The combination of R&D, qualitative inquiry, and multi-subject involvement reflects a serious effort to position culture as the foundation of character education. Major theories—from Piaget to Shweder to Bronfenbrenner offer relevant conceptual frameworks. Supported by recent empirical findings, local wisdom has increasingly been shown to be an effective strategy for fostering cultural identity and 21st-century competencies among elementary school students.

4. CONCLUSION

A systematic review of research trends on local wisdom in Indonesian elementary education journals reveals that the integration of cultural values into learning has advanced significantly. The dominance of R&D and qualitative designs reflects the dual need to produce contextual teaching products while also achieving a deep understanding of cultural meaning. Most studies involve fourth-grade students, who are at the concrete operational stage of cognitive development, making them more prepared to internalize cultural values contextualized in learning. The dominant subjects, such as Thematic Learning, Indonesian Language, and Civics, were chosen because they offer ample space for cross-concept integration with local cultural content. The most frequently used instruments include interviews, observations, and questionnaires, while qualitative descriptive analysis predominates in data analysis. Overall, this trend shows that local wisdom is not only valued for cultural preservation but also as a strategy for character education, strengthening

national identity, and fostering 21st-century skills.

The predominance of fourth-grade students as research subjects aligns with Piaget's cognitive developmental theory, in which children begin to connect cultural symbols with academic concepts. The findings are also consistent with Bronfenbrenner's ecological systems theory, which emphasizes that child development is influenced by layered systems, ranging from family and school to broader community culture. Thus, research on local wisdom rests on both strong empirical findings and solid theoretical foundations that explain the relevance of culture in elementary education.

Nevertheless, this review also uncovers several limitations and gaps. Research has largely focused on grades 3, 4, and 5, while grades 1, 2, and 6 remain underexplored, despite their unique developmental characteristics and pedagogical opportunities. In terms of methodology, studies are still dominated by R&D and descriptive qualitative approaches, with limited use of quantitative methods, rigorous experimental designs, and systematic literature reviews. This indicates considerable opportunities to

diversify research methodologies and enrich perspectives on local wisdom. In addition, research is more concentrated in the Indonesian Language, Thematic Learning, and Civics. At the same time, other subjects, such as mathematics, science, integrated science, social studies, and local content, are rarely addressed. In fact, local wisdom can be contextualized in numeracy, science, and practical skills. Data analysis techniques also remain largely limited to qualitative descriptive methods, with relatively few studies employing inferential statistics or longitudinal analyses. This highlights the wide space available to strengthen methodological rigor while expanding the integration of local wisdom into multiple disciplines.

5. ACKNOWLEDGEMENTS

The authors would like to express their gratitude to the Education Fund Management Institution (Lembaga Pengelola Dana Pendidikan / LPDP) under the Ministry of Finance of the Republic of Indonesia for supporting the authors' doctoral and master's studies as well as the publication of this article.

REFERENCES

- Afriyadi, M. M., Widiati, U., Arifin, I., Ramli, M., & Maba, A. P. (2024). Piil pesenggiri local wisdom as the base of character education in social studies learning at Metro City Elementary School, Lampung. *Al-Tadzkiyyah: Jurnal Pendidikan Islam*, 15(1), 55-69.
- Aningrum, F., Aliazas, V. M., & Kim, S. (2024). Optimizing Elementary School Education through the Implementation of Karawitan-Based Learning Grounded in Local Wisdom. *Journal of Basic Education Research*, 5(1), 40-47.
- Antara, I. G. W. S. (2023). Post-pandemic learning integration of local wisdom as a learning concept for elementary school students. *Adi Wiyata: Jurnal Pendidikan Dasar*, 8(1), 11-17.
- Ardana, I. K. S., & Yudianta, I. K. E. (2024). Improving decision-making skills in elementary schools with cognitive flexibility learning media incorporating Balinese local wisdom. *Thinking Skills and Creativity Journal*, 7(2), 236-246.
- Badeni, B., & Saparahayuningsih, S. (2023). The implementation of local wisdom-based character education in elementary school. *Journal of Educational Issues*, 9(2), 1-14.
- Bransford, J. D., Brown, A. L., & Cocking, R. R. (2000). *How people learn: Brain, mind, experience, and school* (Expanded ed.). National Academies Press.
- Bronfenbrenner, U. (1979). *The ecology of human development: Experiments by nature and design*. Harvard University Press.
- Bruner, J. (1996). *The culture of education*. Harvard University Press.
- Creswell, J. W. (2014). *Research design: Qualitative, quantitative, and mixed methods approaches* (4th ed.). SAGE Publications.
- Fairus, F., Maftuh, B., Sujana, A., Pribadi, R., & Azzahra, F. (2024). Local wisdom integration in learning implementation in elementary school. *Jurnal Cakrawala Pendas*, 10(2), 194-205.
- Fraenkel, J. R., & Wallen, N. E. (2009). *How to design and evaluate research in education* (7th ed.). McGraw-Hill Higher Education.
- Guslinda, G., Kurniaman, O., Firdaus, L. N., & Hadriana, H. (2024). Developing local wisdom-based teaching materials on "family addressing terms" for elementary school students: validation analysis using the 4D model. *Multidisciplinary Journal of School Education*, 13(1 (25)), 295-315.
- Hamidaturrohman, H., & Faidah, N. (2026). Strengthening elementary school students' civic disposition through gamified nohaki e-module in Pancasila Education. *Jurnal Gentala Pendidikan Dasar*, 11(1),

- 15–30.
- Hamzah, A., Handayani, T., Nurlaeli, N., Shawmi, A. N., & Bujuri, D. A. (2021). Development of Palembang local wisdom-based civic education teaching subject in elementary school. *JIP Jurnal Ilmiah PGMI*, 7(2), 43–50.
- Indah, R. N., & Rohmah, G. N. (2022). Indonesian local wisdom: State of the art. *Proceedings of the international symposium on religious literature and heritage*, 644(1), 254–259.
- Lestari, N. P., & Suyanto, S. (2024). A systematic literature review about local wisdom and sustainability: Contribution and recommendation to science education. *Eurasia Journal of Mathematics, Science and Technology Education*, 20(2), 1–19.
- Lickona, T. (1991). *Educating for character: How our schools can teach respect and responsibility*. Bantam Books.
- Lyesmaya, D., Musthafa, B., & Sunendar, D. (2020). Local wisdom value's-based literacy education learning model in elementary school. *Journal of Physics: Conference Series*, 1470(1), 1–7.
- Merika, D., Herpratiwi, H., & Handoko, H. (2022). Developing a performance assessment instrument for integrated thematic learning in elementary school based on local wisdom: A needs analysis. *International Journal of Educational Studies in Social Sciences*, 2(3), 155–160.
- Miles, B. M., & Huberman, A. M. (1994). *Qualitative Data Analysis: An Expanded Sourcebook*, Second Edition. SAGE Publications.
- Munawir, A., Yaumi, M., Sulaiman, U., & Rahman, U. (2024). Integrating local wisdom in elementary education: Evaluating the impact of thematic curriculum in Palopo City. *Tadris: Jurnal Keguruan dan Ilmu Tarbiyah*, 9(1), 139–149.
- Murwaningsih, T., Fadhilah, S. S., & Sholeh, A. R. (2020). The implementation of characters' values through local wisdom of Sadranan in elementary schools. *International Journal of Multicultural and Multireligious Understanding*, 7(1), 450–458.
- Murwati, Y., Sumardjoko, B., Minsih, & Prastiwi, Y. (2022). Thematic learning based on local wisdom in the new normal time in elementary school. *Jurnal Pendidikan Indonesia*, 11(3), 388–396.
- Noritasari, D. R., Edward, B. A., & Padmanathan, H. (2024). Application of local wisdom of wayang figures: Building student character education in elementary schools. *Journal of Basic Education Research*, 5(2), 61–68.
- Olmsted, J. (2024). Research reliability and validity: Why do they matter? *Journal of Dental Hygiene*, 98(6), 53–57.
- Parhan, M., & Dwiputra, D. F. K. (2023). A systematic literature review on local wisdom actualization in character education to face the disruption era. *Journal of Innovation in Educational and Cultural Research*, 4(3), 371–379.
- Permatasari, D. D., & Setyasto, N. (2024). Powtoon learning media containing local wisdom improves elementary school social sciences learning outcomes. *Jurnal Edutech Undiksha*, 12(1), 142–150.
- Purwastuti, L. A. (2022). Batik as a craft teaching-learning medium to preserve values of local wisdom in elementary schools in Bantul, Indonesia. *Humanika*, 22(2), 91–98.
- Rahayu, B. M., Muhyidin, A., & Jamaludin, U. (2025). Cultural intelligence meets edtech : A systematic review on integrating local wisdom into digital teaching to foster learning engagement. *Jurnal Pendidikan Progresif*, 15(03). 1764–1784.
- Ramlan, R., Iskandar, D., Permana, J., & Husin, M. R. (2023). Character values of elementary school education from the perspective of local wisdom of sundanese culture. *Journal of Educational and Social Research*, 13(3), 119–129.
- Rasdia, R., & Hernah, H. (2024). Strategy for instilling local wisdom values in the formation of students' morals. *Jurnal Pendidikan Agama Islam Indonesia*, 5(3), 100–111.
- Rasyid, G. S. M., Kurniaman, O., & Guslinda, G. (2023). Development of local wisdom-based literacy modules for reading comprehension in elementary school. *Al-Ishlah: Jurnal Pendidikan*, 15(4), 4492–4505.
- Salmia, Nursalam, & Bancong, H. (2024). Effectiveness of local wisdom-based independent curriculum teaching modules in improving learning outcomes Indonesia. *Journal of Ecohumanism*, 3(6), 1719–1726.
- Sari, N. (2020). Pendidikan berbasis kearifan lokal untuk membentuk karakter siswa sekolah. *Jurnal Penelitian, Pendidikan dan Pengajaran*, 1(1), 1–10.
- Seno, U., Narimo, S., Fuadi, H., Minsih, M., & Widayarsi, C. (2022). Implementation of local wisdom based learning in realizing pancasila student profiles in elementary schools. *Jurnal Ilmiah Sekolah Dasar*,

- 6(4), 652–660.
- Setyowati, E., Hendratno, H., & Sukartiningih, W. (2024). Assessing the impact of local wisdom on Indonesian language learning in primary schools. *Scaffolding: Jurnal Pendidikan Islam dan Multikulturalisme*, 6(3), 198–212.
- Shweder, R. A. (1999). *Cultural psychology: Essays on human development, family, and culture*. Cambridge University Press.
- Siregar, R. S., Astutik, D., Liestyasari, S. I., Ghufonuddin, & Parahita, B. N. (2023). Cultural semantics: Internalization of Javanese language local wisdom to prevent moral degradation among students. *Kembara Journal of Scientific Language Literature and Teaching*, 9(2), 455–467.
- Siska, F., Sapriya, S., & Febriani, T. (2021). Local wisdom-based character building through social science learning in elementary schools. *Jurnal Ilmu Sosial Mamangan*, 10(1), 54–59.
- Sofiyah, R. A., Suwandayani, B. I., & Kumalasani, M. P. (2025). Characteristics of local wisdom in building character based on the perspectives of teachers and students in Batu City elementary schools. *Cetta: Jurnal Ilmu Pendidikan*, 8(1), 173–182.
- Spring, J. (2021). *Education and culture: An introduction*. Routledge.
- Susetyarini, E., & Fauzi, A. (2020). Trend of critical thinking skill researches in biology education journals across Indonesia: From research design to data analysis. *International Journal of Instruction*, 13(1), 535–550.
- Susilawati, Sofyan, H., Ilhamsyah, Y., & Ridha, S. (2024). The urgency of integrating local wisdom and disaster-resilient character in the merdeka curriculum through the disaster-safe education unit. *Geosfera Indonesia*, 9(3), 265–275.
- Syamsi, I., & Tahar, M. M. (2021). Local wisdom-based character education for special needs students in inclusive elementary schools. *Cypriot Journal of Educational Sciences*, 16(6), 3329–3342.
- Tohri, A., Rasyad, A., Sururuddin, M., & Istiqlal, L. M. (2022). The urgency of Sasak local wisdom-based character education for elementary school in East Lombok, Indonesia. *International Journal of Evaluation and Research in Education*, 11(1), 333–344.
- UNESCO. (2015). *Rethinking education: Towards a global common good ?*. UNESCO Publishing.
- Valentri, A., Rahayu, M., & Ariestika, E. (2024). Development of teaching materials for writing short stories based on local wisdom for primary school students. *International Research-Based Education Journal*, 6(2), 137–144.
- Verawati, N. N. S. P., & Ramdani, A. (2024). Research trend of local wisdom issues based on scopus journal database: A bibliometric study. *International Journal of Contextual Science Education*, 1(1), 11–21.
- Yampap, U., & Haryanto. (2023). The value of local wisdom in the burning stone tradition through learning for character building of elementary school students. *KnE Social Sciences*, 1(1), 239–254.
- Yusuf, F. A. (2023). Meta-analysis: The influence of local wisdom-based learning media on the character of students in Indonesia. *International Journal of Educational Methodology*, 9(1), 237–248.