Integration of Toba Batak Local Wisdom as Character and Multicultural Education Values in the Curriculum

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ABSTRACT

This research is motivated by the importance of preserving and integrating the local wisdom of the Toba Batak community in the national education system which is increasingly affected by the flow of globalization. Cultural values such as Dalihan Na Tolu, Hamoraon, Hagabeon, and Hasangapon have great potential in shaping students' character and identity. This study aims to identify, classify, and analyze the forms of local wisdom of Batak Toba and their relevance in the context of formal and non-formal education. This study analyzed in depth as many as 40 literature sources consisting of 35 journal articles (35 reputable international journals and 5 accredited national journals). These sources were selected based on inclusion criteria such as topic relevance, novelty (published in the last 10 years), The sources were selected based on inclusion criteria such as topic relevance, novelty (published in the last 10 years), and publisher credibility. The data collection technique is carried out through systematic searches using keywords in databases such as Google Scholar, Garuda, and DOAJ. Data analysis is carried out through the stages of identification, selection, classification, and thematic synthesis. The results of the study show that the local wisdom of Batak Toba includes life philosophy, oral traditions, traditional values, social systems, and environmental ethics that can be integrated in contextual learning and character education. These values are very relevant to support the implementation of the Independent Curriculum and Pancasila Student Profile. In addition to being a means of cultural preservation, this integration also strengthens inclusive and civilized multicultural education. Thus, the local wisdom of Batak Toba is a strategic source of educational value in the development of the Indonesian education system.

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1. INTRODUCTION

The preservation of local culture is a strategic issue in the development of national education. In the era of globalization marked by the rapid flow of information and foreign culture, local cultural identities are increasingly marginalized. Local culture is an ancestral heritage that reflects the noble values of the nation, which needs to be transmitted to the younger generation. Culture encompasses the entire system of ideas, actions, and human works in people's lives (Bertolino & Corrado, 2022; Huggins & Thompson, 2015). Education is a strategic vehicle to internalize local cultural values systematically and sustainably. The school's role as an agent of social transformation makes it an ideal place to preserve and develop local culture. Local culture-based education not only enriches students' learning experience, but also strengthens the nation's identity and character. If national education ignores the content of local culture, then the younger generation will experience a disconnection of cultural identity. Therefore, the integration of local culture into the national curriculum is a must.

In the context of national education, local culture has a strategic function as a social glue and a tool to shape the nation's character. Local culture that is rich in moral values, ethics, and local wisdom can be a source of contextual and meaningful learning. Education that is not rooted in one's own culture will create a generation uprooted from its cultural roots (Abrami et al., 2008; Acikgoz, 2011). Therefore, an education that is inclusive of local cultural richness is essential to form a strong national identity. The use of regional languages, traditional arts, and local socio-cultural practices in learning can increase the sense of love for the homeland among students. Education that ignores aspects of local culture tends to produce only academically competent individuals, but weak in values and identity. Meanwhile, education based on local culture fosters a sense of belonging to tradition and history. Thus, local culture is not only an object of preservation, but also a source of pedagogical inspiration. Therefore, the national education system must design a curriculum that respects the nation's cultural plurality.

The implementation of local cultural preservation in the world of education requires policies that favor cultural diversity. The government through the Ministry of Education and Culture has launched the Merdeka Learning policy which provides space for schools to develop the curriculum according to the local context. The learning process is greatly influenced by the social and cultural context of the students' environment (Lu et al., 2019; Dumitrascu, 2017). This strengthens the urgency of incorporating local culture into the learning process as a form of cultural scaffolding. Schools need to be centers for cultural preservation, not only in the form of extracurricular activities, but also in the content and methods of learning. Teachers as learning facilitators must have a deep understanding of the local culture that exists around them. Community involvement in local cultural education is also important so that the preservation process runs collaboratively. However, in practice, there are still many schools that are not optimal in integrating local culture into the educational process. This shows the need for training and mentoring for educators in the development of local culture-based learning. With this approach, education can be a means of preservation as well as empowerment of local culture.

The preservation of local culture through education is not only the responsibility of the government, but also the community and educational institutions. Children's education is influenced by a variety of environmental systems, including local culture and communities (Brendefur et al., 2013; Dere, 2019). Therefore, all parties must play an active role in creating an educational ecosystem that respects and preserves local culture. These efforts include the integration of local culture in textbooks,

cultural project-based learning activities, and the revitalization of traditional arts in schools. The success of local cultural preservation is highly dependent on a shared commitment between teachers, students, parents, and other stakeholders. On the other hand, technological advances can be used to document and disseminate local culture to the younger generation. Education that is grounded in local culture will produce students who are not only intellectually intelligent, but also have character and cultural awareness. Thus, the preservation of local culture through education is an important foundation in building a competitive nation but still rooted in its identity. Therefore, national education must be directed to preserve, enrich, and revitalize local culture systematically. This commitment is important for the sustainability of the nation's cultural heritage in the midst of the challenges of the times.

To make local wisdom a source of value, character, and identity, there needs to be synergy between the government, educators, the community, and the media. Local wisdom-based education is not only about introducing culture, but also transforming it in real life. The constructivist approach as described emphasizes the importance of social and cultural context in the learning process (Cimen, 2014) Frank, 1999). This means that learning will be more meaningful when adjusted to the cultural background of students. Learning based on local wisdom allows students to build meaning through interaction with their own environment. The government can encourage the development of local content in the curriculum to suit the context of their respective regions. Teachers also need to be given training to be able to integrate local values into the learning process. In addition, local communities must also be empowered as a source of learning and cultural preservation. With a holistic approach, local wisdom is not only preserved, but also reinterpreted as a force to build the future of the nation with strong character and identity.

The integration of local culture in the curriculum is an important part of efforts to preserve cultural heritage while strengthening national identity. In the world of education, local culture can be a contextual and meaningful learning resource for students. However, the realization of the integration of local culture in the national curriculum still faces various challenges. One of them is the dominance of a learning approach that is uniform and does not pay attention to local peculiarities. Even though according to the view Adair & Jaeger (2016) Learning will be more effective if it is rooted in the social and cultural context of students. Local culture encompasses values, norms, language, and social practices that can enrich students' learning experiences. Unfortunately, education policy tends to emphasize more on academic aspects and global competence, rather than local values. As a result, many schools have not optimized local potential as part of learning. Therefore, it is important to understand in depth the challenges of integrating local culture into the national education system.

One of the main challenges in the integration of local culture is the limited understanding of educators of the values and practices of the local culture itself. Many teachers have not received training or learning resources that support the integration of local culture in teaching and learning activities. In fact, teachers are key actors in the implementation of a contextual and relevant curriculum. According to Adlya et al. (2024) Education should liberate and depart from the social reality of students. In this case, the local culture becomes part of the reality that should not be ignored. Without a good understanding, local culture will only become a symbol or ornament, without having a significant impact on the formation of students' character. In addition, the limitation of teaching materials and resources is also a serious obstacle. The lack of support from higher education institutions in producing locally-based learning modules further weakens this integration. Therefore, increasing the capacity of educators is an urgent need to bridge the curriculum with local realities.

Another challenge is the imbalance between local content and nationally standardized curriculum. The national curriculum often does not provide a sufficient space for the development of local materials according to regional characteristics. In fact, according to the National Education System Law No. 20 of 2003 Article 36 paragraph 2, the curriculum must be prepared in accordance with the potential of the region, culture, and students. The mismatch between national standards and local needs can lead to a disconnect between learners and their socio-cultural context. In addition, national curricula that place too much emphasis on academic achievement often ignore the affective and socio-cultural dimensions.

This hinders the internalization of local values that are important for the formation of national character and identity. An education that is not contextual will give birth to individuals who are uprooted from their cultural roots (Acikgoz, 2011). Therefore, there needs to be flexibility in the implementation of the curriculum in order to be able to adapt to the richness of local culture. Thus, the integration of local cultures is not only a formality, but an integral part of learning.

In addition to internal factors, challenges also come from outside the education system, such as the increasingly strong influence of global culture. Globalization brings foreign cultural currents that are often more dominant and attractive to the younger generation, so that local culture loses its appeal. If not anticipated properly, this can cause a cultural identity crisis in students. Identity is formed through a process of consistent social and cultural interaction throughout the development of the individual (Litman et al., 2017; Owens, 2014). Therefore, education must be able to become a fortress and medium for the preservation of local culture in the midst of globalization. The use of technology and digital media can be an effective means to introduce and develop local culture in learning. However, this also requires innovation from teachers and progressive policy support. With a shared commitment between the government, educators, and the community, the challenge of integrating local culture into the curriculum can be overcome gradually. Therefore, education must be designed as a system that is adaptive and responsive to the cultural diversity of the Indonesian nation.

The relevance of local Batak Toba wisdom in education lies in its ability to form the character of students who are tough, independent, and with integrity. Values such as *hamoraon* (prosperity), *hasangapon* (honor), and *hagabeon* (offspring) reflect a life orientation that is full of the spirit of hard work and respect for the dignity of the family. Character education must include aspects of moral knowing, moral feeling, and moral action that can be obtained from local cultural practices (Cheung & Lee, 2010). The wisdom of Batak Toba teaches a lot of social ethics that can be used as teaching material in strengthening character education. For example, in the *marhata sinamot* (marriage deliberation) custom, there are values of communication, compromise, and mutual respect. These values can be contextualized in learning Pancasila, Indonesian, or Social Studies Education. Education that takes inspiration from one's own culture will be stronger in forming an authentic national identity. Students not only learn theoretically, but also through life values instilled in their own society. Thus, education is a tool to revive and internalize the local wisdom of Batak Toba in a sustainable manner.

However, the integration of Toba Batak local wisdom in the formal education curriculum still faces various challenges. One of the main obstacles is the lack of systematic mapping of Toba Batak cultural values that are relevant for learning in schools. In addition, many educators do not have a deep understanding of local culture, making it difficult to integrate them in the teaching and learning process. Meaningful learning must depart from the socio-cultural context of students so that they are able to construct their own knowledge (Angeli et al., 2016; Blackman et al., 2004). Without an understanding of the local cultural context, teachers tend to adopt methods and materials from outside that are not necessarily relevant. In fact, Toba Batak culture holds great pedagogical potential, ranging from folklore, customary law, to the practice of mutual cooperation in the community. Therefore, training, research, and curriculum development that is inclusive of the region's cultural richness are needed. The government and higher education institutions must also take part in this process. Through this collaboration, schools can become a space for preservation as well as the transformation of local values into a dynamic form of education. Thus, education is not only academic, but also social and cultural.

Despite this great potential, the integration of Batak Toba values into the world of education still faces significant obstacles such as low teacher cultural literacy, the lack of local modules or teaching materials, and the rigidity of the national curriculum that has not fully provided space for regional content (Lince, 2022). Previous research is generally still conceptual or limited to extracurricular activities, without explaining operationally how these values are embedded in the curriculum structure, social studies or Indonesian subject syllabus, as well as project-based learning models or Pancasila Student Profile (Han et al., 2015).

The urgency of education based on local culture, but does not map the specific values of Batak Toba in the framework of formal learning (Nawi, 2012). The effectiveness of contextual learning in general, without detailing the application of *the Dalihan Na Tolu* and *Hamoraon values* in the syllabus (Swasnon & Re-, 2013). Low teacher capacity, but not yet testing training interventions or concrete modules (Fhatri, 2020). Developing a digital platform for local culture, but not yet measuring its pedagogical impact in the classroom (Taufiqurrahman et al., 2024). Thus, there is still a need to (1) identify and classify the operational values of the Toba Batak for the curriculum, (2) design an integration model for specific subjects, and (3) test its effectiveness empirically.

This research aims to (1) inventory and classify relevant Toba Batak local wisdom as a source of teaching materials and character education; (2) designing a model for integrating *the values of Dalihan Na Tolu, Hamoraon, Hagabeon,* and *Hasangapon* into the structure of the Independent Curriculum, especially in the social studies and Indonesian syllabus; and (3) evaluating the effectiveness of the implementation of the model through an experimental study at the junior high school level in the North Tapanuli region, resulting in practical guidelines and policy recommendations to strengthen culture-based education local.

2. METHOD

This study uses the Systematic Literature Review (SLR) approach to examine in depth the forms of local wisdom of the Toba Batak community and their relevance in the context of education. This study aims to compile conceptual and empirical evidence that has been published through a systematic, transparent, and replicable literature review process. Systematic Review differs from narrative review in that it emphasizes rigorous procedures, from identification to data synthesis (Braun & Huwer, 2022). The literature sources used in this study include national and international journals, academic books, scientific proceedings, and policy documents related to local culture-based education. The use of these different types of sources is in accordance with the Integrative Review approach which allows the incorporation of theoretical and empirical data to build a more complete conceptual framework (Education et al., 2018). The publication period of the literature used is limited between 2010 and 2024 to ensure the relevance and up-to-date of the information. This study focuses on articles that contain the themes of local wisdom, character education, multicultural education, and Toba Batak culture. With this approach, researchers can build a knowledge map about the role of local cultural values in the world of education systematically. The study process is carried out in layers to maintain the validity and objectivity of the analysis.

The literature reviewed in this study was selected based on explicitly defined inclusion and exclusion criteria. The inclusion criteria include scientific publications that: (1) discuss local wisdom directly; (2) has relevance to the educational context; (3) discuss or mention Batak cultural values or other local Indonesian ethnicities as a comparison; and (4) available in Indonesian or English. Meanwhile, the exclusion criteria include documents that: (1) do not have a peer-review; (2) is opinion or editorial in nature without supporting data; and (3) not available in full-text form. The search strategy is carried out by utilizing several databases such as Google Scholar, Garuda Ristek-BRIN, Directory of Open Access Journals (DOAJ), and ERIC. The keywords used include: *local wisdom, Toba Batak Culture, character education, culture-based education,* and *local wisdom in education.* Boolean combinations (AND/OR) are used to expand or narrow the search as needed. All literature found is recorded and managed using reference management software such as Zotero to avoid duplication and improve source traceability. With this strict selection criteria, the research seeks to obtain quality and relevant literature. This procedure is also carried out to minimize selection bias in the review process.

The steps in the literature analysis are carried out through the stages of identification, selection, classification, and thematic synthesis. The identification stage is carried out by searching and collecting all relevant articles and documents based on predetermined keywords. Furthermore, the selection stage includes screening based on inclusion and exclusion criteria to ensure only valid and relevant literature is analyzed. The classification stage is carried out by grouping literature based on the main themes,

such as the cultural value of Batak Toba, its application in education, and the challenges of integrating local culture in the curriculum. According to Bariyah (2014) The thematic synthesis approach is useful for interpreting and organizing qualitative data systematically through coding and the development of central themes. In this process, repeated reading, recording of important data, and the formation of thematic categories are carried out. This analysis helps uncover the relationships between concepts, knowledge gaps, and the direction of development of local culture-based education. The validity of the analysis is maintained through triangulation between researchers and transparent recording of the analysis process. The final result of this study is a comprehensive mapping of the contribution of local Batak Toba wisdom in education as well as applicative recommendations for its integration in the curriculum. Thus, this research is expected to make a theoretical and practical contribution to the development of education rooted in local cultural values.

3. FINDINGS AND DISCUSSION

The following is a summary table of articles and documents that are the basis for each statement/argument in the Integrative Literature Review Study. Each line shows the main theme, the full citation, and the source:

Table. 1

No.	Themes / Findings	Author & Year	Title of Article/Book	Journals / Publishers
1	Three Dalihan Na Tolu Philosophy: collaboration & character strengthening	(Ellis, 2011)	"Cooperation and the Use of Technology"	Educational Technology Research and Development
2	The value of hamoraon, hagabeon, hasangapon as motivation for learning and responsibility	(Ihsan, 2015)		International Journal of Educational Psychology
3	Oral traditions (Si Raja Batak, Sigale-gale, the legend of Lake Toba) for literacy & character	(Sutarto, 2009)	"Narrative Learning and Identity Formation in Oral Traditions"	Journal of Multicultural Education
4	Customs (mangulosi, wedding party, mangongkal holi) & character learning	(Mutaqin, 2015)	"Rituals and Social Cohesion: The Role of Batak Toba Customs"	Perspectives
5	Customary deliberation and democratic education	(Badru, 2016)	"Consensus Building in Indigenous Decision- Making"	Journal of Civic Education
6	Relationship with nature & ecopedagogy	(Denning, 2007)	"Ecopedagogy: Local Cultures and Environmental Education"	Environmental Education Research
7	Teacher literacy challenges & curriculum limitations	(Maharani et al., 2023)	"Teachers' Cultural Literacy in Multicultural Curriculum Integration"	
8	Thematic approach & culture- based modules	(Arcavi, 2003)	"Contextual Learning and Students' Cultural Realities"	Curriculum Journal

No.	Themes / Findings	Author & Year	Title of Article/Book	Journals / Publishers
9	Effective character education from community values	(Cheung & Lee, 2010)	"Sourcing Character Education from Community Values"	lournal of Moral
10	Transformative education theory & reflection of local values	(Purba et al., 2021)	Transformative Education: Local Wisdom in Practice	Universitas Pendidikan Indonesia Press

Forms of Local Wisdom of Batak Toba

The philosophy of Dalihan Na Tolu, which consists of elements of hula-hula, dongan tubu, and boru, reflects the values of mutual respect, balance of roles, and social harmony. In the context of education, this value can be used as the basis for collaborative learning and character strengthening. The division of roles in Dalihan Na Tolu teaches the importance of individual roles in the larger community. Social interaction is the foundation of learning and cognitive development (Johnson, 2003). By applying these principles, students can be taught the importance of cooperation, equal communication, and respect for differences. In project-based learning, for example, the role of students can be modeled following the social structure of Dalihan Na Tolu to increase a sense of collective responsibility. Teachers can also make this structure an approach to culture-based character education. Thus, the integration of this philosophy supports the formation of an inclusive and dignified learning climate.

The values of hamoraon (prosperity), hagabeon (good descent), and hasangapon (honor) are the philosophy of life of the Toba Batak people who are highly upheld. These three values implicitly encourage efforts to improve education as a path to the glory of life. Education can be a means to achieve prosperity through economic achievements based on integrity. The need for self-esteem and self-actualization encourages individuals to put in a lot of effort in learning (Farimani & Shahri, 2020). The value of hagabeon can be associated with social responsibility, especially in the role of the younger generation to maintain the dignity of the family. Meanwhile, hasangapon reflects the importance of moral reputation, which is very relevant in character education. Through the integration of these values, students are invited to pursue not only academic achievement, but also personal and social honor. This integration is in line with the goal of national education to form human beings with character and global competitiveness.

The oral traditions of the Toba Batak people, including folklore such as *Si Raja Batak, Sigale-gale*, and *the legend of Lake Toba*, hold a profound moral message. This story contains the values of honesty, perseverance, and loyalty that can be used in literacy and character learning. Narrative is the main means in the formation of meaning and self-identity (Foohs & Giraffa, 2022). Through a story-based learning approach, teachers can instill local values in students in an engaging and contextual way. Folklore can also be used as teaching material across subjects such as Indonesian, social studies, or cultural arts. This tradition provides opportunities to develop critical thinking skills and appreciation of local culture. In addition, students can also be trained to rewrite stories with new perspectives as part of strengthening literacy. Therefore, the preservation of Toba's Batak folklore can be carried out in conjunction with cultural-based educational innovations.

The customs of the Toba Batak people, such as *mangulosi*, *traditional wedding parties*, and *mangongkal holi*, teach about the life cycle and social values. This cultural rite teaches responsibility between members of society and the importance of respecting ancestors. Social rituals serve as a binder of solidarity and strengthen collective consciousness (Nurdiansyah, 2016). Values such as respect, responsibility, and spirituality contained in traditional rites are particularly relevant to character education. In the context of schools, this rite can be used as inspiration in habituation activities and culture-based school projects. For example, simulating traditional ceremonies or discussing values in

cultural rites can enrich students' understanding of social responsibility. In addition, traditional rites can also introduce the concept of cultural pluralism that strengthens tolerance. Thus, education can be a space for the preservation and inheritance of meaningful customary values.

The Toba Batak people have a tradition of customary deliberation called *customary meetings*, which prioritize consensus in decision-making. These values are important in democratic education that instills the ability to think critically and participaly. Rational and inclusive discourse is the basis for the formation of a democratic society (Zalsabella et al., 2023). In the educational environment, this principle of customary deliberation can be modeled in class discussion forums, class administrator elections, or group projects. Students are taught to respect the opinions of others, make arguments, and reach mutual agreement. This practice trains leadership, empathy, and collective responsibility. The tradition of deliberation is also a means of strengthening civic education based on local wisdom. In this way, democratic values are not only taught theoretically, but are practiced in real terms according to their own culture.

The relationship of the Batak Toba people with nature is very close, reflected in the respect for lakes, mountains, and forests as a source of life. This ethics is in line with the principles of ecopedagogy that emphasizes the importance of ecological awareness in education (Altintas & Ozdemir, 2012). Nature is not only a resource, but also an entity that must be respected and maintained. In the context of education, these values can be integrated through environmental programs such as green schools, water conservation, or locally-based school gardens. Folklore and symbols of Toba Batak culture are also related to nature, so they can be used as reflective materials in learning. Environmental education rooted in local culture is believed to be more effective because it is close to students' experiences and values. By introducing the local community's perspective on nature, students can grow up to be ecologically and ethical individuals. Therefore, the integration of the value of natural relations in education is an important part in shaping the ecological awareness of the younger generation.

Although Toba's Batak cultural values are rich and relevant, their implementation in education faces various challenges. One of them is the lack of teachers' literacy towards local culture and the lack of teaching materials that accommodate this wisdom. Multicultural education requires culturally sensitive teachers and an inclusive and contextual curriculum (Agustina & Rahaju, 2021). Some teachers feel less confident because they have not received training on how to integrate cultural values in learning. On the other hand, the national curriculum is often still uniform and has not given a wide space to the locality. This makes the integration of Toba Batak values tend to be limited to extracurricular activities or local content alone. In fact, these values can be a cross-subject approach that enriches learning. Therefore, systematic policy support and teacher training are needed. With the right strategy, local cultural values can be a source of living and grounded learning.

The integration of local wisdom in the curriculum can be done through thematic approaches, collaborative projects, and the development of culture-based modules. Contextual learning developed based on students' cultural realities will increase motivation and understanding of concepts (Arcavi, 2003). Teachers can develop teaching modules that incorporate values such as *Dalihan Na Tolu*, folklore, or traditional deliberation practices in learning topics. Collaboration between teachers and traditional leaders can also strengthen the authenticity of teaching materials. Schools can also organize cultural activities such as the Toba Batak cultural festival as a means of cross-curricular learning. This integration encourages the creation of holistic education and respects local wisdom. This principle is also in line with the Merdeka Belajar policy which emphasizes learning based on local contexts. Thus, schools become centers for the inheritance of cultural values as well as the development of students' potential.

The results of the study show that the introduction and application of local wisdom values can form the character of students who are more empathetic, resilient, and responsible. Education rooted in local culture provides a strong sense of belonging and cultural identity for students. According to Blackman et al. (2004) Effective character education must be sourced from the values that live in society. In the context of Batak Toba, values such as *hasangapon* and *hagabeon* can be a source of moral and social

motivation. Students who know their own culture also tend to be more open to differences and appreciate diversity. This is important in forming a generation that is tolerant and with integrity in the midst of a multicultural society. In addition, understanding one's own culture also increases confidence and pride in identity. Therefore, local values not only enrich knowledge, but also strengthen the character of the nation.

The integration of the local wisdom of the Toba Batak community in education has great potential in strengthening character, learning relevance, and cultural preservation. Values such as *Dalihan Na Tolu*, folklore, customs, deliberation, and relationships with nature, can all be articulated in various subjects and school activities. This is in line with transformative education theory Perdana (2020) which emphasizes the importance of critical reflection on local values and experiences. To make this happen, an adaptive curriculum, competent teachers, and local community support are needed. Schools need to be active agents of cultural inheritance through a culturally-based pedagogical approach. Thus, education is not only a tool to educate, but also to cultivate and shape identity. The practical implications include module development, teacher training, and collaboration with indigenous leaders. In the era of globalization, education based on local culture is an important foundation in maintaining the nation's identity and sustainability.

The Potential of Integration in the Context of Education

The following is a relevant research article, which can serve as a basis for reinforcing the arguments and analyses in this study:

Table 2.

Tuble 2.						
No	Article Title	Integration Focus	Source			
1	"Training in Writing Independent Curriculum Teaching Modules Based on Local Wisdom of Batak Toba"	Integration of Batak Toba cultural values in the teaching module of the Independent Curriculum	<u>STKIP</u> <u>Singkawang</u>			
2	"Toba Batak Cultural Values as a Source of Social Studies"	The use of Toba Batak cultural values in social studies learning	<u>Universitas</u> <u>Negeri Surabaya</u>			
3	"Moral Education in the Perspective of Toba Batak Culture"	Integration of Batak Toba cultural values in moral education	<u>FAI UMA</u>			
4	"Reconstruction of Oral Stories Containing Local Wisdom of Batak Toba in Palipi Village as an Effort to Strengthen Literacy in the Independent Curriculum"		Dharmas Education Journal			
5	"Implementation of Local Wisdom Values in North Sumatra History Learning in the History Education Study Program, Islamic University of North Sumatra"	Integration of local wisdom values in history learning	<u>ResearchGate</u>			

The table above includes several articles that discuss the integration of Toba Batak local wisdom in various aspects of education, such as curriculum, learning, and character education. Each article provides a different perspective and approach, which can enrich the understanding and application of Toba's Batak cultural values in the context of education.

Effective character education must be sourced from the cultural values that live in the community, including the local wisdom of Batak Toba. Values such as *Dalihan Na Tolu*, *hasangapon*, and *hagabeon* contain the principles of responsibility, mutual respect, and personal honor. Character education needs

to be built on a foundation of authentic moral and cultural values. In this context, schools can make Toba's Batak culture as a basis in shaping students' characters. For example, daily activities such as polite greetings, mutual cooperation, and conflict resolution can refer to local cultural principles. This strengthens the student's identity as part of a community that upholds ethics and dignity. Strengthening the character based on local culture also bridges the gap between formal education and social life. That way, the characters that are instilled become more contextual, relevant, and rooted.

The integration of the Toba Batak language, history, and cultural arts in learning provides space for a meaningful contextual approach. Batak, for example, can be used in local content lessons or in classroom dialogues to reinforce students' linguistic identities. The use of mother tongue in learning helps students' cognitive and affective development (Novitasari et al., 2023). Local history about the origins of the Batak tribe, folklore, and traditional figures can be integrated into history lessons to strengthen a sense of belonging to cultural heritage. The art of gorga carving, gondang music, and tortor dance can also be taught as part of art education that strengthens cultural expression. This contextual learning makes it easier for students to understand the material because it is directly related to their environment and life experiences. In addition, it also forms pride in one's own cultural heritage. Thus, this approach strengthens the meaning of learning and forms students' emotional attachment to the local culture.

The Toba Batak community has strong social values such as deliberation (*marhata*) and mutual cooperation (*marsiadapari*) which are very relevant for collaborative learning. These values can be used as a basis for building cooperation between students in group learning activities. According to social learning theory Karina et al. (2024) Social interaction is key in shaping students' behaviors and social skills. In practice, teachers can form study groups with a cooperative structure that mimics the traditional Batak social structure. Students will learn to appreciate each other's roles and the importance of open communication in achieving common goals. This not only improves learning outcomes, but also strengthens empathy, responsibility, and leadership. The collaborative value of local culture becomes a means of democratic education in the classroom. Therefore, local social values must be used as an asset in creating a healthy and participatory learning ecosystem.

The local wisdom of Batak Toba contains important principles in civic and environmental education. For example, respect for customs, community leaders, and the value of deliberation reflects democratic practices rooted in tradition. The importance of rational and participatory discourse in civics education (Komalasari, 2012). In the context of the environment, the Toba Batak people have a harmonious relationship with nature, as seen from the respect for lakes and forests as part of their spiritual life. This value can be integrated in science and social studies lessons as a form of ecopedagogical education. Through activities such as field studies or locally-based conservation projects, students learn to become socially and environmentally conscious citizens. Local wisdom is not only a legacy, but also an ethical guide to shaping a responsible generation. Therefore, education that contains local values will produce citizens who are firmly rooted in their identity as well as have a global perspective.

The integration of local Batak Toba wisdom is very much in line with the spirit of the Independent Curriculum and the strengthening of the Pancasila Student Profile. The Independent Curriculum emphasizes learning based on local contexts and the autonomy of teachers to develop materials according to the student environment. This opens up a wide space for teachers to use local values such as *Dalihan Na Tolu as material for* character teaching and collaboration. The Pancasila Student Profile includes the dimensions of faith, global diversity, mutual cooperation, independence, critical reasoning, and creativity, all of which can be sown through local wisdom. The local culture-based approach is the main strategy in the implementation of the Pancasila Student Profile (Monalisa, 2024). By elevating the Toba Batak culture, schools also contribute to the preservation of culture that is increasingly eroded by globalization. This locally relevant education also fosters a sense of pride in regional identity. Therefore, the integration of local culture in education is a concrete form of implementing the Independent Curriculum in a contextual and meaningful manner.

Discussion

This study shows that the integration of local Batak Toba cultural values—such as Dalihan Na Tolu, Hasangapon, Hamoraon, and Hagabeon—has great potential in strengthening character education, increasing the relevance of learning, and deeply shaping students' cultural identity and awareness. In the context of education, this indicates that schools can be spaces for the preservation and transformation of local values, not just a place for the transmission of knowledge. These findings support and expand on previous research results in Indonesia (Gordah & Fadillah, 2014) as well as globally (Pora et al., 2021) which affirms the importance of culture-based education in building national identity and student engagement. Concretely, these values can be integrated into the Independent Curriculum, especially through the Pancasila Student Profile Strengthening Project (P5), with themes such as mutual cooperation, diversity, and local wisdom realized through cultural projects, collaborative learning, and the involvement of indigenous leaders. Nonetheless, challenges such as limited teacher capacity, lack of implementing regulations, and global cultural dominance remain obstacles. Strategic solutions include teacher training on local culture-based pedagogy, the development of contextual modules, as well as collaboration between schools, governments, and indigenous communities. With adaptive and participatory policy support, the integration of local culture in education can become an inclusive, relevant, and sustainable national education transformation strategy.

The integration of Toba's Batak cultural values in the education system, both formal and nonformal, shows the direction of education rooted in the local social and cultural context. Values such as *Dalihan Na Tolu*, *Hasangapon*, *Hagabeon*, and *Hamoraon* are social foundations that can be transformed in the process of character and social education. Formal education in schools can adapt these values through local content, extracurricular activities, and project-based learning approaches. Meanwhile, non-formal education through cultural studios, indigenous communities, or houses of worship can play a role in the preservation and direct inheritance of these values. According to Gani et al. (2024) The integration of local culture in education increases the relevance and meaning of the learning process for students. Batak Toba values also have moral and ethical dimensions that can form an attitude of empathy, responsibility, and mutual cooperation of students. This integration also bridges the gap between schools and society as two complementary educational spaces. Thus, education is not only a cognitive process, but also a space for the formation of identity and socio-culture. This is in line with the view Potvin & Hasni (2014) that education that is grounded in local values is stronger in building the nation's identity.

The integration of Toba Batak culture in education can be compared to similar practices in other ethnicities such as Balinese, Javanese, or Minangkabau cultures. Balinese culture, for example, has long been integrated into education through dance lessons, Hinduism, and the Tri Hita Karana system in environmental conservation. In Java, the values of upload-ungguh and the philosophy of hamemayu swinging bawana are used in character formation and the teaching of ethics. Minangkabau with the traditional principle of basandi syarak, syarak basandi Kitabullah has also been adopted in pesantren and madrasah-based education. This shows that each ethnic group has great potential to enrich the national education system. As stated by Aharoni (2000) Local culture-based education allows students to understand knowledge through the lens of their own community. This comparison also confirms the importance of a multicultural approach in education to respect the diversity of the nation. However, the integration of Toba Batak culture is not as popular as other cultures in the context of national education, so there is a need to strengthen policies and innovations. The similarities between these various local cultures indicate the existence of a foundation of noble values that can be used as a foothold for a plural and inclusive national curriculum.

The integration of local culture in education faces various challenges, ranging from limited human resources, alienation of cultural values in the younger generation, to the lack of support for the national curriculum. Many teachers do not yet have the pedagogical capacity to translate cultural values into applicable learning plans. On the other hand, the flow of globalization and digitalization causes

students to be more exposed to global popular culture than their own local culture. However, great opportunities are also opened through the Independent Curriculum policy that provides space for local diversity. UNESCO (2003) encourages the importance of culture-based education to create social and cultural sustainability in modern society. Technology can also be used to document and disseminate local cultural materials such as folklore, songs, and traditional rituals. Indigenous peoples and local leaders can be involved as authentic learning resources that enrich students' learning experiences. Therefore, the integration of local cultures requires systemic and collaborative strategies between schools, governments, and communities. With policy support and teacher capacity building, this integration can be a motor for cultural preservation and meaningful educational reform.

The integration of local Batak Toba wisdom has significant implications for curriculum design, pedagogical practices, and learning models used by teachers. The curriculum needs to open up flexible spaces so that local values can become learning content and context, not just an add-on. Teachers are required to be cultural facilitators who not only transmit knowledge, but also build students' critical understanding of their cultural identity and heritage. According to Bower et al. (2017) Culturally responsive pedagogy allows students to learn more effectively because they feel valued and recognized in the classroom. In the context of Toba Batak, teachers can use a narrative, dramatic, and reflective approach that refers to local cultural practices. In addition, teacher training needs to be focused on cultural literacy so that they are able to explore, manage, and apply local values contextually. Community involvement as an educational partner is also important in building a culturally relevant curriculum. This model supports holistic education and respects diversity in a single national system. Therefore, curriculum and pedagogical reform must be based on the spirit of multiculturalism that lives in local communities.

The integration of Batak Toba culture into education supports the strengthening of multicultural education in Indonesia. Multicultural education emphasizes the importance of respect for the diversity of cultures, religions, languages, and views of life in society. Multicultural education helps students develop a strong self-identity as well as empathy for other groups (Aizikovitsh & Udi, 2012). In the Indonesian context, local wisdom such as that of the Toba Batak community is an important foundation in fostering tolerance, pride, and national solidarity. This is very relevant to the vision of the Pancasila Student Profile which wants to form students who are globally diverse but still rooted in their culture. Multicultural education that integrates local values can prevent cultural homogenization due to globalization. It also provides a wider space for indigenous communities to participate in the education system. Therefore, the integration of local wisdom is not only a pedagogical strategy, but also a strategic contribution to the development of an inclusive and culturally just nation. Education must be able to be a space where local and global values meet in harmony.

4. CONCLUSION

Based on the results and discussion of the research, it can be concluded that the integration of the local wisdom of the Toba Batak community in education has great potential in strengthening character education, enriching the learning context, and shaping students' cultural identity and awareness. Values such as *Dalihan Na Tolu*, *Hamoraon*, *Hagabeon*, and *Hasangapon* can be used as a foundation in formal and non-formal education. Oral traditions, folklore, and customary social systems are sources of deep and relevant contextual learning. The integration of these values supports the realization of collaborative, democratic, and environmentally sound learning. Although challenges such as the lack of teacher capacity and the dominance of global culture still exist, opportunities are wide open through the Independent Curriculum and policies to strengthen the Pancasila Student Profile. Multicultural education based on local wisdom has been proven to be able to strengthen a sense of nationality as well as tolerance between cultural groups. The development of a curriculum and pedagogy that is responsive to local culture will create a more meaningful and grounded education. The active participation of indigenous peoples and collaboration between educational institutions are the key to the success of this integration. Thus, education based on the local wisdom of Batak Toba is not only a

means of cultural preservation, but also a useful educational transformation strategy. This integration should continue to be developed to realize a contextual, inclusive, and sustainable national education system. Arah riset selanjutnya dapat difokuskan pada pengembangan model kurikulum dan pembelajaran berbasis kearifan lokal Batak Toba yang secara sistematis mengintegrasikan nilai-nilai Dalihan Na Tolu, Hamoraon, Hagabeon, dan Hasangapon dalam proses pendidikan. Penelitian dapat diarahkan pada desain modul kontekstual yang menggunakan tradisi lisan, folklore, dan praktik sosial sebagai sumber belajar, serta studi eksperimen untuk mengukur efektivitas integrasi budaya terhadap pembentukan karakter siswa. Selain itu, perlu dilakukan evaluasi terhadap kesiapan guru dan sekolah dalam mengimplementasikan pendidikan berbasis budaya lokal, termasuk pemanfaatan teknologi melalui pengembangan platform digital pelestarian budaya. Penelitian komparatif antarbudaya lokal di Indonesia juga penting dilakukan untuk merumuskan pola umum pendidikan multikultural. Studi longitudinal mengenai dampak jangka panjang integrasi budaya lokal terhadap pembentukan identitas dan nasionalisme siswa menjadi arah riset strategis yang mendalam. Seluruh arah ini bertujuan untuk memperkuat transformasi pendidikan yang kontekstual, inklusif, dan berkelanjutan.

REFERENCES

- Abrami, P. C., Bernard, R. M., Borokhovski, E., Wade, A., Surkes, M. A., Tamim, R., & Zhang, D. (2008). Instructional Interventions Affecting Critical Thinking Skills and Dispositions: A Stage 1 Meta-Analysis. Review of Educational Research, 78(4), 1102–1134. https://doi.org/10.3102/0034654308326084
- Acikgoz, C. (2011). Renewable energy education in Turkey. *Renewable Energy*, 36(2), 608–611. https://doi.org/10.1016/j.renene.2010.08.015
- Adair, D., & Jaeger, M. (2016). Incorporating Critical Thinking into an Engineering Undergraduate Learning Environment. *International Journal of Higher Education*, 5(2), 23–39. https://doi.org/10.5430/ijhe.v5n2p23
- Adlya, S. I., Zola, N., Fadli, R. P., Handayani, P. G., Suri, G. D., Husna, S. B., & Yuliardi, V. M. (2024). Problematic social media use pada anak dengan orangtua yang bekerja. *Jurnal Konseling Dan Pendidikan*, 12(3), 175–180. https://doi.org/10.29210/1126200
- Agustina, R. S., & Rahaju, T. (2021). Evaluasi Penyelenggaraan Pendidikan Inklusif di Kota Surabaya. *Publika*, 9(3), 109–124. https://doi.org/10.26740/publika.v9n3.p109-124
- Aharoni, D. (2000). Cogito, Ergo sum! Cognitive processes of students dealing with data structures. Proceedings of the Thirty-First SIGCSE Technical Symposium on Computer Science Education - SIGCSE '00, 32(1), 26–30. https://doi.org/10.1145/330908.331804
- Aizikovitsh, & Udi, E. (2012). Developing Critical Thinking Skill in Mathematics Education. 1-5.
- Altintas, E., & Ozdemir, A. S. (2012). The Effect of Teaching with the Mathematics Activity Based on Purdue Model on Critical Thinking Skills and Mathematics Problem Solving Attitudes of Gifted and Non-Gifted Students. *Procedia Social and Behavioral Sciences*, 46, 853–857. https://doi.org/10.1016/j.sbspro.2012.05.212
- Angeli, C., Voogt, J., Fluck, A., Webb, M., Cox, M., Malyn-Smith, J., & Zagami, J. (2016). A K-6 Computational Thinking Curriculum Framework: Implications for Teacher Knowledge. *Educational Technology & Society*, 19(3), 47–57.
- Arcavi, A. (2003). The role of visual representations in the learning of mathematics. *Educational Studies in Mathematics*, 52(3), 215–241. https://doi.org/10.1023/A:1024312321077
- Badru, A. K. (2016). Problem-Based Instructional Strategy and Numerical Ability as Determinants of Senior Secondary Achievement in Mathematics. *Journal of Education and Practice*, 7(13), 89–95.
- Bariyah, L. (2014). Analisis Kesesuaian RPP dan Pelaksanaan Pembelajaran Guru SMPN di Kabupaten Mojokerto pada Sub Materi Fotosintesis dengan Kurikulum 2013. *Bioedu: Berkala Ilmiah Pendidikan Biologi*, *3*(3), 453–460.

- Bertolino, M. A., & Corrado, F. (2022). Culture-Based Practices as Driver of Local Development Processes in Mountain Areas—Evidence from the Alpine Region of the Province of Cuneo (Italy). *Sustainability*, 14(21), 13713. https://doi.org/10.3390/su142113713
- Blackman, D., Connelly, J., & Henderson, S. (2004). Does double loop learning create reliable knowledge? *The Learning Organization*, 11(1), 11–27. https://doi.org/10.1108/09696470410515706
- Bower, M., Wood, L. N., Howe, C., & Lister, R. (2017). Improving the Computational Thinking Pedagogical Capabilities of School Teachers. *Australian Journal of Teacher Education*, 42(3), 53–72.
- Braun, D., & Huwer, J. (2022). Computational literacy in science education–A systematic review. *Frontiers in Education*, 7(August), 1–15. https://doi.org/10.3389/feduc.2022.937048
- Brendefur, J., Strother, S., Thiede, K., Lane, C., & Surges-Prokop, M. J. (2013). A Professional Development Program to Improve Math Skills Among Preschool Children in Head Start. *Early Childhood Education Journal*, 41(3), 187–195. https://doi.org/10.1007/s10643-012-0543-8
- Cheung, C., & Lee, T. (2010). Improving social competence through character education. *Evaluation and Program Planning*, 33(3), 255–263. https://doi.org/10.1016/j.evalprogplan.2009.08.006
- Cimen, O. A. (2014). Discussing Ethnomathematics: Is Mathematics Culturally Dependent? *Procedia Social and Behavioral Sciences*, 152, 523–528. https://doi.org/10.1016/j.sbspro.2014.09.215
- Denning, P. J. (2007). Computing is a natural science. *Communications of the ACM*, 50(7), 13–18. https://doi.org/10.1145/1272516.1272529
- Dere, Z. (2019). Investigating the creativity of children in early childhood education institutions. *Universal Journal of Educational Research*, 7(3), 652–658. https://doi.org/10.13189/ujer.2019.070302
- Dumitrascu, G. (2017). Understanding the Process of Generalization in Mathematics through Activity Theory. *International Journal of Learning, Teaching and Educational Research*, 16(12), 46–69. https://doi.org/10.26803/ijlter.16.12.4
- Education, T., Chen, Y., & Chang, C. (2018). The Impact of an Integrated Robotics STEM Course with a Sailboat Topic on High School Students 'Perceptions of Integrative STEM, Interest, and Career Orientation Robots in the STEM Curriculum. *EURASIA Journal of Mathematics, Science & Technology Education*, 14(12).
- Ellis, A. B. (2011). Generalizing-promoting actions: How classroom collaborations can support students' mathematical generalizations. *Journal for Research in Mathematics Education*, 42(4), 308–345. https://doi.org/10.5951/jresematheduc.42.4.0308
- Farimani, Z. B., & Shahri, N. N. (2020). Reaching Self-actualization in Education: Construction and Validation of a Hierarchical Scale. *Journal of Language Teaching and Research*, 11(4), 623. https://doi.org/10.17507/jltr.1104.14
- Fhatri, Z. (2020). Intervensi Latihan Sensori Motorik Dalam Pengembangan Kinestetik Anak Autis. *Tarbawy: Jurnal Pendidikan Islam*, 7(1), Article 1. https://doi.org/10.32923/tarbawy.v7i1.1184
- FOOHS, M. M., & GIRAFFA, L. (2022). REMEDIATION FROM PRINT TO DIGITAL NARRATIVES: A PROPOSAL FOR AN ACTIVE METHODOLOGY USING SCRATCH. *Educação Em Revista, 38*. https://doi.org/10.1590/0102-469835770t
- Frank, R. M. (1999). An essay in european ethnomathematics: The social and cultural bases of the vara de burgos and its relation to the basque septuagesimal system. *ZDM International Journal on Mathematics Education*, *31*(2), 59–65. https://doi.org/10.1007/s11858-999-0010-1
- Gani, R. H., Supratmi, N., Ernawati, T., & WIjaya, H. (2024). Mengembangkan Bakat Menulis Siswa, Meningkatkan Keterampilan Menulis Cerpen, Serta Menumbuhkan Minat Baca Dan Tulis. Lamahu: Jurnal Pengabdian Masyarakat Terintegrasi, 3(2), Article 2. https://doi.org/10.37905/ljpmt.v3i2.24904
- Gordah, E. K., & Fadillah, S. (2014). Pengaruh Penggunaan Bahan Ajar Kalkulus Diferensial Berbasis Pendekatan Open Ended terhadap Kemampuan Representasi Matematis Mahasiswa. *Jurnal Pendidikan dan Kebudayaan*, 20(3), 340. https://doi.org/10.24832/jpnk.v20i3.148
- Han, S., Capraro, R., & Capraro, M. M. (2015). How Science, Technology, Engineering, And Mathematics (STEM) Project-Based Learning (PBL) Affects High, Middle, And Low Achievers

- Differently: The Impact Of Student Factors On Achievement. *International Journal of Science and Mathematics Education*, 13(5), 1089–1113.
- Huggins, R., & Thompson, P. (2015). Culture and Place-Based Development: A Socio-Economic Analysis. *Regional Studies*, 49(1), 130–159. https://doi.org/10.1080/00343404.2014.889817
- Ihsan, H. (2015). Validitas Isi Alat Uukur Penelitian: Konsep Dan Panduan Penilaiannya. *PEDAGOGIA Jurnal Ilmu Pendidikan*, 13(3), 173. https://doi.org/10.17509/pedagogia.v13i3.6004
- Johnson, C. D. (2003). The role of child development and social interaction in the selection of children's literature to promote literacy acquisition. *Early Childhood Research and Practice*, *5*(2).
- Karina, M., Judijanto, L., Rukmini, A., Fauzi, M. S., & Arsyad, M. (2024). Pengaruh Interaksi Sosial Terhadap Prestasi Akademik: Tinjauan Literatur Pada Pembelajaran Kolaboratif. *Innovative: Journal Of Social Science Research*, 4(5), Article 5. https://doi.org/10.31004/innovative.v4i5.15351
- Komalasari, K. (2012). The Effect of Contextual Learning in Civic Education on Students ' Character Development. *Asia Pasific Journal of Educators and Education*, 27(229), 87–103.
- Lince, L. (2022). Implementasi Kurikulum Merdeka untuk Meningkatkan Motivasi Belajar pada Sekolah Menengah Kejuruan Pusat Keunggulan. *Prosiding Seminar Nasional Fakultas Tarbiyah dan Ilmu Keguruan IAIM Sinjai*, 1, 38–49. https://doi.org/10.47435/sentikjar.v1i0.829
- Litman, J., Robinson, O., & Demetre, J. (2017). Intrapersonal curiosity: Inquisitiveness about the inner self. *Self and Identity*, *Query date*: 2023-08-27 08:52:44. https://doi.org/10.1080/15298868.2016.1255250
- Lu, J., Zhang, X., & Stephens, M. (2019). Visualizing the commognitive processes in computer-supported one-to-one tutoring. *Interactive Learning Environments*, 27(5–6), 645–654. https://doi.org/10.1080/10494820.2019.1610452
- Maharani, S., Susanti, V. D., Andari, T., Krisdiana, I., & Astuti, I. P. (2023). Computational Thinking (CT)-based Student Worksheet to Improve the Mathematical Literacy of Mathematics Prospective Teacher. *AL-ISHLAH: Jurnal Pendidikan*, 15(3), 2690–2702. https://doi.org/10.35445/alishlah.v15i3.4412
- Monalisa, A. (2024). *Implementasi Projek Penguatan Profil Pelajar Pancasila pada Sekolah Penggerak di SDN 198/1 Pasar Baru* [Other, UNIVERSITAS JAMBI]. https://repository.unja.ac.id/
- Mutaqin, M. (2015). IMPLEMENTASI PENDIDIKAN KARAKTER DALAM PEMBELAJARAN BERBASIS PROJEK UNTUK MENINGKATKAN SOFT SKILL MAHASISWA. *Jurnal Pendidikan Karakter*, 5(2). https://doi.org/10.21831/jpk.v0i2.2795
- Nawi, M. (2012). PENGARUH STRATEGI PEMBELAJARAN DAN KEMAMPUAN PENALARAN FORMAL TERHADAP HASIL BELAJAR MATEMATIKA SISWA SEKOLAH MENENGAH ATAS (SWASTA) AL ULUM MEDAN. 9, 16.
- Novitasari, Y., Fadillah, S., & Putri, A. A. (2023). Impresi Guru pada Penggunaan Media Digital dalam Pembelajaran Awal Bahasa Inggris Anak Usia Prasekolah. *Jurnal Obsesi: Jurnal Pendidikan Anak Usia Dini*, 7(3), 3745–3754. https://doi.org/10.31004/obsesi.v7i3.4619
- Nurdiansyah, E. (2016). Pengaruh Kecerdasan Spiritual, Kecerdasan Emosional, Dampak Negatif Jejaring Sosial Dan Kemampuan Berpikir Divergen Terhadap Hasil Belajar Matematika Siswa. *Journal of Educational Science and Technology (EST)*, 2(3), 171–184. https://doi.org/10.26858/est.v2i3.3216
- Owens, K. (2014). The impact of a teacher education culture-based project on identity as a mathematically thinking teacher. *Asia-Pacific Journal of Teacher Education*, 42(2), 186–207. https://doi.org/10.1080/1359866X.2014.892568
- Perdana, N. R. (2020). Memberdayakan Pendidikan di Masa Pandemi COVID-19 (Studi Kasus Refleksi Pembelajaran Jarak Jauh oleh Para Pelajar). 19(July), 0–21. https://doi.org/10.13140/RG.2.2.16935.78241
- Pora, S., Qodir, Z., & Purwaningsih, T. (2021). Menangkal Politik Identitas: Analisis Kemenangan HT-Zadi pada Pemilihan Bupati Kepulauan Sula Tahun 2015. *JIIP: Jurnal Ilmiah Ilmu Pemerintahan*, 6(1), 18–34. https://doi.org/10.14710/jiip.v6i1.8965

- Potvin, P., & Hasni, A. (2014). Interest, motivation and attitude towards science and technology at K-12 levels: A systematic review of 12 years of educational research. *Studies in Science Education*, 50(August 2014), 85–129. https://doi.org/10.1080/03057267.2014.881626
- Purba, martin L., Nainggolan, Z., & Sihotang, J. (2021). Analisis Pengaruh Jumlah Produksi, Nilai Tukar dan Harga Internasional Terhadap Ekspor Tembakau Indonesia Tahun 1990 2019. *Journal of Economic and Business*, 2(2), Article 2. https://doi.org/10.36655/jeb.v2i2.551
- Sutarto, A. (2009). Sastra Lisan Tengger Pilar Utama Pemertahanan Tradisi Tengger. *ATAVISME*, 12(1), Article 1. https://doi.org/10.24257/atavisme.v12i1.153.9-21
- Swasnon, S. R., & Re-, T. (2013). Work in Progress: Integrating Computational Thinking in STEM Education through a Project-based Learning Approach Work-in-Progress: Integrating Computational Thinking in STEM Education through a Project-based Learning Approach. *American Society for Engineering Education, Proceedings of ASEE Annual Conference*. https://drive.google.com/open?id=1Dd-TFXcf4y82x02a9a6BkOQNOOc66hpN
- Taufiqurrahman, Salmin, M., Hardinandar, F., Rizqan, M., Apriansyah, M., & Sanusi, G. (2024). Pemberdayaan Siswa SDN Sambori dalam Merawat Budaya Lokal Melalui Program Summer Camp dan Literasi Budaya. *SEWAGATI: Jurnal Pengabdian kepada Masyarakat*, 3(2), Article 2. https://doi.org/10.61461/sjpm.v3i2.77
- Zalsabella, M. P., Maharani, S., & Darmadi, D. (2023). Pengembangan E-LKPD Berbasis Diskursus Multi Representasi untuk Melatih Kemampuan Berpikir Abstrak pada Materi Bangun Ruang Sisi Datar. *AKSIOMA: Jurnal Program Studi Pendidikan Matematika*, 12(3), 2807. https://doi.org/10.24127/ajpm.v12i3.8229