The Power of Integrity of Local Wisdom in Basic Education: Sustainable Development

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Abstract
This study aims to determine the strength of integrity and sustainability of local wisdom in its application in elementary schools. The method used in this research is a systematic literature review that collects various literature or journals. The results of this study show that the integrity of local wisdom in education in elementary schools is one of the essential foundations in shaping students' character, identity, and connection with local culture. Many studies emphasize the values of local wisdom, such as gotong royong, mutual respect, preserving cultural heritage, and teaching the values of perseverance and determination through folklore and traditions. In addition, implementing local wisdom into the learning curriculum is a practical approach and provides significant strength in supporting sustainable development for future generations. Hence, it is essential to cooperate with the government, schools, teachers, and the surrounding community to support the implementation of local wisdom.

Keywords: Basic Education, Local Wisdom, Sustainable Development

Introduction

The Technology has become integral to educational advancement (Bernacki et al., 2020; Haleem et al., 2022). With the continuous development of technological innovation, education has undergone many significant transformations in recent decades. This can be seen from the technology that has opened the doors of education for many people who previously did not have access to it and the emergence of online learning platforms and mobile devices that have enabled people to learn anytime and anywhere without being restricted by geographical or physical limitations (Guan et al., 2020; Mukhid, 2023). Technology also provides a more personalized and adaptive approach to learning. AI-based learning systems can adapt learning materials according to each student's level of understanding and learning style, thus improving efficiency and effectiveness in learning (Chen et al., 2020). The Internet provides easy access to various learning resources, including learning videos, e-books, scientific journals, and online courses. It can enrich learners' learning experiences and provide various materials and perspectives (Odili et al., 2020).

Local wisdom in Indonesia refers to knowledge, values, traditions, and practices from generation to generation by local communities (Nasriandi et al., 2023; Nasution et al., 2022). The concept of local wisdom in Indonesia is closely related to the country's ethnic, cultural and geographical diversity (Sumartias et al., 2020). This concept covers various aspects of life, including culture, religion, art, agriculture, fisheries, crafts, arts and traditional knowledge systems related to nature and the environment. (Komara & Meliyani, 2021; Retnowati et al., 2020). Indonesia's diverse cultural wealth consists of thousands of islands with rich and diverse tribes, languages, customs, religions, and cultures. Thus, this local wisdom can develop along with the interaction between the community and the environment (Purwani & Arvianti, 2020).

Along with the times and globalization, Indonesia will continue to experience various challenges and changes. This happens because there is too much interference from modern technology that is not balanced with local values (Santoso et al., 2023). However, efforts to maintain and respect traditional values are still very strong. Various government, community and educational institutions have launched initiatives to promote and protect local wisdom, such as developing tourism villages, local wisdom education, local

wisdom-based product development, local wisdom-based environmental preservation, and legal recognition and protection of local wisdom (Haniah et al., 2023; Triastari et al., 2021).

Local wisdom in basic education today reflects a paradigm shift from an educational approach that merely teaches academic skills to a more holistic and integrated approach that values and integrates local wisdom in the curriculum and learners' learning experiences. This is driven by the understanding that education should prepare learners to become open-minded, competitive and responsible members of society (Abubakar & Uke, 2021; Noor & Sugito, 2019). Integrating local wisdom helps strengthen students' cultural identity, contextualizes learning, increases community engagement, protects culture and the environment, develops life skills, and fosters social and human values. Hence, there is a need for collaboration between educators, local communities, and other stakeholders to ensure that students' learning experiences are enriched and connected to their culture and the surrounding environment (Irmayanti et al., 2024; Penuel et al., 2020).

Over the past three years, learners' use of gadgets in basic education reflects a shift towards integrating technology into the learning process (Jing et al., 2024; Tuzahra et al., 2021). Educational apps, educational games and AR/VR technologies are increasingly popular, providing students with a more engaging and fun learning experience while supporting their understanding of local wisdom (Fisher & Baird, 2020; Paliokas et al., 2020). In addition, collaborative platforms and social media are used to facilitate local wisdom-based discussions and projects (Ardiansyah et al., 2024). Using gadgets, basic education is undergoing a transformation that enriches learners' learning experiences and increases their access to learning content relevant to local cultures and traditions (Barakabitze et al., 2019; Dewi & Alam, 2020).

Local wisdom is a cultural heritage passed down from generation to generation in a particular society or culture. The importance of local wisdom lies in the values, knowledge and traditions that shape the identity of a society and preserve cultural diversity around the world (Rozi et al., 2021). Local wisdom is important in supporting cultural identity, strengthening social relations, and preserving the natural environment (Karmini, 2020). Integrity and understanding of local wisdom enrich individual experiences, encourage tolerance and respect for other cultures, and strengthen the cultural sovereignty of a nation. By understanding and respecting local wisdom, communities can build a strong foundation for sustainable development and intercultural harmony. Therefore, education and society need to strengthen and preserve local wisdom as anintegral part of human identity and cultural heritage (Noor & Sugito, 2019; Rustan Effendi, 2020).

In sustainable development, local wisdom is an important resource. This is because local wisdom often contains solutions that have been tested from generation to generation in managing natural resources sustainably (Abas et al., 2022). Through education that incorporates local wisdom values into the curriculum, students can understand and appreciate their cultural heritage and learn traditional ways of managing natural resources sustainably (Budiastra et al., 2021). Education focusing on local wisdom also allows young people to stay connected to their cultural and natural roots, thus fostering a sense of environmental responsibility and sustainability (Agus et al., 2021).

Based on previous research, local wisdom must be implemented in elementary schools (Riyanti & Novitasari, 2021; Santoso et al., 2023). This aligns with Ki Hajar Dewantara's concept of multicultural education, whose main goal is to form the nation's generation to understand, appreciate, and be aware of cultural values (Shabartini et al., 2023). Thus, integrating local wisdom in education makes one of the good stepping stones in building the character of the nation's children (Tambunan, 2020). Thus, integrating sustainable development, education, and local wisdom becomes a solid foundation for the community to achieve sustainable prosperity while maintaining cultural identity and environmental diversity (Febrianty et al., 2023).

This research was conducted to determine the strength of local wisdom integrity and sustainability in its application in elementary schools. So far, there is no literature review that discusses the integrity of local wisdom in primary education: sustainable development. This article hopes to be a reference for educational success in the integrity of local wisdom and sustainable development. This study refers to previous researchers on the integrity of local wisdom in primary education and sustainable development.

Method

In This study used a systematic literature review (SLR). A SLR is a technique of identifying, evaluating, and analyzing various existing and relevant information in the literature or references to answer research questions through deeper analysis (Snyder, 2019; Xiao & Watson, 2019). SLR has been proven to help

summarize the latest knowledge on a particular topic with a systematic and transparent method for answering research questions (Kurniati et al., 2022).

The Systematic Review Process for Selecting the Articles

For selecting the research papers, we used the terms "augmented reality and mathematics" in the disbursement menu in the Scopus database. The obtained data was stored in *RIS format and synchronized with the Reference Manager (Mendeley). Furthermore, VOS-viewer software was used to visualize the data, resulting in a more communicative, interesting, and clearer information presentation. The search history on Scopus was carried out through TITLE- ABS-KEY (local AND wisdom, AND attitude) AND PUBYEAR > 2012 AND PUBYEAR <2025 AND (LIMIT-TO-KEY) AND (LIMIT-TO-KEY). 2025 AND (LIMIT-TO (LANGUAGE , "English")) AND (EXCLUDE (OA , "publisherfullgold") OR EXCLUDE (OA , "publisherhybridgold") OR EXCLUDE (OA , "publisherfree2read") OR EXCLUDE (OA , "repository")) AND (EXCLUDE (SRCTYPE , "p") OR EXCLUDE (SRCTYPE , "b")) AND (EXCLUDE (DOCTYPE , "no")) AND (EXCLUDE (SUBJAREA , "BUSI") OR EXCLUDE (SUBJAREA , "ENGI") OR EXCLUDE (SUBJAREA , "ENVI") OR EXCLUDE (SUBJAREA, "AGRI") OR EXCLUDE (SUBJAREA, "ECON") OR EXCLUDE (SUBJAREA, "NURS") OR EXCLUDE (SUBJAREA, "MEDI")).

Data Analysis

The papers that met the inclusion criteria were thoroughly reviewed for data analysis and subsequently categorized to extract systematic information by the criteria established for this research. The analysis was conducted focusing on the strength of the integrity of local wisdom in basic education: sustainable development, specifically on the (1) local, (2) wisdom, and (3) attitude.

Results and Discussion
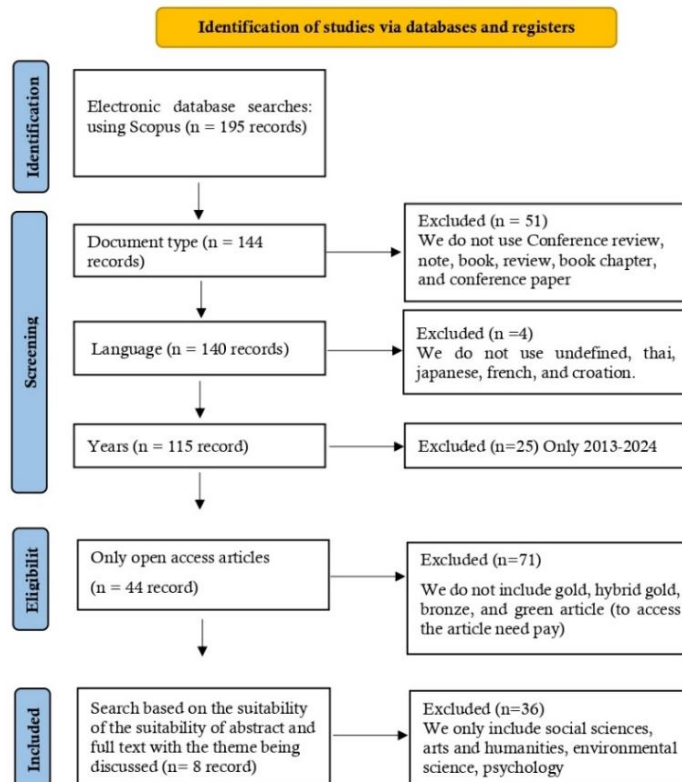
From: Page MJ, McKenzie JE, Bossuyt PM, Boutron I, Hoffmann TC, Mulrow CD, et al. The PRISMA 2020 statement: an updated guideline for reporting systematic reviews. BMJ 2021;372:n71. doi: 10.1136/bmj.n71

For more information, visit: http://www.prisma-statement.org/

Table 1. The main articles' summary, sorted by author name

No	Title	Author(s)	Aim	Main Result
1.	The Effects of Integrating Folklore and Mixed Reality toward Student's Cultural Literacy Yunus	(Abidin et al., 2023)	The main goal was to develop students' cultural literacy, which included knowledge and attitudes towards culture.	Applying mixed reality Folklore media can help pupils develop cultural literacy abilities. Cultural knowledge was the facet of cultural literacy that increased the most, but cultural attitudes and behaviour did not change significantly. As a result, the proposed mixed reality folklore medium can help pupils improve their cultural literacy abilities in West Java.
2.	The Ronggeng, the Wayang, the Wali, and Islam: Female or transvestite male dancers-singers-performers and evolving Islam in West Java	(Foley, 2015)	The goal was to eliminate the traces of singers', dancers', and wari's performance activities, which had long been described in colonial literature and associated in the oral tradition with the birth of Islam.	Find a shift in attitudes regarding performance, sexuality, and religious discourse in local Islam as ideas about Rongen and art are challenged.
3.	Local Wisdom of Kampung Naga in Mitigating Disaster and Its Potencies for Education Tourism Destination	(Maryani & Yani, 2014)	It aims to discover the forms of local wisdom in Kampung Naga, especially those related to disaster anticipation, and to assess its potential as an educational tourism destination.	Sundanese people possess local knowledge that is extremely useful in disaster mitigation. This culture has generally recognised that the repercussions of environmental destruction are severe. Even while customary rules serve as the foundation for environmental protection, they have proven highly effective in anticipating disasters, particularly floods and landslides.
4.	Glocal vision to deconstruct internationalization in Indonesian higher education	(Nursalam, 2020)	To identify the characteristics of student perspectives on implementing the glocal vision curriculum and applying glocal vision in deconstructing internationalisation.	Adopting a glocal vision curriculum creates student attitudes that can impact higher education's internationalisation. Students with high perceptions will demonstrate their dedication by allocating appropriate resources to deconstruct internationalisation in their

No	Title	Author(s)	Aim	Main Result
				particular colleges via a glocal vision curriculum.
5.	Religious-Cosmic based philosophical foundation of environmental development law in Sundanese Local Wisdom	(Rahayu et al., 2018)	The goal is to examine the evolution of religion-based environmental development's legal and philosophical foundation through local knowledge.	A philosophical basis for environmental law that prioritises local wisdom can be formed if there is an empowerment movement that encourages the creation of an equal relationship between humans and the universe, as well as formal material and substantive aspects in the development of environmental law. This raises awareness of the interdependence of all kinds of life.
6.	Values of the Authority of Local Art Coaches as a Source of Learning for Multicultural Education	(Sugiarto et al., 2020)	To show the values of local artistic wisdom, which can serve as a learning resource for multicultural education.	Visualising the visual forms of many visual works in the research region reveals the presence of local wisdom values, which express a tolerant and accepting attitude toward alien cultural aspects. The ideals of local artistic wisdom are highly significant when employed as a learning resource for multicultural education in a pluralistic society.
7.	View of Ethnic folktale-based materials development for secondary students' learning	(Songsirisak et al., 2024)	To promote cultural inclusivity in education, school textbooks are contextualised with globalisation rather than ethnicisation, which extends well beyond the cultural background of many students of a specific ethnicity.	The students had a very positive attitude towards ethnic folktales. They stated that they may learn multicultural information about their lives, ideologies, beliefs, identities, and moralities from these folktales.
8.	View of Design and Development of Products from Reed Mats of Ban Phaeng Agricultural Housewife Professional Rehabilitation Group	(Saelee, 2020)	To investigate the context, concepts, evidence of wisdom, and management of reed mats at Ban Phaeng Agricultural Housewives Rehabilitation Group (B.P.G.), Phaeng Sub-district, Kosum Phisai District, as well as the	Usability, Beauty, and Local Characteristics, as well as Comfort of Use, received the highest levels of satisfaction, followed by Durability and Delivery. They also expressed the most pleasure with all elements, including durability, delivery, and ease of use: beauty, Local

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No	Title	Author(s)	Aim	Main Result
			development of local wisdom by designing the reed mats with geometric shapes to represent the B.P.G. community's identity.	Identity, and their respective Applications.

Research Paper Identified by Search Terms

Figure 1 shows the result of an initial search via Scopus, concentrating on their "article, abstract, keywords" found 195 articles. From those articles, we identified 144 articles in document type. There were 51 articles excluded since they were conference reviews, notes, book reviews, book chapters, and conference papers. We also involved only the language. From this criteria, we obtained 140 articles that met the criteria, indicating that 4 were excluded as they were in Thai, Japanese, French, and Croatian. We identified 115 articles in 2013-2024. We then used the open-access article criteria. There were 44 articles that met the criteria, meaning 71 articles were excluded. In the last phase, we took a closer look at the articles, ensuring they fit the theme, that the full text was accessible, and that the articles were published in English. Based on this, we found 8 articles that met the criteria, meaning 36 articles were excluded. We only include social sciences, arts and humanities, environmental science, and psychology. The distribution of the 8 articles published in the last 10 (2013-2024) years on Scopus is illustrated in Figure 2.
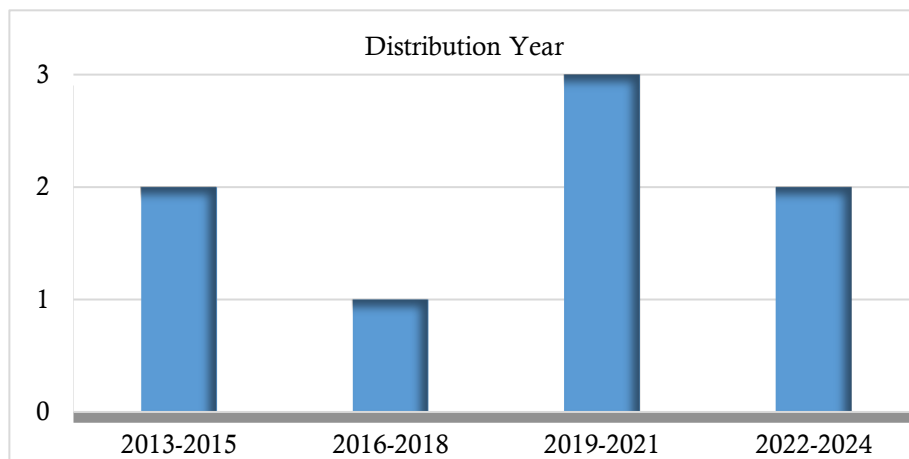
Distribution year

Figure 2. shows the number of articles published yearly from 2013 to 2024

Based on Figure 2, it can be seen that the number of articles published on the topic of the strength of the integrity of local wisdom in basic education in sustainable development was in 2014 as many as 1 articles, in 2015 as many as 1 article, in 2018 as many as 1 article, in 2020 as many as 3 articles, in 2023 as many as 1 article, and in 2024 as many as 1 article.

The results of this research include quantitative, qualitative, and mixed-method research. The distribution of the data is as follows:
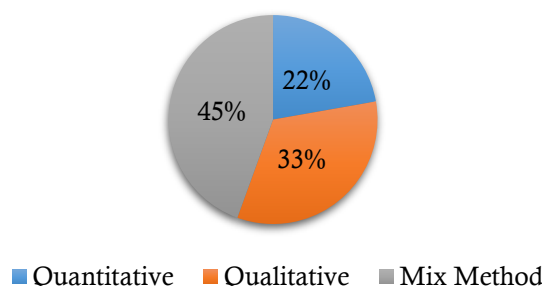
Figure 3. Distribution of Research Methods Used in Socio-Cultural Research

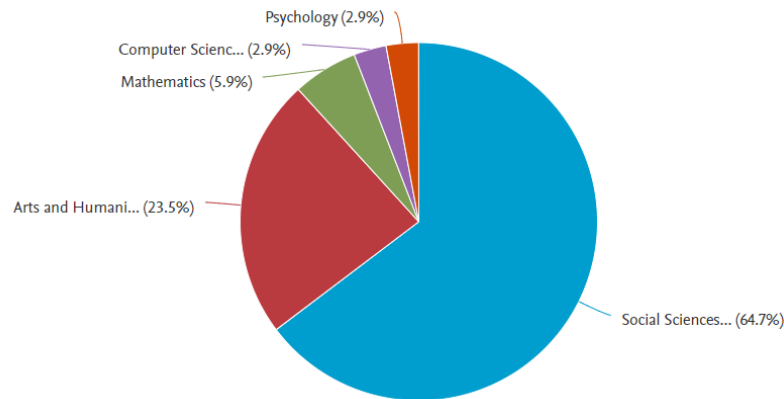Furthermore, for the articles analyzed, the following is the percentage of keywords used.

Figure 4: Percentage of Keywords

In several articles related to the strength of the integrity of elementary school local wisdom in sustainable development, sub-topics that are often discussed with this variable are local wisdom, ecotourism and kampung naga, educative values and cultural transfer, religious cosmic, development of environmental 1, and qualitative.
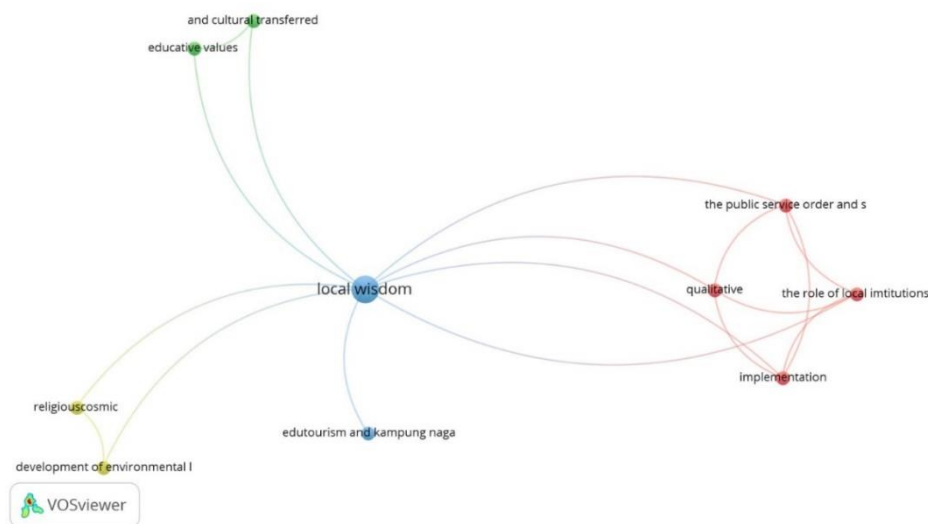

Figure 5. VOS-viewer display for co-occurrence + keyword analysis.

Based on Figure 5, the results of the articles analyzed show that local wisdom is the main sub-topic used in this study. Furthermore, local wisdom is also connected to ecotourism and Dragon Village. Local wisdom is often at the core of a community's cultural identity and can be a valuable source of knowledge on adapting to local environments and challenges. It also shows how important it is to preserve and respect the cultural heritage of each community. Many regions in Indonesia are still rich in culture. The dragon village is one example of an area that still maintains rich local wisdom and is not only a tourist attraction but also a source of cultural knowledge. This dragon village is a traditional Sundanese village in Tasikmalaya Regency, West Java. It can be seen in its distinctive traditional house architecture, with rumba (palm fibre) roofs and walls

made of woven bamboo. Every detail of the building has its meaning and function, illustrating local wisdom in utilizing natural materials.

The traditional skills and crafts in Kampung Naga are educational tours. Educational tourism involves teaching and demonstrating traditional craft techniques such as bamboo weaving, cloth weaving, and wood carving. This is not only to promote cultural heritage but also to help maintain the sustainability of the local economy and can also provide lessons in cultural values such as solidarity, mutual cooperation, and mutual respect, which are the cornerstones of the life of the people of Kampung Naga. Thus, it can provide a deep experience of how local wisdom can be applied in everyday life. Educational values in local wisdom cover various aspects that become the basis for character-building and knowledge in society.

Local wisdom is also connected to educative values and cultural transfer. Local wisdom teaches a lot about moral norms, ethics, and manners, such as mutual respect, honesty, and concern for others, which are well represented in folklore and customs. Folktales, proverbs and folk songs often contain wisdom and moral messages that strengthen character, such as perseverance and determination. This will enrich the character development of the younger generation. In Indonesian culture, local wisdom is reflected in many aspects of life and refers to knowledge and values passed down from generation to generation. This is very important in cultural transfer, where knowledge and values can be exchanged between cultures without losing their original identity. The importance of local wisdom in cultural transfer is to maintain diversity and enrich cross-cultural experiences. When local values and practices are valued and learned by outsiders, this not only broadens our understanding of the world but also strengthens the identity and sustainability of local wisdom amid the challenges of globalization. In this way, local wisdom not only plays a role in preserving cultural heritage but also becomes a source of wealth in promoting intercultural understanding and tolerance worldwide.

Furthermore, local wisdom is connected to the religious cosmos. The concept that combines traditional wisdom values with an understanding of the universe's role and spirituality in human life is local wisdom with a religious cosmic perspective. This concept refers to a way of seeing the universe as a unity spiritually connected to human life and how religious and cosmic values give direction to daily life. In local wisdom with a cosmic approach to religion, there is a belief that all aspects of life, from daily actions to social relationships, are closely related to cosmic harmony and God's will. Values such as mutual respect, justice, simplicity and respect for the environment are seen as reflections of a value system that stems from a deep understanding of the role of humans. Overall, local wisdom with a religious cosmic perspective presents a holistic view of life and its connection to the larger universe. It is a source of spiritual inspiration and a practical guide in living a meaningful and harmonious life with nature and social life around us. Thus, overall, local wisdom that views religion from a cosmic perspective presents a holistic view of life and its interconnectedness with the larger universe.

In environmental development, local wisdom offers valuable insights and alternatives to conventional approaches. By integrating traditional knowledge with contemporary science and technology, communities can develop innovative solutions that are both environmentally friendly and culturally relevant. For example, community-based conservation initiatives often draw on local wisdom to design effective resource management plans that align with ecological principles while respecting indigenous rights and traditions. Integrating local wisdom with environmental sustainability development represents a synergy between traditional knowledge, cultural heritage and modern science. By respecting and learning from local wisdom, communities can forge a path towards a more harmonious relationship with the environment, ensuring that development is economically and socially viable and ecologically and culturally responsible.

In a qualitative context, local wisdom often includes values that influence how people interact and how they live their daily lives. Applying local wisdom in policies and practices tailored to the local context and community needs. Meanwhile, involvement in public services in the context of local wisdom refers to the active role of local institutions and educational institutions, such as traditional villages, schools, or other institutions, in managing resources and providing services and understanding related to local wisdom. This makes these institutions have a very important role in maintaining the sustainability and relevance of local wisdom amid rapid social and economic changes. Through this role, local institutions can integrate local knowledge into sustainable development policies and ensure that traditional values remain relevant and useful to modern society.

This research discusses the strength of local wisdom's integrity in basic education and sustainable development. The research results related to the articles analyzed show that the integrity of local wisdom in

primary school education is an extraordinary power that shapes the character and identity of the younger generation (Harmadi et al., 2022; Hidayat, 2020). Amid rapid globalization, maintaining and integrating local wisdom values into education is crucial to ensure that children grow up with academic knowledge and strong and solid cultural values (Mukaromah et al., 2022). Local wisdom in primary education can be applied to the curriculum, for example, by incorporating local wisdom values into national lessons through folklore, regional songs and dances, and daily traditions or habits. Using teaching materials relevant to local culture can strengthen students' sense of belonging to the culture in their environment and, in addition, organize learning activities outside the classroom, such as visiting cultural places or educational tours (Lestari, 2024; Nisa, 2017) One of them is Kampung Naga, a tourist spot that involves teaching and demonstrating traditional craft techniques. Thus, students do not only learn theory, but can also go directly and interact with their culture.

Local wisdom covers various aspects of life passed down from generation to generation, such as language, customs, folklore, art, and moral values (Harianto et al., 2021; Wati et al., 2024). When this local wisdom is integrated into the primary school curriculum, children learn to appreciate and respect their cultural heritage. This helps them develop a sense of identity and pride in their culture (Budiastra et al., 2021; Tohri et al., 2022). The integrity of local wisdom also plays an important role in children's character (Sakti et al., 2024). Values such as gotong royong, tolerance, honesty, and a sense of responsibility are often at the core of local wisdom. For example, in Indonesian culture, *gotong royong* is a value that is held in high. When this value is taught and practiced in schools, children learn the importance of cooperating and helping one another (Hidayati et al., 2020). In addition, local wisdom can be a source of inspiration in teaching and learning. Folktales, for example, can be used to teach moral and ethical values and develop critical and creative thinking skills (Halimah et al., 2020; Pulimeno et al., 2020). Folk songs and traditional dances can be a medium to teach art and culture while enriching children's learning experiences (Ayuningrum et al., 2024; Mahmudah et al., 2021). Local wisdom's integrity also helps create an inclusive and relevant learning environment (Parhan & Dwiputra, 2023; Rustan Effendi, 2020). When children see their culture and values are valued and recognized in education, they feel more connected and motivated to learn. It also helps to reduce the gap between formal education and everyday life, making education more meaningful and rewarding for children. Achieving the integrity of local wisdom in primary school education requires cooperation between various parties, including the government, schools, teachers and communities (Budiastra et al., 2021; Tohri et al., 2022).

The government can support this by providing policies and integrating local wisdom education into the national curriculum (Arif et al., 2023; Suprapto et al., 2021). Organize training programs for teachers to effectively understand local wisdom and sustainable practices related to the environment. The government can also allocate funds for projects that support local wisdom in schools and communities. Meanwhile, schools and teachers can play a crucial role in implementing this curriculum and creating a supportive learning environment (Alam et al., 2020; Timm & Barth, 2021). They are developing local wisdom-based curricula such as values, folklore, and traditional practices or customs relevant to the local context. Organizing extracurricular activities related to local wisdom, such as regional dances and handicrafts, and organizing activities that involve the community, such as cultural festivals (Atmaja, 2024; Sari et al., 2022). Similarly, the role of communities who can contribute by sharing their knowledge and experience about local wisdom is also essential. Communities can also develop innovative solutions that are environmentally friendly and culturally relevant. For example, community-based conservation initiatives often utilize local wisdom to design effective resource management plans that align with ecological principles while respecting indigenous rights and traditions. So overall, the strength of the integrity of local wisdom in primary school education lies in its ability to shape children's character, identity and connection to their culture (Hidayati et al., 2020; Sakti et al., 2024). and integrating local wisdom can strengthen cultural identity and build a strong foundation for the sustainability of future generations (Agus et al., 2021; Machfiroh et al., 2024).

Conclusion

Local wisdom is the cultural heritage of a particular society or culture that includes knowledge, values, and practices that have stood the test of time and are passed down from generation to generation. Integrating local wisdom in primary school education can shape character and identity and increase pride in local heritage. Integrating local wisdom in primary school education also offers significant strengths in supporting sustainable development. Meanwhile, policymakers at the education level need to formulate policies that support the integration of local wisdom into the curriculum. This can be done by setting clear guidelines for

incorporating local materials into national lessons, such as Indonesian language, arts, history, and science. In addition, training for teachers to understand and teach local wisdom should be a priority so that they can deliver these materials effectively and inspiringly. Teachers can also collaborate with local communities or organize learning activities outside the classroom, such as visits to cultural sites or educational tours that involve teaching and demonstrating traditional craft techniques. Through understanding and applying local values and practices first-hand, learners not only gain knowledge about their culture but can also gain skills and learn how to contribute to environmental and social sustainability directly. The involvement of the government, schools, teachers, and communities can support the achievement of local wisdom and integrity in primary school education. By maintaining and integrating local wisdom, we preserve our cultural heritage and build a strong foundation for a sustainable and meaningful future for future generations.

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