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ANGKOLA: Experience Learning Model for Elementary Schools

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Abstract

Indonesia is known as a country rich in culture. Therefore, in elementary school learning, it is very important to introduce their cultures, so that students can preserve them in the future. The objective of this research is to design a valid, practical, and effective ANGKOLA model for teaching Pancasila and Civic Education to elementary school students in Padangsidimpuan City. This model is designed to integrate local Angkola cultural values in the learning process so that students can understand the material contextually and meaningfully. The research method used is development research with the Plomp model, which consists of several stages, namely initial investigation, design, realization, testing, evaluation, and revision. This research was carried out in three elementary schools located in Padangsidimpuan City, involving fourth-grade students as the research sample. Data collection was carried out through various techniques, including observation, tests, questionnaires, and interviews, to obtain comprehensive information regarding the validity, practicality, and effectiveness of the learning model developed. The collected data were examined through both a quantitative and qualitative approach. Findings reveal that the model demonstrates strong validity as confirmed by expert evaluations, offers practical use due to its ease of implementation by both teachers and students, and proves effective in enhancing students' comprehension of Pancasila and Civic Education content. The model also contributes to improving students' critical thinking skills through an experiential and local culture-based learning approach. The implications of this study indicate that the use of local culture-based learning models can improve the quality of learning in elementary schools.

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INTRODUCTION

Indonesia, a nation celebrated for its extraordinary cultural diversity, encompasses 38 provinces and is home to approximately 1,340 distinct ethnic groups (Badan Pusat Statistik, 2010). This rich multicultural landscape has produced a vast array of traditions, from dance and music to culinary practices and local customs (Rahma, 2020), positioning Indonesia as one of the most culturally varied nations in the world (Barsihanor et al., 2024). Culture, as a system of ideas that guides societal behavior (Fuadi, 2020), fundamentally shapes a community's identity and is expressed through its actions. However, this cultural wealth is juxtaposed with the pressing challenges within the national education system (Sari et al., 2023).

Recent studies have revealed a significant decline in students' national character, marked by shifting ethical norms and diminishing appreciation for cultural values (Aulia & Ruddin, 2021; Imron et al., 2023). A critical issue is the character crisis among students, particularly their low environmental awareness, which starkly contrasts with the ancestral values of environmental stewardship that are often neglected. This educational gap is further evidenced by Indonesia's low ranking in the Programme for International Student Assessment (PISA) (OECD, 2020), signaling an urgent need for systemic reform (Kusmaryono & Kusumaningsih, 2023).

The persistence of these issues suggests that current educational models, some of which are legacies of the colonial era, lack cultural relevance and may hinder student progress (Wiryopranoto et al., 2017). Initial investigations for this study confirmed that teaching practices in the observed elementary schools remain suboptimal, relying heavily on conventional, teacher-centered methods, such as direct instruction and passive listening. Constructivist and culturally integrated approaches are notably absent, limiting students' cognitive engagement, problem-solving skills, and the development of social interaction patterns necessary for reconstructing civic knowledge. This disconnect is manifested in student behavior; for example, a lack of concern for litter demonstrates a failure to internalize key cultural values, such as Poda Na Lima, which emphasizes cleanliness. Despite the long-standing inclusion of character education in the curriculum, its implementation has not yielded optimal results (Ibnu & Tahar, 2021), often due to teachers' limited pedagogical capacity and a systemic focus on cognitive performance over character development.

Addressing this disconnect is crucial, as integrating culture into formal education is essential for ensuring continuity and providing meaningful learning experiences (Zubaidah & Arsih, 2021). When civic education is grounded in students' cultural backgrounds, it fosters a deeper understanding and a greater sense of civic responsibility. Therefore, it is imperative to design learning processes

that incorporate culturally relevant instructional models to strengthen students' character and connect acquired knowledge to real-world contexts. The literature points to the potential of experiential learning, which has been shown to positively influence students' moral character (Ningsih, 2020) and critical thinking skills (Khairati et al., 2021). Studies have also indicated that this approach improves student performance and learning outcomes in civic education (Husni et al., 2023; Lubis et al., 2023). However, the successful implementation of such models is contingent on teachers' preparedness to create authentic learning experiences (Laili & Nisak, 2022). While culturally responsive teaching is known to enhance civic learning among elementary students (Azizan et al., 2025), existing research reveals a gap in the application of a structured, culturally specific experiential model within the Indonesian elementary school context, particularly one that systematically integrates local wisdom, such as the Angkola culture.

To fill this gap, this study introduces the ANGKOLA model, a novel learning framework developed from experiential learning principles (Sambo et al., 2024) and tailored to the local culture. ANGKOLA is an acronym for its five stages: A (Cultural Apperception), N (Critical Thinking), G (Interest Engagement), KO (Communication), and LA (Action), which involves practicing Poda Na Lima cultural values, assessment, and reflection. This model is theoretically grounded in constructivism, which posits that learning is most effective when students actively construct knowledge through real-world exploratory experiences (Mercat, 2022; Santhalia et al., 2020). This also aligns with Kolb's experiential learning cycle of concrete experience, reflective observation, abstract conceptualization, and active experimentation (Ryder & Downs, 2022). By integrating local cultural values into this structured process, the ANGKOLA model aims to provide a meaningful context for learning that is often lacking in traditional pedagogy.

The primary objective of this study was to design and test a valid ANGKOLA learning model for Pancasila and Civic Education, aimed at strengthening the character development of elementary school students in Padangsidimpuan City. Specifically, this study investigates the model's practicality for classroom implementation and evaluates its effectiveness in improving student character. By developing a model that is deeply rooted in local culture, this study aims to contribute to a replicable and effective pedagogical strategy. The findings are expected to demonstrate how culturally responsive experiential learning can enhance not only students' academic comprehension and critical thinking but also foster a stronger sense of cultural identity and civic responsibility, thereby addressing the prevalent character crisis in Indonesian education.

METHODS

This study utilized a research and development (R&D) approach, following the Plomp model, which consists of several sequential stages: preliminary investigation, design, construction, testing, evaluation, and revision (Plomp, 1997). The research was conducted at three elementary schools in Padangsidimpuan—SDN 200205, SDN 200212, and SDN 200406—during the first semester of the 2022/2023 academic year. The procedure began with an initial investigation to identify learning problems, followed by the design and construction of the ANGKOLA learning model and its supporting materials. The process concluded with systematic testing, evaluation, and revision of the model in a real-world classroom setting.

The research participants were fourth-grade students selected through purposive non-probability sampling because of their relevance in providing data on Indonesia's ethnic and cultural diversity (Harahap, 2020). The sample included 24 students from SDN 200205, 34 from SDN 200212, and 28 from SDN 200406. Before data collection, ethical protocols were strictly followed; the participants were informed about the study's purpose and confidentiality, and informed consent was obtained. They were also assured of the voluntary nature of their participation and their right to withdraw at any time.

Data were gathered using a combination of techniques, including observations, questionnaires, academic assessments (tests), surveys and interviews. The research instruments developed for this study consisted of an ANGKOLA model handbook, lesson plans, a teacher's guide, a student book, an educational comic, and student worksheets. The validity of these materials was evaluated by 11 academic experts based on their design, content, and language. Practicality was measured through student questionnaires and teacher interviews regarding their experiences using the model. The model's effectiveness was determined by comparing student learning outcomes from a pre-test to three subsequent trials.

A mixed-methods approach was used for data analysis. Quantitative data from the test results, observation checklists, and questionnaires were statistically analyzed. Specifically, a repeated measures ANOVA using SPSS software was conducted to assess significant improvements in student scores across the trial phases. The effectiveness of the model was confirmed if the significance value from Pillai's Trace, Wilks' Lambda, Hotelling's Trace, and Roy's Largest Root was less than 0.05 (Field, 2024). Qualitative data from open-ended questionnaire responses and interviews were analyzed to gain deeper insights into the model's implementation.

RESULTS

Phase 1: Initial Investigation

The preliminary investigation phase identified significant pedagogical challenges in delivering Pancasila and Civic Education to fourth-grade students

across the three participating schools: SDN 200205, SDN 200212, and SDN 200406. Classroom observations revealed that the instruction was predominantly suboptimal and relied heavily on traditional, teacher-centered methodologies. The prevailing instructional model was characterized by direct instruction, where communication was largely unidirectional, from teacher to student. Teachers typically explained concepts based on established rules, occasionally posed questions, and assigned homework. This approach resulted in a passive learning environment in which students were primarily engaged in listening, taking notes, and completing exercises with minimal active participation or collaborative learning.

Further analysis indicated a clear disconnect between these conventional teaching practices and modern educational paradigms that emphasize student-centered learning and teaching. Empirical observations have confirmed that instructional models are not well aligned with the core objectives of civic education. Specifically, constructivist approaches that encourage students to build their own understanding were notably absent, and cultural dimensions were not adequately integrated into the learning process. This pedagogical gap limits students' cognitive engagement in concept comprehension and problem-solving. Furthermore, teachers did not effectively leverage patterns of social interaction to foster an environment where students could actively participate in reconstructing civic knowledge through culturally grounded problem-based learning experiences.

The consequences of these pedagogical shortcomings were evident in the students' character development, which remained below expectations. A tangible example was the widespread indifference among students toward environmental cleanliness; many ignored litter they encountered, demonstrating little concern for its decay or impact. This behavior reflects a significant failure to internalize the values taught in the Pancasila and Civic Education curriculum, particularly those related to Indonesia’s ethnic and cultural diversity. Specifically, it showed a disconnect from the local wisdom of Poda Na Lima, which promotes five core aspects of cleanliness. This observation underscored the central problem: the cultural lessons delivered in the classroom had not been successfully translated into meaningful real-life behaviors.

Phase 2: Design

In response to the challenges identified during the initial investigation, a new instructional framework, the ANGKOLA learning model, was developed. This model was specifically designed to address the identified gaps by structuring the learning process into five key stages. ANGKOLA is an acronym representing these stages: **A** for cultural **A**pperception, **N** for critical thi**N**king, **G** for interest en**G**agement, **KO** for **KO**munikasi (Communication), and **LA** for **L**earning **A**ction. The final stage, Action, is a culminating phase that involves students practicing Poda Na Lima cultural

values, undergoing assessment, and engaging in reflection on their learning experience.

To support the successful classroom implementation of the ANGKOLA model, we developed a comprehensive suite of six integrated instructional materials. These materials were designed to work synergistically to create a cohesive and effective learning environment. The developed products included: (1) the ANGKOLA model guidebook, (2) detailed lesson plans (RPP), (3) a teacher's manual, (4) a student textbook, (5) a supplementary educational comic, and (6) a set of student worksheets.

The ANGKOLA model guidebook served as a foundational document outlining the theoretical and practical aspects of the model. It details the underlying philosophical, psychological, and sociological principles that informed its design. The guidebook also provided a clear description of the model's syntax (the procedural stages), offered guidance for educators on developing their own instructional materials aligned with the model, and explained its specific application within the context of Pancasila and Civic Education at the elementary school level.

The lesson plans were meticulously prepared in accordance with the guidelines stipulated in *Circular Letter Number 14 of 2018,* from the Indonesian Ministry of Education and Culture. Each plan included essential components, such as learning objectives, instructional steps, required tools and materials, guiding questions, student exercises, and assessment activities. The learning scenario outlines a clear time allocation for each stage of the ANGKOLA model, ensuring a structured yet dynamic classroom session. The accompanying teacher's guide was systematically developed to include an introduction, instructions for use, strategies for collaborating with parents, and alignment with the national competency standards. It emphasized a problem-based approach rooted in factual situations and the local Angkola cultural context of the study area.

The student textbook was designed with content directly aligned with the curriculum's basic competencies and learning outcomes. The material focused on the theme of ethnic, social, and cultural diversity within the framework of national unity, with a specific emphasis on the local cultural concept of *Poda Na Lima*.

To enrich the textbook content and enhance student engagement, a supplementary educational comic was created for this study. This visual resource illustrates social interactions among elementary school students within the Angkola cultural context, vividly depicting the five core values of *Poda Na Lima*: cleanliness of the heart (*paias rohamu*), body (*paias pamatangmu*), clothing (*paias parabitonmu*), home (*paias bagasmu*), and yard (*paias pakaranganmu*). The comic was intended to capture students' interest, deepen their comprehension of the material, and inspire the practical application of these values in their daily lives.

Finally, student worksheets were developed to complement the teacher's guide and student textbook. While the textbook introduced concepts and fostered understanding through guiding questions, the worksheets were designed to provide more extensive and varied practice. They offer a broader range of test items and exercises, moving beyond the limited number of questions in textbooks to ensure comprehensive reinforcement of the learning material.

Phase 3: Realization

Following the design phase, the complete set of instructional materials developed to support the ANGKOLA learning model underwent rigorous validation. The materials were evaluated by a panel of 11 field experts, comprising academics with the rank of professor or associate professor. This evaluation comprehensively assessed three critical aspects of the materials: the quality of the instructional design, the accuracy and relevance of the content, and the clarity and appropriateness of language used.

Table 1. Summary of Validation Scores for the Product

No.	Product	Percentage of average value
1.	ANGKOLA model book	89,29
2.	Lesson plan	91,87
3.	Teacher's book	86,03
4.	Student book	91,30
5.	Comic	91,82
6.	Student worksheet	91,57
		90,31

Figure 1. ANGKOLA Learning Model Development Output

The results of this expert validation, summarized in Table 1, confirmed the high quality of all the developed products. The average validation score across all six instructional materials was 90.31%, indicating that the products were

considered highly valid and well suited for their intended educational purpose. Figure 1 provides a visual representation of the finalized products, showcasing the covers of the ANGKOLA model book and the student textbook. With this strong validation, the ANGKOLA learning model and its supporting materials were deemed ready for implementation and testing in a real classroom environment.

Phase 4: Testing, Evaluation, and Revision

With the validity of the ANGKOLA learning model and its associated materials established, the research proceeded to the testing phase to assess its practical application and effectiveness in the classroom. This was accomplished through a series of three implementation trials conducted in the participating schools, where student competencies were measured and supported by the observational data.

Table 2. Statistical Description of Students' Grades

School	Statistics	Pre-test	Trials I	Trials II	Trials III
SDN 200205: Class IV	Minimum	60	67	71	74
	Maximum	82	87	90	98
	Average	72,88	77,46	82,08	86,83
	Standard Deviation	7,31	5,80	4,65	5,72

The results from the first trial site, SDN 200205 are presented in Table 2. The data show a consistent and clear improvement in the student performance. The average score progressively increased from a pre-test mean of 72.88 to 77.46 in Trial I, 82.08 in Trial II, and 86.83 in Trial III. This upward trend suggests a positive impact of the model on students learning.

To determine the statistical significance of this improvement, a repeated-measures ANOVA was conducted (Table 3). The results from all multivariate tests—Pillai's Trace, Wilks' Lambda, Hotelling's Trace, and Roy's Largest Root—yielded a significance value of .000. As this value is substantially below the $p < 0.05$ threshold, it confirms that the observed increase in scores was statistically significant, demonstrating the model's effectiveness at this school.

Table 3. Statistical Test of Value Improvement Using Repeated Measures ANOVA

Effect	Value	F	Hypothesis df	Error df	Sig.
Pillai's Trace	.912	72.543[a]	3.000	21.000	.000
Wilks' Lambda	.088	72.543[a]	3.000	21.000	.000
Hotelling's Trace	10.363	72.543[a]	3.000	21.000	.000
Roy's Largest Root	10.363	72.543[a]	3.000	21.000	.000

Similar positive outcomes were observed at the second trial site, SDN 200212, which involved two fourth-grade classes in the second year. As detailed in Tables 4 and 6, both classes demonstrated a steady increase in academic performance

throughout the trial phases. The average score of Class IV-A increased from 73.06 to 86.34, whereas that of Class IV-B improved from 72.91 to 86.13.

The statistical analyses for both classes at SDN 200212, presented in Tables 5 and 7, reinforce these findings. The repeated measures ANOVA for both groups yielded a significance value of .000, indicating that the academic gains were highly significant and not due to chance. This provides additional strong evidence for the effectiveness of the model.

Table 4. Statistical Description of Student Academic Results

School	Statistics	Pre-test	Trials I	Trials II	Trials III
SDN 200212: Class IV-A	Minimum	60	70	80	80
	Maximum	79	80	89	90
	Average	73,06	76,78	84,78	86,34
	Standard Deviation	4,84	2,20	2,70	2,74

Table 5. Score Improvement Significance Using Repeated Measures ANOVA

Effect	Value	F	Hypothesis df	Error df	Sig.
Pillai's Trace	.904	91.462[a]	3.000	29.000	.000
Wilks' Lambda	.096	91.462[a]	3.000	29.000	.000
Hotelling's Trace	9.462	91.462[a]	3.000	29.000	.000
Roy's Largest Root	9.462	91.462[a]	3.000	29.000	.000

Table 6. Statistical Summary of Student Grade Data

School	Statistics	Pre-test	Trials I	Trials II	Trials III
SDN 200212: Class IV-B	Minimum	55	74	77	80
	Maximum	83	83	86	92
	Average	72,91	78,19	81,03	86,13
	Standard Deviation	5,77	2,62	2,51	2,74

Table 7. Score Improvement Significance Using Repeated Measures ANOVA

Effect	Value	F	Hypothesis df	Error df	Sig.
Pillai's Trace	.941	164.658[a]	3.000	31.000	.000
Wilks' Lambda	.059	164.658[a]	3.000	31.000	.000
Hotelling's Trace	15.935	164.658[a]	3.000	31.000	.000
Roy's Largest Root	15.935	164.658[a]	3.000	31.000	.000

The results from the third trial site, SDN 200406, mirrored the positive trends observed in other schools (Table 8). The average student score increased from a pre-test mean of 70.82 to 85.04 by the end of Trial III. The corresponding statistical analysis (Table 9) again produced a significance value of .000, confirming that the

ANGKOLA model was effective in improving students' learning outcomes across all implementation sites.

These quantitative findings were further corroborated by qualitative and observational data from the interviews. As shown in Tables 10 and 11, the observer ratings indicated a high level of model implementation (82%) and effectiveness (82.07%). Furthermore, the student questionnaire responses, summarized in Table 12, were overwhelmingly positive, with 106 favorable responses compared to only 12 unfavorable responses. This indicates that the ANGKOLA learning model and its supporting materials were well received by the students and considered practical for classroom use.

Table 8. Descriptive Analysis of Student Achievement Scores

School	Statistics	Pre-test	Trials I	Trials II	Trials III
SDN 200406:	Minimum	55	67	80	80
Class IV	Maximum	82	87	90	92
	Average	70,82	77,04	83,61	85,04
	Standard Deviation	7,56	5,36	3,25	3,40

Table 9. Score Improvement Significance Using Repeated Measures ANOVA

Effect	Value	F	Hypothesis df	Error df	Sig.
Pillai's Trace	.841	44.187[a]	3.000	25.000	.000
Wilks' Lambda	.159	44.187[a]	3.000	25.000	.000
Hotelling's Trace	5.302	44.187[a]	3.000	25.000	.000
Roy's Largest Root	5.302	44.187[a]	3.000	25.000	.000

Table 10. Summary of Implementation Scores for the ANGKOLA Model

No.	School	Average Percentage
1.	SDN 200205	82
2.	SDN 200212	84
3.	SDN 200406	81
		82

Table 11. Summary of Effectiveness Scores for the ANGKOLA Model

No.	School	Average Percentage
1.	SDN 200205	**82,12**
2.	SDN 200212	82,20
3.	SDN 200406	81,90
		82,07

Table 12. Summary of Student Questionnaire Responses

School	Class	Number of Good Responses	Bad Response Count
SDN 200205	IV	21	3
SDN 200212	IV-A	30	2
	IV-B	31	3
SDN 200406	IV	24	4
Sum		**106**	**12**

Finally, interviews conducted with fourth-grade teachers after the trials provided valuable insights. Teachers reported that the ANGKOLA model and its accompanying materials were highly beneficial, significantly supporting them in delivering the subject matter and enhancing students' comprehension. A constructive suggestion emerged from a teacher at SDN 200212, who recommended integrating the ANGKOLA model with other subjects, such as science (to emphasize environmental awareness) and arts and crafts (to foster creativity through recycling). This feedback suggests the potential for broader interdisciplinary applications of the model to create even more meaningful learning experiences.

DISCUSSION

Interpretation of Research Findings

The findings of this study robustly confirm that the ANGKOLA learning model is a highly valid, practical, and effective pedagogical tool for elementary school education. The model's validity was affirmed by experts, with an average score of 90.31%, while its classroom implementation and effectiveness were rated at 82% and 82.07%, respectively. This comprehensive validation suggests that the model is not only theoretically sound but also well suited for practical application, successfully addressing the identified need for a more engaging and culturally relevant instructional approach in Pancasila and Civic Education.

A primary finding of this study was the model's significant impact on students' conceptual understanding. The quantitative data revealed a statistically significant increase in academic scores from the pre-test through the three trial phases across all participating schools, with ANOVA tests consistently yielding a significance level of $p < 0.001$. This demonstrates that contextualizing civic education content with the local cultural values of Poda Na Lima enables students to grasp the complex concepts of diversity and national character more effectively. The model facilitates a shift from rote memorization to meaningful knowledge construction, which is foundational for deeper learning.

The enhanced student engagement observed during the trials can be attributed to the model's unique five-stage structure: Cultural Apperception, Critical Thinking, Interest Engagement, Communication, and Action. This syntax

systematically fosters engagement on multiple levels: emotionally, by using culturally relatable media such as comics; socially, through collaborative activities and discussions; and actively, by requiring students to participate in dialogue and knowledge co-construction rather than passively receiving information. This multifaceted engagement is a key driver of the model's overall effectiveness.

The success of the ANGKOLA model is strongly aligned with constructivist learning theory, which posits that learners actively construct their own understanding by interpreting the world through existing knowledge structures. As Schunk suggests, learning becomes meaningful when it is grounded in observable and exploratory experiences (Santhalia et al., 2020). The ANGKOLA model embodies this principle by immersing students in a learning process in which they must apply cultural concepts, solve context-driven problems, and reflect on their actions, thereby building knowledge progressively through direct engagement.

Furthermore, the model serves as a practical application of the experiential learning theory. Its structure reflects the core cycle of learning through experience, encompassing concrete actions, reflective observations, and conceptual understanding. This supports the assertion by Sukardi et al. (2022) that advancing educational quality requires adopting an experiential framework. The findings also resonate with research by Hulaikah, Degeng, Sulton, and Murwani (2020), who found that experiential learning significantly enhances students' problem-solving abilities, a key competency fostered by the ANGKOLA model.

The outcomes of this study reinforce the findings of previous studies conducted within the same cultural context. Specifically, the results are consistent with those of Lubis and Rasyid (2023), who demonstrated that an experiential model grounded in Angkola culture effectively fosters character development in elementary students. This consistency across studies strengthens the conclusion that integrating local Angkola wisdom, such as Poda Na Lima, within an experiential framework is a potent strategy for character education in the region and beyond.

This study also provides compelling evidence for the value of culturally responsive pedagogy, as recommended by theorists such as Scheurich (in Derlina et al., 2021). The findings demonstrate that integrating cultural elements into instruction is not merely an auxiliary activity but a critical factor that can significantly influence students' character development and academic comprehension. By grounding lessons in students' cultural heritage, the ANGKOLA model helps them gain a deeper understanding of ancestral values, thereby making learning more relevant and impactful.

The model's contribution extends beyond academic achievement to the crucial domain of character formation. Its implementation facilitates a process in which students progressively develop positive traits through sustained experience and educational engagement. This aligns with the educational goal of helping students

not only to know values but also to care about and internalize them until they become integral to their behavior. This process is vital for cultivating citizens with integrity who act responsibly and appreciate cultural diversity, as described by Kaelan (in Lubis et al., 2022) and Sanjaya et al. (2021).

In addition to core character traits, the ANGKOLA model effectively nurtures essential soft skills. The emphasis on environmental stewardship through Poda Na Lima encourages students to develop environmental awareness, creativity, and responsibility. This approach positions students to become "Environmental Change Agents," who not only understand eco-friendly principles but also apply them in their daily lives, as highlighted by Arief et al. (2022).

Finally, the results underscore the indispensable role of teachers in facilitating transformative learning experiences. As Dewey posits, educators are ethical agents responsible for shaping instruction (Nilholm et al., 2021). The success of the ANGKOLA model relies on teachers who can effectively guide student activities, act as emotional exemplars, and facilitate a supportive and interactive learning environment. Teachers are the central agents of educational transformation, guiding students to appreciate local culture and develop essential competencies.

Practical Implications for Learning and Policy in Elementary Schools

The findings of this study have significant practical implications for classroom instruction. The ANGKOLA model provides teachers with a structured, validated, and replicable framework to move beyond conventional lecture-based methods. The comprehensive suite of supporting materials, including guidebooks, lesson plans, comics, and worksheets, offers tangible tools that directly assist educators in delivering engaging and culturally meaningful lessons, thereby enhancing the quality of teaching and learning in the classroom.

On a broader level, this study informs educational policy and curriculum development at the school and district levels in the following ways. The demonstrated success of the ANGKOLA model offers a compelling case for school administrators and policymakers to champion the development and implementation of culturally responsive learning models. This study provides a practical strategy for meaningfully linking local wisdom with the national curriculum, which can help address the documented character crisis and improve civic awareness among students, thus aligning school practices with national educational goals.

The interdisciplinary potential of the ANGKOLA model is another key implication. As suggested by teachers during interviews, the model's core principles–integrating cultural values, promoting critical thinking, and encouraging hands-on action–are highly transferable to other subject areas. Applying the model in science could foster environmental ethics, while its use in art and crafts could promote creativity through recycling projects. This potential for cross-disciplinary

applications could lead to more holistic and integrated learning experiences for students.

Ultimately, the implementation of the ANGKOLA model has profound implications for holistic student development. The model provides a structured pathway for cultivating essential life skills and positive character traits that extend far beyond academic knowledge alone. By participating in these activities, students develop empathy, patriotism, compassion, and a sense of social responsibility (Loi, 2021). This prepares them not only for future academic challenges but also for active, constructive, and responsible citizenship in a diverse society.

Limitations of the Research

Despite these positive findings, this study has several limitations that must be acknowledged. First, the research was conducted within a specific geographical and cultural context—the Angkola community in Padangsidimpuan—and focused exclusively on fourth-grade students. While this specificity allowed for deep and relevant cultural integration, it also limited the direct generalizability of the findings. The effectiveness of the ANGKOLA model in other regions with different cultural values or among students at different grade levels requires further adaptation and investigation.

Second, the scope of the study was confined to a single subject area: Pancasila and Civic Education. Although the findings and teacher feedback strongly suggest the model's potential for interdisciplinary application, its effectiveness in other subjects, such as mathematics, science, or language arts, has not been empirically tested. Additionally, the outcomes were measured over a relatively short timeframe of one semester. Consequently, the long-term impact of the model on the sustainability of students' character development and civic behavior remains an open question for future research.

Finally, the third limitation pertains to the nature of the instructional materials developed. This study relied exclusively on traditional print-based resources such as books, comics, and worksheets. This study did not explore the integration of digital technology or the development of a hybrid version of the ANGKOLA model. In an increasingly digital educational landscape, future studies could investigate how incorporating technological components might enhance the model's accessibility, interactivity, and adaptability for diverse learning environments and student needs.

CONCLUSION

The findings of this study indicate that the ANGKOLA learning model in Pancasila and citizenship lessons based on the Poda Na Lima culture is valid, practical, and effective in improving the character of elementary school students in Padangsidimpuan City. The model significantly improves students' understanding

of the concept of citizenship, especially the material on ethnic and cultural diversity in Indonesia, increases their involvement through culturally meaningful learning stages, and improves their academic performance in various trial phases. Validation data from experts revealed that the product validity score (learning model book, RPP, teacher's book, student's book, comic, and student worksheet) had an average of 90.31%, while implementation and effectiveness in the classroom reached 82% and 82.07%, respectively. Student responses were very positive, and teacher interviews confirmed the usefulness of the model and its supporting materials in improving students' learning outcomes.

The ANGKOLA model successfully integrates A= cultural apperception, N= critical thinking, G= interest engagement, KO= communication, LA= action (practicing poda na lima culture, conducting an assessment of students, and reflecting on the learning), creating a holistic learning experience that nurtures students' character, cultural identity, and critical thinking. These outcomes suggest that embedding local culture into civic education fosters deeper conceptual understanding, social responsibility, and contextual problem-solving skills.

The implications of this research highlight the importance of developing culturally responsive learning models in elementary education to preserve local heritage and address current character and civic awareness challenges among students. The ANGKOLA model offers a replicable strategy for other regions seeking to meaningfully link local wisdom with national curricula.

Future research should consider applying and adapting the ANGKOLA model across broader subject areas beyond Pancasila and civic education, including science, social studies, and language learning, to evaluate its cross-disciplinary effectiveness. Further studies should explore the long-term impact of the model on student character development and community engagement. Incorporating digital components or hybrid approaches may enhance the model's accessibility and adaptability in diverse educational settings.

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