



Study of The Local Wisdom Curriculum of Geopark Belitung to Support Local Cultural Values in Context of Natural Science Learning for Elementary School

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ABSTRACT

In this article, the respondent's opinion is discussed about the effectiveness of the model of integrating local cultural values of the Belitung Geopark in learning science in elementary schools. The research design refers to research and development design (R&D) includes four stages of activity. However, this study discusses the results of a preliminary study on the content of the local cultural values of the Belitung Geopark in science learning in elementary schools. The population of this research is the teachers of elementary schools Dendang District and Simpang Pesak District, East Belitung Regency. The sample was selected by purposive sampling, namely 34 elementary school teachers and as many as 152 elementary school students in grade IV, grade V, and grade VI. The instruments used in the data collection process included questionnaires, interview guidelines, observation sheets, and student learning outcomes tests. The teacher's ability to plan to learn is measured using the teacher ability assessment tool (TAAT) I format. Meanwhile, the teacher's ability to teach is measured using the (TAAT) II format. From the results of this study, it concluded that (1) Implementation of the Geopark local wisdom curriculum is effective in improving student geopark learning outcomes in science learning in elementary schools; (2) The characteristics of science learning that are integrated with Geopark content can be implemented by the teacher; (3) The model of integrating local cultural values of the Belitung Geopark in learning science in elementary schools can realize the concept of science is fun in elementary school.

Key words: geopark, local cultural values, science learning in elementary school

INTRODUCTION

Local cultural values that are usually integrated into science learning in elementary schools are the cultural values that exist around students. However, some elementary school teachers said

that there were several factors that hindered the readiness of teachers to be able to integrate local cultural values in natural science learning in elementary schools (Samri, Rewo, & Laksana, 2020), including: (1) lack of understanding of the teachers elementary school teachers on the importance of the ability to integrate local cultural values in science learning in elementary schools; (2) the number of science materials or concepts that students must master in one semester or in one year so that the time to integrate local cultural values in science learning in elementary schools cannot be implemented properly; (3) limited teaching aids or facilities and infrastructure to support the science learning process are perceived as an obstacle in being able to carry out the learning process based on inquiry in elementary schools; (4) lack of adequate training to integrate local cultural values into science learning in elementary schools; and (5) feeling lazy or "reluctant" to integrate local cultural values in science learning in elementary schools. In addition, adequate time, energy, and support for facilities and infrastructure are needed if the teacher wishes to integrate local cultural values in science learning in elementary schools (Budiastra & Sopandi, 2016).

The results of identifying the learning process in the field show several efforts that support the ability of teachers to integrate local cultural values in the science learning process in the classroom, including: (1) elementary school teachers lack understanding of the importance of ability using examples of lesson plans that integrate local cultural values in the learning process; (2) adopting or adjusting the questions that are downloaded in full from the lesson plan, which integrates local cultural values in science learning in elementary schools that are available on the internet; (3) develop their own lesson plans that integrate local cultural values in science learning in elementary schools; and (4) practicing with peers how to integrate local cultural values into learning in schools even though activities like this are rarely carried out or are not routine in nature.

So far, science lessons have often become a "scourge" for most students. Students are afraid of science lessons (Gafur, Yustina, & Zulfarina, 2020). The stereotype that science lessons are difficult subjects has caused science lessons not to be viewed objectively anymore. As if science is synonymous with "difficult." One of the non-neutralities of science as a science is influenced by teachers who teach science. Often, students' displeasure with science lessons is actually caused by a fierce teacher, too fast in delivering teaching material or monotony, a lack of variation in teaching (Maryani, Husna, Wangid, Mustadi, & Vahechart, 2018). So that students feel afraid, bored and not interested in studying it in more depth. So actually, the "scourge" is the teacher, not the science lesson itself. Natural science is basically neutral. The process of teacher-student interaction is essential to train students' thinking skills. Scientific thinking skills in Indonesia can be said to be in a bad state. This is seen from the results (The Program for International Assessment) PISA 2015 (Kartianom & Ndayizeye, 2017). Indonesia is in 62 places out of 70 countries in the world. Science, reading, and maths averaged below the PISA-determined average of 493 for science and reading and 490 for math. The scores obtained were 403 for science, 397 for reading, and 386 for mathematics. This will raise questions about the causes of the low scores obtained, especially in the learning process in class.

In recent decades, the learning system by revealing indigenous knowledge and traditional knowledge (indigenous science) has begun to be discussed and has received serious attention from science education experts in various parts of the world (Vaughn, Brown, & Johnson, 2020). The success of children learning science depends on the effectiveness of children moving from

a culture of everyday life to a culture of science. Nationally, the results of science learning have not shown encouraging results. This opinion is based more on the achievement of learning outcomes according to the national final exam standards that have been applied nationally in recent years. The quality of our education is low and shows signs of dipping from year to year (Jalil, 2003). Some things that have so far been considered to influence the low absorption of students in science subjects greatly include the subject matter that is too dense and unattractive, the ability of teachers to master and deliver material, and facilities and infrastructure to support the learning process. Of course, the root causes of all of this are very many, but the main accusations are mostly aimed at teachers because teachers are the spearheads in the field who meet students programmatically (Wardani, 1999).

This research was inspired by a 2016 study entitled "Development of a Model of Integrating Local Cultural Values in Natural Science Learning in Elementary Schools." From the results of the study in 2016, information was obtained, among others, several factors support the readiness of teachers to integrate local cultural values in science learning in elementary schools, among others: teachers say that they have sufficient ability to integrate local cultural values in learning Natural Science in elementary schools; According to them, peers play an important role in integrating local cultural values in science learning in elementary schools; the work environment in elementary schools plays an important role so that they can integrate local cultural values in science learning in elementary schools; So far, the teacher working group (TWG) has played an important role in supporting their abilities, even though activities in the TWG forum are not carried out routinely (Budiastra & Sopandi, 2016).

In general, this study aims to examine the effectiveness of the model of integrating local cultural values of the Belitung Geopark in science learning in elementary schools. More specifically, this study aims as follows: (1) To determine the extent to which elementary school teachers have integrated the local cultural values of the Belitung Geopark in science learning in elementary schools; (2) To analyze the effectiveness of the model of integrating local cultural values of the Belitung Geopark in science learning in elementary schools; (3) To analyze the opinions of community/customary leaders on the local cultural values of the Belitung Geopark which can be integrated into natural science learning in elementary schools; and (4) To analyze whether the model of integrating local cultural values of the Belitung Geopark in science learning can realize the concept of "science is fun" in elementary school.

PERSPECTIVE

Curriculum

The curriculum plays an important role in achieving educational goals. The curriculum is a collection of plans, goals, learning materials, and even teaching methods used as guidelines by teachers to achieve the ultimate goal of learning (Paraskeva, 2020). In the world of education, many subjects must be studied or taken by a student to get a diploma as an award. The curriculum has several functions: adjustment, integration, differentiation, preparation, selection, and diagnostic (Whitty, 2017). The curriculum can adapt to the environment dynamically. The curriculum can be an educational tool that can form complete individuals with integrity in society. The curriculum pays attention to service to each student with different innate characteristics. The curriculum also serves to help prepare students to go to the next level of education and choose a study program that suits their interests and talents (Suryawati & Osman, 2017). The curriculum is also a diagnostic potential for students to continue to

explore their potential and improve their weaknesses. Enforcing the curriculum in schools will be more effective if followed up with development steps. Teachers have a dual role, namely in schools and communities. Gestures or all words and actions in society are always monitored. The teacher is considered an ideal figure according to the teacher's adage for the teacher. Still, it is very noble if the teacher can actualize it in everyday life. An example is more effective and meaningful than a thousand pieces of advice. This suggests that the action gets more attention and emphasis. Therefore, teachers must be able to carry themselves and adapt to the situation and conditions of society (Supriyono, 2012; Darminah, 2012).

Natural Science Learning in Elementary School

As educators engaged in science, we must understand what is meant by science so that the understanding of that field of knowledge becomes deeper and more fundamental (Set, Hadman, & Ashipala, 2017). Besides understanding science, what is no less important is how to teach science to students. Scientific thinking is a systematic and empirical thought process, and one can master the knowledge and apply it in real-life situations. Scientific thinking processes are needed to obtain correct knowledge or scientific knowledge (Wulandari, 2017). Scientific thinking is a process of thinking by using reason to consider, decide and develop knowledge. In this case, the flexibility for students to cross everyday cultures into a culture of science (culture border crossing) will affect the degree of acquisition of science. Experts involved with research on the involvement of cultural values possessed by students in science learning use metaphors called the border crossing metaphor to explain the science learning process from an anthropological perspective (Aikenhead, 2002). Seeing the complexity of educational problems, especially in science learning, researchers through this study try to uncover local cultural values in science learning in elementary schools. Good coordination between related parties is needed, namely teachers, peers, school principals, and supervisors/supervisors (Yanti, Wiyanto, & Lisdiana, 2018). All related elements should be able to work together and support each other. The training activities for elementary school teachers can integrate local cultural values in science learning can be carried out regularly and continuously.

Geopark

A geopark is an area that has geological elements where local people are invited to participate in protecting and enhancing the functions of natural heritage, including the archaeological, ecological, and cultural values contained in it. Geopark is an abbreviation of "Geological Park," which is translated into Indonesian as a Geological Park or Earth Park (Escorihuela, 2021). The existence of a Geopark by UNESCO (United Nations Educational, Scientific and Cultural Organization) was developed and facilitated by forming the GGN (Global Geopark Network) organization in 2004 to accommodate more members from countries in the world. In addition, the Geopark aims to be further developed, not only to protect the geological heritage. According to GGN UNESCO (2004), a Geopark aims to benefit, explore, appreciate, and develop geological heritage. UNESCO Global Geoparks is an integrated geographic area where international geological sites and landscapes are managed with the concept of holistic protection, education, and sustainable development through a bottom-up approach (Justice, 2018). These goals are achieved through the protection of the earth's diversity and environmental conservation, preservation and promotion of the earth's heritage to the general public, education and research in geology, biology, culture at large, and sustainable growth & development of the local economy especially through geotourism (Catana & Brilha, 2020).

Local wisdom

Indonesia is a multi-ethnic country with different traditions, socio-culture, economy, and education between regions in the Indonesian archipelago. Basically, Indonesian people are difficult to separate from their respective ethnicities' traditions, socio-culture, customs, and habits. Education is a conscious and systematic effort in developing the potential of students. Education is also an effort of the community and the nation in preparing their younger generations for a better life for society and the nation in the future. This continuity is marked by the cultural and character inheritance of the community and nation (Fadli, 2020). Therefore, education is the process of inheriting the nation's character culture for the younger generation and also the process of developing the nation's culture and character; students actively develop their potential, carry out the process of internalizing and living the values into their personalities in socializing in society, developing community life. Who is more prosperous and develops a dignified national life. To fulfill these human resources, education has a crucial role. Local wisdom is a curricular activity to develop competencies that are tailored to regional characteristics and potentials and regional excellence as part of efforts to improve the quality of education (Kurniawati, Sumarmi, & Aliman, 2020). Local wisdom aims to provide students with knowledge, skills, and behavior so that they have solid insight into environmental conditions and community needs by the values/rules that apply in their area and support the continuity of regional development and national development (Ramdiah, Abidinsyah, Royani, Husamah, & Fauzi, 2020).

METHOD

Participants

The population of this study was elementary school teachers in Dendang District and Simpang Pesak District, East Belitung Regency. The sample was selected by purposive sampling of elementary school teachers and elementary school students in grades IV, V, and VI. The teachers involved in this study had a requirement to have participated in the teacher working group (TWG) forum when the research was carried out. This study involved 34 teachers, namely 12 in grade IV elementary school teachers; 11 in grade V elementary school teachers; and 11 in grade VI elementary school teachers. Meanwhile, the number of elementary school students involved in this study was 51 students of grade IV, 51 students of grade V, and 50 students of grade VI. The distribution of respondents in this study can be seen in Table 1.

Table 1. Participants

Subject	Grade		
	IV	V	VI
Teacher	12 (35,94%)	11 (32,35%)	11 (32,35%)
Students	51 (33,55%)	51 (33,55%)	50 (32,89%)

Procedure

The research design used in this study refers to research and development design, R&D (Gall, Gall, & Borg, 2003). The design has been modified or simplified to include four stages, namely: (1) Preliminary study of the content of local cultural values of the Belitung Geopark in science learning in elementary schools; (2) The design of the learning model that is packaged in the lesson plan by integrating the content of local cultural values of the Belitung Geopark in science

learning in elementary schools; (3) Development of learning models packaged in lesson plans by integrating the content of local cultural values of the Belitung Geopark in science learning in elementary schools; and (4) Testing the learning model by integrating the content of the local cultural values of the Belitung Geopark in science learning in elementary schools in the learning process in elementary schools. In addition, this study also looks at qualitative and quantitative aspects by referring to the dominant, less dominant design (Creswell & Creswell, 2017).

Case Materials and Discussion Questions

The aspects measured in the initial product test and main test include: (1) teaching ability is measured using the Teacher Ability Assessment Tool (TAAT I) and (TAAT II); (2) the teacher's mastery of the science topic being taught and how to teach it in elementary schools was netted using test instruments, observation guidelines, and interview guidelines; (3) students' mastery of the concept of the topic being studied is netted using a test instrument developed by the teacher.

Instrument and Data Analysis

Besides comparing the quantitative aspects, in this study, the qualitative aspects of the learning model that were tried out were also included. Qualitative aspects are netted by carrying out observations and interviews with teachers and students carried out throughout the process by the researcher. The questions in the interview cover aspects of the attitude of the teacher and students whether they feel "science is fun" with the learning model that has been implemented. Teachers who taught were also asked if they were interested in using this learning model further. In addition, information is also collected about the strengths and weaknesses of the learning model that has been implemented. Teacher and student response data can be identified through the information SA = Strongly Agree, A = Agree, D = Doubt; DS = Disagree; and SD = Strongly Disagree. Student learning outcomes were analyzed using Normalized Gain. The calculation of Normalized Gain scores based on the formula (Archambault, 2008), namely: $N - Gain = \frac{Posttest\ Score - Pretest\ Score}{Max\ Score - Pretest\ Score} \times 100$. The results of Normalized Gain scores are divided into three categories, namely: criteria for Normalized Gain percentage classification $N-gain > 70$ (High), $30 \leq N-gain \leq 70$ (Medium), and $N-gain < 30$ (Low).

RESULTS AND DISCUSSION

In general, this study aims to examine the effectiveness of the model of integrating local cultural values of the Belitung Geopark in science learning in elementary schools. More specifically, this study aims as follows: (1) To determine the extent to which elementary school teachers have integrated the local cultural values of the Belitung Geopark in science learning in elementary schools; (2) To analyze the effectiveness of the model of integrating local cultural values of the Belitung Geopark in science learning in elementary schools; (3) To analyze whether the model of integrating local cultural values of the Belitung Geopark in science learning can realize the concept of "science is fun" in elementary school; and (4) To analyze the opinions of community / customary leaders on the local cultural values of the Belitung Geopark which can be integrated into natural science learning in elementary schools. The answers to the four objectives of the study are discussed as follows.

(1) The extent to which elementary school teachers have integrated the local cultural values of the Belitung Geopark in natural science learning in elementary school

To instill and develop knowledge and attitudes towards the basic students of the geological, biodiversity, and cultural heritage of the island of Belitung. Also, a Geopark local wisdom in curriculum development team was formed in the East Belitung region. This team was formed to: (1) prepare competency standards and basic competencies, syllabus, and teaching materials for the Geopark local wisdom curriculum; and (2) train and foster local Geopark content continuously at the elementary school level in the district of East Belitung. The teacher's response implement of Geopark-based learning in science learning can be seen in Table 2.

Table 2. The Teacher's Response to the Implementation of Geopark-Based Learning in Science Learning in Elementary Schools

No	Component	SA	A	D	DS	SD
1	The science learning process is in accordance with inquiry-based learning	7 (20,59%)	26 (76,47%)	1 (2,94%)	0 (0%)	0 (0%)
2	Science learning materials according to the Geopark content curriculum	19 (55,88%)	13 (38,24%)	2 (5,88%)	0 (0%)	0 (0%)
3	The science learning process planning has included the local cultural values of Geopark	8 (23,53%)	22 (64,71%)	4 (11,76%)	0 (0%)	0 (0%)
4	The implementation of the science learning process has integrated the local cultural values of Geopark	11 (32,35%)	17 (50,00%)	6 (17,65%)	0 (0%)	0 (0%)
5	Indicators of character development are in accordance with the local cultural values of the Geopark	8 (23,53%)	23 (67,65%)	3 (8,82%)	0 (0%)	0 (0%)
6	Indicators of cultural inheritance are in accordance with the local cultural values of Geopark	5 (14,71%)	25 (73,53%)	4 (11,76%)	0 (0%)	0 (0%)

Information:(SA = Strongly Agree, A = Agree, D = Doubt; DS = Disagree; SD = Strongly Disagree)

Table 2 shows the data that teachers have involved students in carrying out an inquiry in science learning, but this has not been realized by all the teachers who were the respondents. Most of the primary school teacher respondents stated that the science lesson planning had integrated Geopark content. Most elementary school teacher respondents are very interested in integrating Geopark content in science learning. They also said that they had developed the character for students in their regular teaching. In addition, elementary school teachers said that they had routinely managed various cultural elements in classroom learning. Table 2 shows information that teachers have been able to plan or have been able to carry out science learning by integrating local Geopark content in the learning process, especially in science learning in elementary schools. However, most of them do not realize that they have involved students in science learning. Teachers have not realized that the learning process they are doing

has integrated the local Geopark content into the learning process in the classroom. Most of the primary school teacher respondents stated that the science lesson planning had integrated Geopark content. Most elementary school teacher respondents are very interested in integrating Geopark content in science learning. They also said that they had developed the character for students in their regular teaching. In addition, elementary school teachers said that they had routinely managed various cultural elements in classroom learning. As a learning tool, geopark can provide real and reliable learning methods accessible to all groups and run in formal and informal forms (Álvarez, 2020).

(2) The effectiveness of the model of integrating local cultural values of the Belitung Geopark in science learning in elementary schools.

Meanwhile, the pre-test scores, post-test scores, and normalized gain (N-gain) for elementary school students in grade IV, grade V, and grade VI in science learning can be seen in Table 3-8.

Uji Paired Sample t-test

Grade IV

Table 3: Paired Samples Statistics

	Mean	N	Std. Deviation	Std. Error Mean
Pair 1 Post-test	84.8529	51	12.81222	1.79407
Pre-test	42.2941	51	20.25714	2.83657

Table 4: Paired Samples Test

	Paired Differences					t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
Pair 1 Post-test - Pre-test	42.55882	22.67149	3.17464	36.18236	48.93528	13.406	50	.000

Hypothesis

H₀: There is no average difference between before and after "science is fun" occurs in natural science learning in elementary school through the integration of local cultural values of Geopark Belitung in science learning in Grade IV.

H_a: There is an average difference between before and after "science is fun" occurs in science learning in elementary schools through the integration of local cultural values of Belitung Geopark in Grade IV.

Decision-making

1. If the value is Sig. (2-tailed) < Research Alpha (0.05), then H₀ is rejected and H_a is accepted.
2. If the Sig. (2-tailed) > Alpha Research (0.05), then H₀ is accepted and H_a is rejected.

Based on the results of the above analysis, it can be seen that Sig. (2-tailed) > Alpha (0.00 < 0.05). This means that H₀ is rejected and H_a is accepted.

Grade V**Table 5: Paired Samples Statistics**

	Mean	N	Std. Deviation	Std. Error Mean
Pair 1 Post-test	85.7000	50	13.43959	1.90064
Pre-test	53.5000	50	19.03943	2.69258

Table 6: Paired Samples Test

	Paired Differences					t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
Pair 1 Post-test - Pre-test	32.20000	24.53985	3.47046	25.22585	39.17415	9.27849	49	.000

Hypothesis

H₀: There is no average difference between before and after "science is fun" occurs in natural science learning in elementary school through the integration of local cultural values of Geopark Belitung in science learning in Grade V.

H_a: There is an average difference between before and after "science is fun" occurs in science learning in elementary school through the integration of local cultural values of Belitung Geopark in science learning in Grade V.

Decision-making

1. If the value is Sig. (2-tailed) < Research Alpha (0.05), then H₀ is rejected and H_a is accepted.
2. If the Sig. (2-tailed) > Alpha Research (0.05), then H₀ is accepted and H_a is rejected.

Based on the results of the above analysis, it can be seen that Sig. (2-tailed) > Alpha (0.00 < 0.05). This means that H₀ is rejected and H_a is accepted.

Grade VI**Table 7: Paired Samples Statistics**

	Mean	N	Std. Deviation	Std. Error Mean
Pair 1 Post-test	91.3000	50	10.14235	1.43435
Pre-test	39.2000	50	20.48793	2.89743

Table 8: Paired Samples Test

	Paired Differences					t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
Pair 1 Post-test - Pre-test	52.10000	17.32316	2.44986	47.17681	57.02319	21.26649	49	.000

Hypothesis

H₀: There is no average difference between before and after "science is fun" occurs in natural science learning in elementary school through the integration of local cultural values of Geopark Belitung in science learning in Grade VI.

H_a: There is an average difference between before and after "science is fun" occurs in science learning in elementary school through the integration of local cultural values of Belitung Geopark in science learning in Grade VI.

Decision-making

1. If the value is Sig. (2-tailed) < Research Alpha (0.05), then H₀ is rejected, and H_a is accepted.
2. If the Sig. (2-tailed) > Alpha Research (0.05), then H₀ is accepted, and H_a is rejected.

Based on the results of the above analysis, it can be seen that Sig. (2-tailed) > Alpha (0.00 < 0.05). This means that H₀ is rejected and H_a is accepted.

Professional teachers should have a deep understanding of their field of study and an awareness of the difficulty of these materials to be taught to students (Goodwin, 2021). If teachers are not prepared to teach science subject areas, there is a tendency for teachers to teach as they are taught. If lectures teach them, they will teach using the lecture method, even though this method is not appropriate (McDermott, Shaffer, & Constantinou, 2000). Thus, teachers are expected to have skills in teaching science, so they must be prepared from the time they study / lecture by providing examples and exercises on teaching science effectively to students.

(3) Realizing the concept of "science is fun" in elementary school through the integration of local cultural values of the Belitung Geopark in science learning

Student responses to the concept of integrating local cultural values of the Belitung Geopark in science learning to realize the concept of "science is fun" can be seen in Table 9.

Table 9: Student response to the implementation of Geopark-based learning

No	Component	SA	A	D	DS	SD
1	The science learning process is in accordance with inquiry-based learning	67 (44,08%)	76 (50,00%)	9 (5,92%)	0 (0%)	0 (0%)
2	Science learning materials according to the Geopark content curriculum	78 (51,32%)	62 (40,79%)	12 (35,29%)	0 (0%)	0 (0%)
3	The science learning process is in accordance with the character development indicators	85 (55,92%)	57 (37,50%)	10 (29,41%)	0 (0%)	0 (0%)
4	The science learning process is in accordance with the indicators of local cultural inheritance	64 (42,11%)	80 (52,63%)	8 (5,26%)	0 (0%)	0 (0%)
5	Science learning based on the Geopark local content curriculum encountered many obstacles in its implementation	8 (5,26%)	16 (10,53%)	23 (15,13%)	91 (59,87%)	14 (9,21%)

Information: (SA = Strongly Agree, A = Agree, D = Doubt; DS = Disagree; SD = Strongly Disagree)

Table 9 show information that: (1) students feel that the teacher has facilitated them to do simple experiments regularly when they are studying at school; (2) the students felt that the teacher asked them to do a simple experiment/proof and mentioned the culture and natural resources around us (various kinds of arts, folklore and various kinds of rocks on the island of Belitung) when I was studying at school; (3) students feel that the teacher guides them always to be responsible; (4) students feel that the teacher gives them a duty to participate in maintaining various kinds of cultural elements regularly to them, and (5) students feel that they cannot pay attention to the teacher because friends in the class are sometimes busy or students talk to their friends. Table 5 give information that: (1) students feel that the teacher has facilitated them to do simple experiments regularly when they are studying at school; (2) the students felt that the teacher asked them to do a simple experiment/proof and mentioned the culture and natural resources around us (various kinds of arts, folklore and various kinds of rocks on the island of Belitung) when I was studying at school; (3) students feel that the teacher guides them always to be responsible; (4) students feel that the teacher gives them a duty to participate in maintaining various kinds of cultural elements regularly to them, and (5) students feel they cannot pay attention to the teacher because friends in the class are sometimes busy / or students talk to their friends.

Five (5) levels or levels of inquiry-based learning (Wenning, 2011), namely: (1) discovery learning; (2) interactive demonstration; (3) inquiry lesson; (4) inquiry laboratory; and (5) hypothetical inquiry. In a recent development, it is stated that there are almost as many types of inquiry-based learning as there are scientists. Without positive perceptions and attitudes towards learning, students will have limited opportunities to learn and acquire knowledge (Marzano, Pickering & McTighe, 1993). Feeling comfortable to study in the classroom is very important so that students can study well. Therefore, teachers need to pay attention to create a comfortable and pleasant atmosphere for students to learn. Student-centered learning by carrying out hands-on activities has created conditions that make students feel happy about learning science. Therefore, students in elementary school should be taught more and more by teachers who have practiced and understand how to teach science topics in elementary school (Hinduan et al., 2001; Budiastara, Wicaksono, & Erlina, 2020; Budiastara, Wicaksono, Sanjaya, 2020).

(4) Opinions of community / customary leaders on the local cultural values of the Belitung Geopark, which can be integrated into science learning in elementary schools

In general, it is said that local cultural values in the Belitung people have existed since ancient times. These cultural values continue to grow and develop until now. Meanwhile, to instill and develop knowledge and attitudes towards the basic students of the geological, biodiversity, and cultural heritage of the island of Belitung, a Geopark local wisdom curriculum development team, was formed in the East Belitung region. This team was formed to: (1) prepare competency standards and basic competencies, syllabus, and teaching materials for the Geopark local wisdom curriculum; and (2) train and foster local Geopark content continuously at the elementary school level in the district of East Belitung. However, the implementation of local cultural values in learning has not been maximally implemented in the learning process, especially in science learning in elementary schools.

In fact, most teaching teachers prioritize children's intelligence rather than instilling children's character education. If we look at the tendency of parents at home, due to the busyness of the parents, so many parents fail to educate their children's character. For this reason, schools must have a strong commitment to developing the character of students based on the values of the national character adopted (Grimus, 2020). At this time, local cultural values are starting to be eroded by the swift currents of modernization and globalization, so this needs special attention from the government and society. In this case, schools implementing education have a crucial role in inheriting a culture to shape the character of the nation because one of the functions of education is a planned effort to develop the potential of students (Samri, Rewo, & Laksana, 2020). From observations made in the classroom, there is an increase in the ability of teachers to design and implement learning by integrating local cultural content in the classroom (Budiastra & Sardjijo, 2020). Natural science learning in elementary schools has developed the inheritance of cultural values, namely in terms of thinking power, national spirit, introducing cultural elements, and managing them to become the nation's wealth. The character of the Indonesian nation will determine the collective behavior of the Indonesian nationality, which is distinctive, which is reflected in the awareness, understanding, feeling, intention, and behavior of the Indonesian nation and state based on the values of Pancasila, the 1945 Constitution, diversity with the principle of "Bhinneka Tunggal Ika" (Sediyaningsih, 2012).

CONCLUSIONS

Implementing the Geopark local wisdom curriculum is said to be effective in improving student geopark learning outcomes in science learning in elementary schools. The teacher can implement the characteristics of science learning that are integrated with Geopark content. The model of integrating local cultural values of the Belitung Geopark in learning science in elementary school can realize that science is fun in elementary school. Students can carry out inquiry-based learning, including carrying out simple experiments. Students feel happy and interested in using inquiry learning. Students do learning according to the Geopark content curriculum. Students observe natural conditions and visit local natural attractions and learn local arts. Students follow character development guidance, namely gratitude, responsibility, discipline, enthusiasm, and so on. Students find it easy to understand the material presented by the teacher. Students feel interested in learning that is integrated with Geopark content. The process of learning science in elementary schools has developed a character for students in regular teaching in the classroom. Activities of inculcating character values in students include components of knowledge, awareness or willingness, and actions to carry out these values, both towards God, themselves, others, the environment, and the nationality, to become human beings, develop students' self-potential, carry out the process of internalizing and living the values into their personalities in associating with the community, developing more prosperous community life, and developing a dignified national life.

SUGGESTIONS

The implementation of the Geopark local wisdom curriculum is said to be effective in improving student geopark learning outcomes in science learning in elementary schools. The model of integrating local cultural values of the Belitung Geopark in learning science in elementary school can realize that science is fun in elementary school. For this reason, science learning based on the local geopark content curriculum should be implemented in schools around the geopark location so that geopark-based local culture can be preserved and can even continue to be developed in the future. In addition, the science learning process in elementary school has

been able to instill and develop character values in students, which include components of knowledge, awareness or will, and actions to carry out these values, both towards God, yourself, neighbors, environment, and nationality so that they become human beings, develop students' potential, carry out the process of internalization and live the values into their personalities in socializing in society.

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