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Strengthening Student Character through the Application of Sipakatau, Sipakalebbi, Sipakainge in IPAS Learning at UPT SD Inpres Perumnas II Makassar

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Abstract

This study aims to (1) describe the techniques used to integrate local cultural values into lesson planning; (2) analyze the implementation of learning activities based on local wisdom values; and (3) evaluate the effectiveness of integrating local cultural values into Natural and Social Sciences (Ilmu Pengetahuan Alam dan Sosial [IPAS]) instruction among fifth-grade students at UPT SPF SD Inpres Perumnas II Makassar. This study employed a descriptive qualitative research design. The research participants included the school principal, classroom teachers responsible for IPAS instruction, and fifth-grade students. Data were collected through interviews, observations, and document analysis. Data trustworthiness was established through source and methodological triangulation, while data analysis involved data condensation, data display, and conclusion drawing. The findings indicate that the local wisdom values of Sipakatau, Sipakalebbi, and Sipakainge were systematically integrated into IPAS instruction through structured planning and classroom practices. Regarding instructional planning, these values were incorporated into the school's vision and mission, the Education Unit Curriculum (Kurikulum Satuan Pendidikan [KSP]), teaching modules, instructional supervision documents, professional learning communities, and character development programs. Regarding implementation, these values were reinforced through group discussions, collaborative activities, respect for differing opinions, polite communication, apologizing, classroom agreements, greetings, handshakes, and the practice of reminding one another about appropriate behavior. Regarding effectiveness, the integration of local wisdom values was found to contribute positively to students' character development and social interactions while fostering a supportive and conducive learning environment.

INTRODUCTION

Education is a process involving teaching and learning activities aimed at developing individuals' and communities' knowledge, skills, attitudes, and values. In general, education encompasses the transmission of knowledge from one generation to the next through formal settings, such as educational institutions; informal learning experiences in everyday life; and nonformal educational activities, such as training programs outside the formal education system. This perspective aligns with Tafsir (2013), who defines education as a conscious process of guidance involving the transformation and internalization of knowledge and values

among students to foster positive character development. This definition highlights the essential role of education in facilitating individual growth and development, enabling individuals to achieve well-being and happiness within society. Similarly, Samani and Hariyanto (2011) state, "Education is a necessity in the growth of a child's life, meaning that education drives all the innate potential present in children so that, as human beings and members of society, they can attain the highest safety and happiness."

Education plays a fundamental role in helping individuals achieve well-being, happiness, and a dignified life characterized by faith in and devotion to God Almighty, moral integrity, practical skills, social competence, intellectual development, and independence. This perspective aligns with the objectives of Indonesia's national education system, which seeks to develop individual potential while fostering national character and civilization. Specifically, national education aims to cultivate students who demonstrate faith in and devotion to God Almighty, possess noble character, maintain physical and mental well-being, acquire knowledge and skills, demonstrate creativity and independence, and become democratic and responsible citizens (Ministry of National Education, 2010).

The era of globalization and rapid advancements in information technology presents increasingly complex challenges to character development among younger generations. Limited understanding and internalization of moral and ethical values may contribute to behavioral problems among children and adolescents (Lickona, 1991/2016; Nurhayati, 2022). In Indonesia, particularly in Makassar, South Sulawesi, the local wisdom of the Bugis-Makassar community offers considerable potential for strengthening students' character (Anggraeni et al., 2020; Nooviar et al., 2024; Zahrawati et al., 2022). Cultural values such as sipakatau (mutual respect and recognition of human dignity), sipakalebbi (mutual appreciation and respect), and sipakainge (mutual reminders and constructive guidance) serve as fundamental principles guiding social interactions within Bugis-Makassar society (Nur et al., 2023). These values are closely associated with the cultural philosophy of siri' na pacce, which emphasizes personal dignity, honor, solidarity, and social responsibility (Kilawati, 2022; Maida, 2016).

The novelty of this study lies in its comprehensive examination of the planning, implementation, and perceived effectiveness of integrating sipakatau, sipakalebbi, and sipakainge into Natural and Social Sciences (Ilmu Pengetahuan Alam dan Sosial [IPAS]) instruction at the elementary school level. Unlike previous studies that have primarily examined individual cultural values or specific aspects of instructional practices (Darwis et al., 2025; Kaharuddin et al., 2020; Salmia et al., 2025), this research adopts a holistic perspective by investigating how these values are incorporated into school policies, teaching modules, classroom activities, and students' behavior. Furthermore, the study contributes to the literature on culturally responsive pedagogy (Banks, 2008; Syarif et al., 2024) by exploring how local wisdom values can be integrated into instructional practices within the framework of the formal curriculum. Accordingly, this study has three objectives: first, to describe the strategies used to integrate local cultural values into lesson planning; second, to analyze the implementation of instructional activities based on local wisdom values; and third, to examine the effectiveness of integrating these values into fifth-grade IPAS instruction at UPT SPF SD Inpres Perumnas II Makassar.

This study is expected to contribute to the advancement of character education in Indonesia, particularly in South Sulawesi. By identifying and examining strategies for integrating local wisdom values into IPAS instruction, the research seeks to provide insights into effective pedagogical approaches for strengthening students' character. The findings are also expected to serve as a practical reference for teachers at UPT SPF SD Inpres Perumnas II Makassar and other educational institutions in designing comprehensive instructional programs that emphasize not only cognitive development but also affective and psychomotor development, thereby fostering students' moral integrity and positive character traits. Beyond the school context, this research may provide valuable insights for curriculum developers, teacher educators, and policymakers seeking to incorporate local cultural values into formal education. Specifically, the study examines how the integration of sipakatau, sipakalebbi, and sipakainge into fifth-grade IPAS instruction on ecosystems at UPT SPF SD Inpres Perumnas II Makassar contributes to strengthening students' character, while identifying the factors that facilitate or hinder the implementation of these cultural values in classroom learning.

METHOD

This study was conducted at UPT SPF SD Inpres Perumnas II Makassar, Rappocini District, Makassar City, South Sulawesi, from March to June 2026, during the second semester of the 2025/2026 academic year. A descriptive qualitative research design with a field-based approach was employed to examine the integration of the Bugis-Makassar local wisdom values of Sipakatau, Sipakainge, and Sipakalebbi into Natural and Social Sciences (Ilmu Pengetahuan Alam dan Sosial [IPAS]) instruction on ecosystems and their contribution to character development among fifth-grade students.

Participants were selected through purposive sampling and included 20 fifth-grade students aged 10–11 years from Bugis-Makassar cultural backgrounds, three to five classroom teachers, and the school principal, totaling approximately 25 informants. Data were collected through classroom observations, semi-structured interviews, and document analysis. Classroom observations focused on student interactions and the integration of local wisdom values into instructional activities, while interviews explored teachers' and students' experiences and perceptions. Document analysis included teaching modules, curriculum materials, and relevant school records.

Data trustworthiness was established through source and methodological triangulation, member checking, and an audit trail. Data were analyzed using the Miles and Huberman (1992) interactive model, consisting of data reduction, data display, and conclusion drawing and verification. The analysis focused on identifying patterns in the integration of local wisdom values and their contribution to students' character development. The research was conducted in three stages: preparation in March 2026, data collection and preliminary analysis in April 2026, and comprehensive analysis, interpretation, and reporting from May to June 2026.

RESULTS AND DISCUSSION

Based on the research findings from interviews with the principal, teachers, and students, as well as analysis of school documents, it was found that the application of the local wisdom values of Sipakatau, Sipakalebbi, and Sipakainge in science learning at UPT SPF SD Inpres

Perumnas II Makassar has been carried out through three main stages: learning planning, learning implementation, and the effectiveness of local culture implementation. These three aspects show the relationship between school policy, teacher planning, learning practice, habituation, and the development of student character.

Discussion on IPAS Learning Planning Based on Local Wisdom

The results of the study show that the integration of local wisdom into social science learning has begun since the planning stage. The principal explained that character strengthening and local culture have been outlined in the school's vision, mission, and Education Unit Curriculum (KSP). This shows that the application of local wisdom in the school is not only carried out based on each teacher's individual initiative, but has also received support through school policies and programs (Zubaedi, 2013). This finding is reinforced by the review of the KSP, the school's vision and mission, teaching modules/learning tools, supervision documents, learning community programs, and teacher training documents. The existence of these various documents shows that the school has made efforts to build a system that supports teachers in integrating local cultural values into learning. In the IPAS learning process, the values of Sipakatau, Sipakalebbi, and Sipakainge can be integrated into learning objectives, learning activities, and the formation of student character. Sipakatau directs students to treat one another humanely and with mutual respect. Sipakalebbi emphasizes an attitude of esteeming and honoring others, while Sipakainge contains the meaning of reminding one another with kindness. These three values are relevant to the character required in IPAS learning, particularly when learning employs discussion activities, group work, observation, problem-solving, and environment-based activities.

Planning also shows that IPAS learning is positioned not merely as a process of knowledge transfer, but as a means of developing student character through contextual learning experience. This is important because IPAS has a strong connection to daily life, the environment, society, and the relationship between human beings and their social and natural surroundings (Achmad et al., 2022; Hasibuan, 2025). Therefore, integrating local cultural values into learning planning brings IPAS material closer to students' lives and experiences.

Supervision documents and learning community activities also show the principal's role in ensuring that lesson plans prepared by teachers are not only oriented toward academic content, but also give attention to character strengthening. The learning community serves as a space for teachers to share experiences, discuss learning tools, and develop strategies suited to student characteristics and the school environment. It can thus be understood that the planning of social science learning based on local wisdom in the school has taken place at both the policy level and the level of learning tools simultaneously. The KSP and the vision-mission serve as the policy foundation, while the teaching modules represent the operationalization of these values in learning activities. This shows a continuity between school policy and learning-planning practice.

Discussion on the Implementation of Social Science Learning Using Local Wisdom Values

The research findings at the implementation stage show that the values of Sipakatau, Sipakalebbi, and Sipakainge are realized through various learning activities and habits. Teachers apply these values through group discussions, cooperation, respect for opinions,

speaking politely, apologizing, learning contracts, greetings, and handshakes.

These findings show that the application of local wisdom is carried out practically, through behaviors directly experienced by students. Local cultural values are not merely explained verbally by teachers, but are also internalized through students' experiences during learning. This approach is important because character formation becomes more meaningful when students have the opportunity to practice the values they learn in real situations (Lickona, 1991/2016; Salmia et al., 2025).

Discussions and group-work activities, for example, give students the opportunity to apply the value of Sipakatau by respecting the presence and opinions of group members (Johnson & Johnson, 1999). Students learn that every member has the right to speak and be heard. Meanwhile, appreciating a friend's opinion or work is a form of applying Sipakainge. Reminding one another about rules, class agreements, and responsibility in completing tasks is one form of applying Sipakainge.

The application of these values is also seen through the habit of using polite language, apologizing when making mistakes, greeting others, and shaking hands. These habits show that the strengthening of local culture is carried out repeatedly, so that the values introduced in learning can develop into habitual behavior. The results of the study also show that teachers play an important role in the process of internalizing these values. Teachers not only play a role in delivering material, but also serve as role models, guides, facilitators, and directors of student behavior (Bandura, 1977; Dewantara, 2011). When teachers build a mutually respectful learning atmosphere, students obtain concrete examples of how the values of Sipakatau, Sipakalebbi, and Sipakainge are applied. Documents such as teaching modules, learning contracts/class agreements, school discipline records, and documentation of learning activities further reinforce the interview findings. These documents show that the application of local wisdom has found a place in learning management and school culture. It can thus be understood that the implementation of learning based on local wisdom in the school is a process of internalizing values through experience, habituation, modeling, and social interaction. Local cultural values do not stand alone as additional material, but become part of how students learn and interact during IPAS learning.

Discussion on the Effectiveness of Applying Local Culture in Social Science Learning

The results of the study show that the application of Sipakatau, Sipakalebbi, and Sipakainge has a positive impact on the learning atmosphere and students' social interaction. Teachers and students stated that the application of local culture helps create a more conducive learning atmosphere, improves cooperation, and builds better relationships among students.

This finding can be seen from student behavior that shows positive tendencies. The research data show that 19 students expressed gratitude when receiving help, 18 students did not boast about their achievements in front of friends, 15 students admitted their mistakes without being told to do so by the teacher, and 15 students showed polite and respectful attitudes toward all members of the school community. In addition, 14 students showed respect for differences, and 10 students showed a willingness to help friends experiencing learning difficulties.

The data show that local wisdom values are beginning to be reflected in students' actual behavior. Attitudes of gratitude, respecting others, admitting mistakes, respecting members of

the school community, and respecting differences are behaviors consistent with the values of Sipakatau and Sipakalebbi. Meanwhile, attitudes of accepting guidance, correcting mistakes, and reminding one another show a connection to the values of Sipakainge.

The effectiveness of applying local wisdom in this study can be seen not only from the academic aspect, but also from the development of students' character and the quality of their social interaction. This is important because the success of learning is shown not only by knowledge attainment, but also by students' ability to apply the values they have acquired in daily life. These results are reinforced by observation notes, documentation of group activities, character-building programs, the KSP, and habituation documentation. The consistency between interview results, student behavior, and supporting documents shows that the application of local culture has contributed to the formation of a more positive learning environment.

However, the data also show that the internalization of values is not fully evenly distributed among all students. For example, the number of students expressing willingness to help friends with learning difficulties is still lower compared to other indicators. This shows that the application of local wisdom is a process that requires continuous habituation, teacher role-modeling, school-level reinforcement, and family involvement (Bahari et al., 2026; Dewantara, 2011; Samani & Hariyanto, 2011). Thus, the effectiveness of implementing Sipakatau, Sipakalebbi, and Sipakainge can be said to be most evident in the aspects of character and student social interaction, namely increased mutual respect, cooperation, politeness, responsibility, and the ability to build harmonious relationships. This impact further supports the creation of a conducive learning environment, thereby indirectly supporting the process and outcomes of IPAS learning.

Discussion Based on Data on the Values of Sipakatau, Sipakalebbi, and Sipakainge

Based on the results of the study of 20 Grade V students, a general picture was obtained of the application of the local wisdom values of Sipakatau, Sipakalebbi, and Sipakainge in students' daily behavior in the school environment. The data show that the application of local wisdom is evident in various student behaviors, although the level of achievement differs across indicators.

The results of the study show that the value of Sipakatau has been applied in students' lives, particularly through the attitude of admitting mistakes, being humble, accepting input, appreciating help from others, and respecting members of the school community. As many as 75% were able to admit mistakes without needing to be told by the teacher. This finding shows that most students have an awareness of taking responsibility for their actions. The ability to admit mistakes is an important part of character formation because it reflects honesty and self-awareness.

However, there are still 5 students who have not consistently shown this behavior. This shows that teachers still need to provide habituation through post-learning reflection, dialogue, and giving students the opportunity to correct mistakes without fear or embarrassment. In addition, 90% did not take pride in their achievements in front of their friends. This achievement shows a strong sense of humility. This attitude is consistent with the value of Sipakatau, because students learn to respect themselves without feeling inferior or superior to others.

As many as 65% were willing to listen to criticism and suggestions from teachers and friends. Although more than half of the students showed this attitude, this indicator is one aspect that still needs to be strengthened. The ability to accept criticism requires emotional maturity and an awareness that input from others can be used for self-improvement. The indicator for expressing gratitude achieved a very high result (95%). This shows that a culture of appreciating others' help has become a relatively strong habit. Simple habits such as saying thank you carry important meaning in character formation because they teach students to value the contributions of others.

Meanwhile, 75% showed politeness and respect toward all members of the school community, including cleaning and security staff. This finding shows that most students understand that respect is given not only to teachers or friends, but to everyone in the school regardless of position or occupation. Based on all these indicators, it can be understood that the application of Sipakatau among students has developed well, particularly in the aspects of humility, respect for others, gratitude, and responsibility for mistakes. The aspect that still needs strengthening is the ability to accept criticism and suggestions.

The value of Sipakalebbi emphasizes mutual respect, mutual esteem, maintaining one's manner of speaking, and treating others well. Based on the results of the study, this value is evident in students' interactions with teachers, friends, and members of the school community. The indicator with the highest achievement is the use of polite language. As many as 100% showed polite language behavior when speaking with teachers and friends. This finding is one of the strongest indicators in the application of the values of Sipakalebbi. This achievement shows that politeness in language has become part of students' interactional habits. In the context of Bugis-Makassar culture, the ability to maintain one's manner of speaking is a form of respect for others. Therefore, the habit of speaking politely at school can serve as a means of preserving local cultural values while also building student character.

In addition, 70% showed the ability to appreciate differences in ethnicity, religion, culture, and the economic status of friends. This shows that most students already have an attitude of respecting diversity. However, there are still students who need reinforcement in order to accept differences more consistently. As many as 70% also actively participated in group work and reciprocal cooperation. This finding shows that the value of Sipakalebbi is realized not only through verbal communication, but also through concrete actions in working together.

For the indicator related to helping friends experiencing difficulty with lessons, only 50% was indicated. This achievement is the lowest among the Sipakalebbi indicators. This shows a gap between polite communication attitudes and active helping behavior. This means that students are relatively good at showing politeness, but are not yet fully able to translate these values into genuine attention and action.

Similarly, concern for friends' conditions and the environment was shown by only 65%. This indicates that social concern still needs to be developed through activities that give students direct experience, such as group work, environmental cleanliness activities, social activities, and joint cooperative activities. Thus, the application of Sipakalebbi is considered strong in the aspects of polite language and respect for others, but still needs to be strengthened in the aspects of caring, helping friends, and social involvement.

The value of Sipakainge is the attitude of reminding one another with kindness and having awareness to improve oneself. This value is closely related to the ability to engage in self-reflection, accept input, improve one's abilities, and become a role model for others. The results of the study show that 90% were able to identify their own strengths and weaknesses. This achievement shows that most students already have awareness of their own condition. Self-awareness is an important foundation in the character-development process, because students who are able to recognize their strengths and weaknesses will find it easier to determine which aspects need to be maintained or improved.

However, the ability to recognize shortcomings has not been fully followed by efforts to improve achievement. The data show that only 55% made a strong effort to improve their learning achievement. This indicates that there is still a gap between self-awareness and self-improvement action.

Further findings show that 60% were able to set a positive example for their classmates. The data show that more than half of the students were able to display exemplary behavior, but not all students were consistent in setting an example. Meanwhile, only 50% actively read or sought additional information beyond textbooks. This indicator represents the lowest achievement in the Sipakainge group. The findings show that a culture of independent learning and initiative in seeking knowledge still needs to be strengthened.

The application of local culture in social science learning is an important concern because social science learning does not only expect students to understand information from textbooks, but also encourages students to observe their environment, seek information, ask questions, and connect knowledge with real life. Therefore, the application of Sipakainge needs to be developed more broadly. Sipakainge is not only understood as an activity of reminding friends, but also as an encouragement to remind oneself to keep learning, correct shortcomings, improve achievement, and become a better person.

The Relationship Among the Three Local Wisdom Values and Character Formation

The results of the study show that Sipakatau, Sipakalebbi, and Sipakainge have a complementary relationship in shaping student character. Sipakatau provides the foundation for students to be able to respect others and treat them well. This value is reflected in behaviors such as admitting mistakes, being humble, expressing gratitude, and respecting members of the school community. Sipakalebbi develops students' ability to esteem and respect others in social interaction. This is particularly evident through the use of polite language, respect for differences, cooperation, and reciprocal collaboration. Sipakainge directs students toward reflection and self-improvement. These values can be seen through the ability to recognize one's strengths and weaknesses, strive to improve achievement, become a role model, and have the willingness to seek additional information.

These three values can be described as a sequence. Students first learn to respect fellow human beings through Sipakatau, then to esteem others through Sipakalebbi, and subsequently to remind and improve themselves through Sipakainge. Thus, the application of these three values does not stand alone. Together they can form a mutually reinforcing pattern of character in students' lives. The achievement of character values related to local culture can be explained as follows:

The Relationship between the Value of Sipakatau and Character Formation

The value of Sipakatau has a strong relationship with character formation that is closely related to respect for fellow human beings. In educational terms, Sipakatau can be understood as an attitude of humanizing others, treating others well, respecting the presence of others, helping others, and building harmonious social relationships. The results of the study show that the value of Sipakatau is most evident in interactions among students during IPAS learning. When learning is conducted through discussion and group work, students are directed to cooperate, help friends who are experiencing difficulties, listen to friends' opinions, and not belittle the abilities of others. Teachers not only deliver material, but also provide examples and guide students so that interactions during learning reflect these humanistic values. Character data from 20 students show that the average Sipakatau score achievement is 80%. This achievement is the highest compared to the other two scores. The findings show that most students are able to display behavior reflecting appreciation for others. The most prominent indicator is the habit of saying thank you when receiving help, shown by 19 of 20 students, or 95%. This high achievement shows that a simple daily habit has developed into a relatively strong character behavior. Saying thank you is not merely a verbal expression, but shows that students are aware that help from others needs to be appreciated.

In addition, as many as 18 students, or 90%, showed behavior of not boasting about their achievements in front of friends. This shows the development of a humble attitude and the ability to place personal success proportionately within communal life. Meanwhile, 15 students, or 75%, were able to admit their mistakes without first being told to do so by the teacher. The data show that most students are beginning to have an awareness of taking responsibility for their actions. However, there are still indicators that need to be strengthened. Only 10 students, or 50%, showed a willingness to help friends experiencing learning difficulties. Similarly, the ability to accept criticism and suggestions from teachers and friends was achieved by only 13 students, or 65%. This shows that Sipakatau has developed quite well in the aspects of politeness and appreciation, but is not yet fully strong in the aspects of active empathy and openness to input. Thus, the relationship between Sipakatau and character formation can be seen through the process of change from an awareness of valuing others into actual behavior in communal life. IPAS learning that uses group activities provides students with a space to practice these values directly. Students not only know that helping a friend is a good deed, but also have the opportunity to do so in real learning situations. Based on the level of achievement, the Sipakatau score can be placed in the strong/high development category, with an average achievement of 80%. This means that character related to respect for others has become one of the strengths in the formation of student character, although it still needs to be strengthened in the aspects of helping friends and accepting criticism.

The Relationship between the Value of Sipakalebbi and Character Formation

The value of Sipakalebbi is closely related to the character of respecting, esteeming, honoring, and treating others politely. In the school environment, this value is evident through the way students speak, behave, listen, appreciate differences, and show respect to teachers, friends, and all members of the school community. Observation results show that teachers consistently model polite language and encourage students to respect their peers' opinions. In discussion activities, students are directed not to interrupt conversations, not to mock friends'

answers, and to respond using appropriate language. This practice shows that Sipakalebbi is applied through direct experience, not merely through conceptual explanation.

The average Sipakalebbi score achievement among 20 students is 71%. This achievement shows that the character of respect and appreciation has developed, although it is still below the achievement of Sipakatau. The strongest finding can be seen in the use of polite language, which reached 100%. This achievement shows that politeness in language has become a behavior relatively embedded in students' lives at school. As many as 75% also showed politeness and respect toward all members of the school community, including cleaning and security staff. This finding is important because respect is given not only to teachers or the principal, but also to everyone in the school environment. This shows that Sipakalebbi is beginning to develop as a universal value in students' social interaction.

In addition, as many as 70% showed the ability to appreciate differences in ethnicity, religion, culture, and the economic circumstances of friends. The data show that the values of Sipakalebbi are beginning to develop in the context of diversity. Students are learning to understand that differences are not a reason to discriminate against or belittle others. Nevertheless, an achievement of 71% shows that there is still room for improvement. It is not enough to show respect for others merely through polite language; it must also be shown through the ability to listen, accept differing opinions, appreciate friends' abilities, and build positive social relationships. Thus, Sipakalebbi is related to character formation primarily through the internalization of respectful and polite attitudes in communication and social interaction.

IPAS learning provides a context that allows students to interact intensively through discussion, group work, presentations, and observation activities. Each of these activities becomes a space for training students to respect others. Based on the level of achievement, Sipakalebbi is at a fairly strong stage of development, with an average achievement of 71%. This value shows that the character of politeness and respect has been well formed, particularly in the use of language, but still needs to be strengthened in the aspects of respecting differences and accepting others' opinions.

The Relationship between the Value of Sipakainge and Character Formation

The values of Sipakainge are very closely related to the character of responsibility, care, self-awareness, the ability to engage in introspection, and the willingness to remind others as well as to accept reminders from others. In an educational context, Sipakainge holds important meaning because student character is formed not only through the ability to take positive action, but also through the ability to recognize shortcomings and correct behavior. The results of the study show that the values of Sipakainge are applied through reflection activities, giving feedback, reminding one another within groups, and teacher guidance when students make mistakes. Teachers act as mentors who help students understand their mistakes and find ways to correct them. This pattern shows that the process of character formation is carried out through a constructive approach, rather than merely giving punishment.

Based on data from 20 students, the average Sipakainge score achievement is 64%. Compared with Sipakatau at 80% and Sipakalebbi at 71%, the achievement of Sipakainge is the lowest. This is an important finding in the study because it shows that the ability to reflect and remind one another is a relatively more complex character aspect for students. However,

there is an indicator showing a fairly high achievement, namely 18 students, or 90%, being able to identify their own strengths and weaknesses. This shows that most students already have a basic level of self-awareness. Students are beginning to be able to recognize their strengths and weaknesses.

However, the ability to recognize one's shortcomings is not always directly matched by the ability to accept criticism and improve oneself. The data show that only 13 students, or 65%, were willing to listen to criticism and suggestions from teachers and friends. This shows that there is a gap between self-awareness and openness to external input. This finding can be explained by the fact that recognizing one's shortcomings is only the initial stage in the formation of Sipakainge character. The next stage is the ability to accept reminders or criticism, while a higher stage is the ability to change behavior based on the results of reflection. Therefore, the 64% achievement shows that the values of Sipakainge have begun to develop but need to be continuously strengthened. Thus, Sipakainge is related to character formation through the process of self-awareness, accepting reminders, reflection, correcting behavior, and taking responsibility for one's actions. This sequence makes Sipakainge an important value in character formation because it helps students develop into individuals capable of evaluating themselves.

Based on the level of achievement, Sipakainge falls into the category of beginning to develop, with an average achievement of 64%. This score does not indicate a failure of implementation, but rather shows that character aspects related to self-reflection, acceptance of criticism, and behavioral improvement require more intensive habituation.

CONCLUSION

Based on the findings of this study on strengthening students' character through the integration of the local wisdom values of Sipakatau, Sipakalebbi, and Sipakainge into Natural and Social Sciences (Ilmu Pengetahuan Alam dan Sosial [IPAS]) instruction among fifth-grade students at UPT SPF SD Inpres Perumnas II Makassar, three main conclusions were drawn. First, the planning of IPAS instruction systematically incorporated the local wisdom values of Sipakatau, Sipakalebbi, and Sipakainge to support students' character development. Second, the implementation of IPAS instruction demonstrated that these values were not merely introduced as theoretical concepts but were also integrated into students' daily learning activities, social interactions, and classroom behavior. Third, the integration of these local wisdom values contributed positively to students' character development and social interactions, particularly by fostering mutual respect, appreciation, cooperation, and constructive communication within the learning environment.

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CONFLICT OF INTEREST

The authors declare that this research was conducted without any commercial, financial, professional, or other relationships that could be considered a potential conflict of interest that might influence the conduct of the research, the interpretation of the results, or the publication of this article.

AUTHOR CONTRIBUTIONS

The authors are responsible for all stages of the research, including problem formulation, methodology development, data collection and analysis, interpretation of results, manuscript preparation, manuscript revision, and approval of the final version of the article for publication. The authors are also responsible for the integrity and accuracy of the entire content of the manuscript.

GENERATIVE AI USE STATEMENT

In the process of preparing this manuscript, the authors used generative AI technology as a tool to improve the clarity of language, grammar, and the structure of the manuscript's presentation. Generative AI was not used to replace the authors' intellectual contribution in formulating the research problem, determining the methodology, conducting the analysis, interpreting the results, or drawing conclusions.

All output generated with the assistance of generative AI has been reviewed, checked, and verified by the authors. The authors take full responsibility for the accuracy, originality, scientific integrity, and final content of the manuscript. The use of generative AI was carried out with due regard to applicable ethical guidelines and scientific publication requirements.

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