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Curriculum Implementation Index for Geography Learning in East Java, Indonesia

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ABSTRACT
Curriculum changes often occur in Indonesia, however studies regarding the gap between curriculum planning and implementation are still very limited. Therefore, this study aimed to analyze Curriculum Implementation Index for Geography Learning in East Java. In this study, we used a curriculum implementation index for geography subject. This study used purposive sampling with several consideration such as region distribution of geography teachers and school accreditation. The number of respondents is determined by selecting the person who is directly related to geography learning and its relation to curriculum implementation. We observed 30 geography teachers to determine curriculum implementation. The curriculum implementation index was used to evaluate consistency between curriculum planning and implementation indicated by teachers' activities and several concept in geography learning. The results show that the readiness of teachers in implementing the curriculum in the laboratory, literature and media aspects is in the low category. This is indicated by a laboratory index of 1.03, a literature index of 1.58, and a media index of 1.87. This low index indicates that geography learning does not meet the 2013 curriculum standards, especially in physical geography material which really needs laboratories and media to explain concrete concepts in geography learning. The implementation of the 2013 curriculum in geography learning has not met the characteristics of the concrete concept of geography learning which requires visualization for physical and environmental aspects.

INTRODUCTION

The curriculum plays an essential role in the educational process. The curriculum could be interpreted as a learning plan containing stages of learning during study with several learning outcomes (Bahri, 2017). It means that the curriculum is strategic due to the vision, mission, and national education goals generally described in the curriculum. The curriculum is a tool for enhancing students' values and core and essential competencies. The curriculum also changes according to the development of the era and education trends. The curriculum can be developed by considering collaboration among stakeholders and educational experts (Gale et al., 2020; Byrne & Prendergast, 2020; Leufer et al., 2019). Collaboration with other parties will be adapting curriculum content based on community needs. However, previous studies have yet to consider the resource aspects of developing countries.

Sustainability learning significantly affects students' mindset towards society and the future (Kemper et al., 2019; Selim, 2019). Curriculum planning should focus on the underlying theories (Kharrazi et al., 2018). Critical thinking and discussion skills are closely related to developing an appropriate curriculum (Cunningham & Ladd, 2018). These studies focus on curriculum content that can support student learning innovation and abilities in various aspects. However, it does not consider countries' conditions, particularly developing countries, when preparing and implementing the curriculum.

Several previous studies related to curriculum development from a geographical perspective include: The implementation of the curriculum in geography learning is very different from other subjects, especially in conveying spatial aspects that require the integration of learning methods (Vlček et al., 2018). However, the research did not adjust the resource requirements to apply spatial content in learning within the curriculum structure. The inquiry approach in learning geography is implemented in various countries today (Sypniewski, 2018). The study results are based on the conditions of curriculum changes that require adaptation and socialization for teachers. However, the research did not consider schools' ability to provide comprehensive facilities to support the effectiveness of curriculum implementation.

The use of technology in the curriculum is essential to improve learning outcomes. Previous studies by (Bengel & Peter, 2021 Gómez-Trigueros et al., 2019 Lawrence & Tar, 2018) showed that using technology improved learning outcomes in the cognitive aspect. These technologies should be able to improve the geographic learning content, particularly related to geographical information systems, remote sensing, and physical geography materials, which are related to various concrete concepts. Concrete concepts could only be conveyed effectively using technology and media for landscape visualization. It stated that teachers in Indonesia still have difficulty integrating technology into learning to strengthen the curriculum. However, in the study, the topic of technology's suitability with the study of physical geography or human geography was not explained in detail. Integrating curriculum with GIS in Hong Kong can improve students' critical thinking skills (Cheung et al., 2011).

The curriculum currently being applied in Indonesia is the 2013 (new) curriculum, commonly abbreviated as K13, and the Merdeka Curriculum. In its application, this curriculum leads to several issues from various circles, especially educators. The 2013 curriculum (new curriculum) is a refinement of the previous KTSP 2006 (previous curriculum) curriculum. The KTSP is based on Law Number 20 of 2003 concerning the National Education System, which is then explained in Government Regulation 19 of 2005 concerning National Education Standards, where eight standards must be implemented in National Education's interests. Turning to the 2013 curriculum (new curriculum), it turns out that the eight standards set in the previous curriculum, four standards have changed in the 2013 curriculum (new curriculum), including the content, process, assessment, and competency standards of graduates. Indeed, when perfecting a curriculum, there will be differences from the previous curriculum. The 2013 curriculum (new curriculum) demands that students be able to develop their potential, and teachers must be innovative and creative when carrying out learning so that the educational goals in the 2013 curriculum (new curriculum) can be achieved.

Previous research conducted by (Suhailah et al., 2018) related to the implementation of K13 explained that the implementation of K13 still had constraints related to time constraints, limited facilities and infrastructure, assessment, and activeness of students in the learning process of mega subjects. Some teachers also felt that they were more suitable to use KTSP. These studies concluded that implementing the 2013 curriculum (new curriculum) was still not optimal in the field. Curriculum development focuses on teacher readiness and contextual learning abilities (Al-Awidi & Al Dhafeeri, 2017). The teacher must change the learning model if it wants to adjust to the character of the 2013 curriculum (new curriculum). Curriculum changes have caused debate at the implementation stage (Gleeson et al., 2020).

Some previous research related to curriculum development in geoscience includes: The development of a geoscience curriculum needs to consider aspects of social responsibility to improve students' social abilities (Katz, 2021; Gosselin et al., 2016; Stewart & Gill, 2017). The geographical distribution of diseases in the environment

and medical geology need to be accommodated by the geoscience curriculum to improve students' ability to analyze disease spread trends in various regions (Davies, 2019). Improved learning in small project-based fields must be implemented in developing the geoscience curriculum related to 21st-century capabilities (Kelso & Brown, 2008). Implementing the curriculum at primary schools in Croatia still found problems related to insufficient field learning and does not meet the geography curriculum standards (Popović & Bogut, 2018). Utilization of local objects in geography learning in the field is essential to improve the quality of curriculum development (Dolan, 2016).

Curriculum planning and implementation studies are essential because Indonesia has a widespread archipelago with different educational facilities. Previous studies have not discussed curriculum implementation in depth, especially in Indonesia, which is related to the conditions of different facilities. Educational facilities in schools reflect the school's readiness to accommodate the characteristics of geography learning consisting of physical geography (concrete concepts) and human geography (abstract concepts).

Previous studies have examined geography teachers' understanding of scientific approaches in the implementation of the 2013 curriculum (Ayuni, 2015; Yani, 2016; Zanna & Sitompul, 2017), analysis of geography teachers' pedagogical competencies on the 2013 curriculum (Norsidi & Paiman, 2018), analysis of related teacher TPACK 2013 curriculum (Nofrion et al., 2018), geography teacher's difficulties in developing HOTS test instruments related to the 2013 curriculum (Putri et al., 2021). The results of these studies emphasize the teacher's ability to apply the characteristics of the learning process, media, technology, and learning evaluation. However, the relationship between the characteristics of the 2013 curriculum, the learning process, school facilities, and the literature used has yet to be discussed.

Curriculum development in developed countries has a different character than in Indonesia. These differences are that Indonesia has a multicultural society, and some people still argue that education is not the most important thing. There is an uneven distribution of geography teachers due to Indonesia being an archipelago country. The development of educational infrastructure is also uneven because of the area and geographical condition of the islands. This research's novelty is the new index (Curriculum et al.) to measure the effectiveness of the 2013 curriculum (new curriculum). This has led to debate, especially aspects of teacher readiness and suitability of geography subjects with curriculum objectives and their implications for geography. Based on the previous study, it is interesting to determine whether the implementation of the 2013 curriculum (new curriculum). Previous research used comparisons of curriculum documents (Vycek, 2019; Sypniewski, 2019), showing that integration across disciplines has yet to show optimal results in implementing the curriculum. The inquiry method in the new curriculum for learning geography is highly recommended. Popovic and Bogut (2019) compared the syllabus to measure curriculum implementation, showing that geography learning hours were still limited and course content had not been updated according to developments in geography. Content analysis of geography books (Susiati et al., 2016; Tanjung & Fahmi, 2015) shows that the scientific approach to the 2013 curriculum has not been ideally implemented, and there is still limited local wisdom content in geography books, causing learning not to occur contextually.

The novelty of this study is that it is a new method that uses a geography learning index to measure how the curriculum is implemented in schools for geography subjects because previous studies still need to be expanded to use models or media to measure curriculum implementation. This index is intended to analyze in more detail how geography teachers use learning tools and teacher knowledge in understanding

concrete concepts in geography learning. Previous studies have focused on developing instructional media and books without being linked to curriculum implementation and concrete concepts in geography learning. Therefore, this study aims to analyze the Curriculum Implementation Index for Geography Learning in East Java.

RESEARCH METHODS

This study employs quantitative methods, focusing on several aspects of geography learning. To overcome information bias, we guarantee the objectivity of researchers and research subjects throughout the data collection process by using several approaches, such as strict and justified criteria. In addition, we guarantee and maintain the level of validity (measurement validity) and reliability of research instruments.

This study used purposive sampling with several considerations, including school accreditation and regional distribution—respondents of 30 geography teachers in East Java, Indonesia. We used a questionnaire to collect teacher responses to the new curriculum and an observation sheet to check curriculum documents and learning resources used by each teacher. To validate the findings, we involved experts in geography learning. These validations aim to check the rationale of findings based on geographical concepts (Merriam, 2013). Experts also validate the observation sheet to ensure clarity and conformity with the research topic. Then, the instrument validity test results indicated a correlation coefficient from 0.445 to 0.630 with a significance value between 0.000, thus indicating a significance value of less than α (0.05). This means that all items in the variable are valid. Instrument reliability testing obtained Cronbach's Alpha coefficient values ranging from 0.601-0.652 and more excellent than 0.60; therefore, these instruments are reliable.

The Curriculum Implementation In Borg and Gall model (2003). We used this model because the development model has detailed stages. Procedures in this development include: (1) preliminary studies, (2) planning, (3) development of hypothetical models, (4) review of hypothetical model stick, (5) revision, (6) limited trial, (7) revised results trials, (8) broader trials, (9) model revision. Development results showed that all indicators, including curriculum documents, literature, laboratories, and learning media, can evaluate curriculum implementation. This study used several parameters to measure curriculum implementation (Table 1).

Geography learning should focus on more than classroom learning. The following conceptual framework (Figure 1) explains that teachers must understand that geography requires recent literature, especially physical geography. In addition, media and laboratories must adjust the characteristics of learning materials.

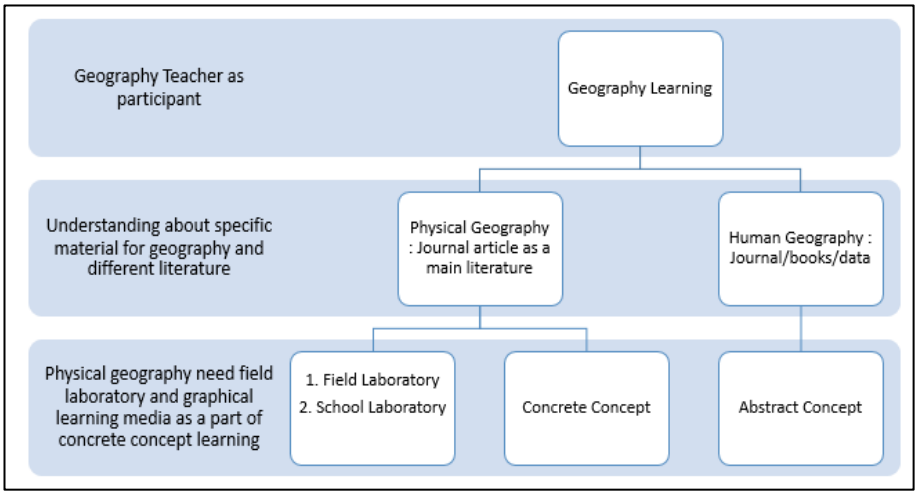

Figure 1. Conceptual Frameworks (Source: Data Processing, 2023)

Table 1. Parameter of Curriculum Implementation Index for Geography Learning

Curriculum documents	Score	Literature	Score	Laboratory	Score	Learning Media	Score
All documents are available and it has been implemented by Teacher with curriculum documents reconstruction regularly (at least per 2 year)	3	Books, e-books, module, e-moduls, journal/e-journals	3	Geography Laboratories (Field and a room laboratory at school) with regularly improvement (at least per year)	3	Media has developed with relevancy of content consideration (physical or human geography content) and using media development procedure (content validation by using trial of media on large group)	3
All documents are available and it has been implemented by teacher	2.5	Books, module, and journals/e-journals	2.5	One of Geography laboratory (a room laboratory or field at school only) with regularly improvement (at least per year)	2.5	Media has developed with relevancy of content consideration (physical or human geography content) and using media development procedure (content validation by using trial of media on small group)	2.5
Only some documents are available and it has been implemented by teacher	2	Books and module	2	One of Geography laboratory (a room laboratory or field at school only)	2	Media has developed with relevancy of content consideration (physical or human geography content)	2
Only some documents are available	1.5	Books only	1.5	One of Geography laboratory (a room laboratory /field at school only)	1.5	Media has developed with no relevancy of content consideration	1.5
Documents are not avalaible	1	Module only	1	Using general laboratory	1	There is no media development	1

Note: criteria for scoring consist of = 9-12 (high); 5-8 (medium (low)

RESULT AND DISCUSSION

Table 2 shows that the curriculum implementation index at the medium level with three parameters (literature, laboratory, and learning media) indicates that geography learning does not reflect the new curriculum goal. The literature used by geography teachers in Indonesia needs to meet the characteristics of the new curriculum. The new curriculum (Curriculum 2013) emphasizes students' ability to analyze so that books and modules cannot be used as primary sources. Books and modules contain basic concepts only, while in journals, students can learn about the analysis of geographical phenomena.

The findings in the study indicate that teachers still need to be used to using literature other than books. The use of journals as literature still needs to be higher due to school culture factors and low teacher motivation to develop learning resources. This is contrary to the characteristics of the 2013 curriculum, which focuses on the constructivist paradigm. In addition, since 2015, there have been many journal databases that can be accessed online, but this has not been able to increase teacher motivation to add journals as a primary source of learning. This causes some of the geography teacher's theories to be not by the geographical spatial approach. For example, in learning physical geography, the theory conveyed by the teacher is still limited to one area or one landscape. Even though eight other landforms have yet to be written down in the book, these physical geographic characteristics already exist in journals. However, teachers can still make journals a primary reference source. This is by the results of a study by (Sugiyanto et al., 2018), which shows that 92% of teachers do not understand geographic literacy, and 72% do not understand 21st-century skills. Books are also unable to provide updated knowledge. In contrast, the character of the new curriculum focuses on students' ability to observe and convey material or data communicatively and using the scientific approach of the 2013 curriculum. This finding is different from the results of research by (Putra et al., 2021; Van Loon, 2019); Hamid et al., 2021); Prastiyono, 2021), which stated that geography learning is in line with project-based learning and learning in field (outdoor study) model, where this model is also in line with the characteristics of the 2013 curriculum as a new curriculum.

Figure 2 shows that the readiness of literature and laboratories needs to follow the readiness of curriculum documents. Literature books and modules are most widely used by Geography teachers in Indonesia, resulting in a low literature index. It shows that the research development in geography cannot update the material presented to students. Therefore, it causes potential misconceptions, theoretical errors, or the delivery of theories that are no longer relevant to the trend of geographical research. The new curriculum aims to increase students' creativity in finding knowledge through problems or data. Teachers can explain how to solve problems through the results of research from relevant journals. For example, the problem of river pollution has been widely discussed in journals, and teachers should be able to refer to the journal to teach to address problems that comply with scientific standards. In physical geography material, students need many illustrations and examples related to landscapes and the environment. This requires more appropriate learning references, such as journals, to visualize concrete concepts and increase student learning motivation with appropriate graphics.

Table 2. Curriculum Implementation Index for Geography Learning in East Java

Teachers	Curriculum documents	Literature	Laboratory	Learning Media	Index
1	3	1.5	1	1.5	7
2	2.5	1.5	1	2	7
3	2.5	1.5	1	1.5	6.5
4	2.5	1.5	1	2	7
5	2.5	1.5	1	2	7
6	2.5	1.5	1	2	7
7	2.5	2	1	2	7.5
8	2	1.5	1	2	6.5
9	2.5	1.5	1	2	7
10	3	1.5	1	2	7.5
11	3	2	1.5	2	8.5
12	3	1.5	1	1.5	7
13	3	1.5	1	2	7.5
14	3	1.5	1	2	7.5
15	3	1.5	1	2	7.5
16	3	1.5	1	2	7.5
17	3	1.5	1.5	2	8
18	3	2	1	1.5	7.5
19	3	1.5	1	2	7.5
20	3	1.5	1	2	7.5
21	3	1.5	1	2	7.5
22	3	2	1	2	8
23	3	1.5	1	2	7.5
24	3	1.5	1	2	7.5
25	3	1.5	1	1	6.5
26	3	1.5	1	2	7.5
27	3	2	1	2	8
28	3	1.5	1	1	6.5
29	3	1.5	1	2	7.5
30	3	1.5	1	2	7.5
Average	2.85	1.58	1.03	1.87	7.33

Note: The index results have been calculated using numerous parameters.
(Source: Data Processing, 2023)

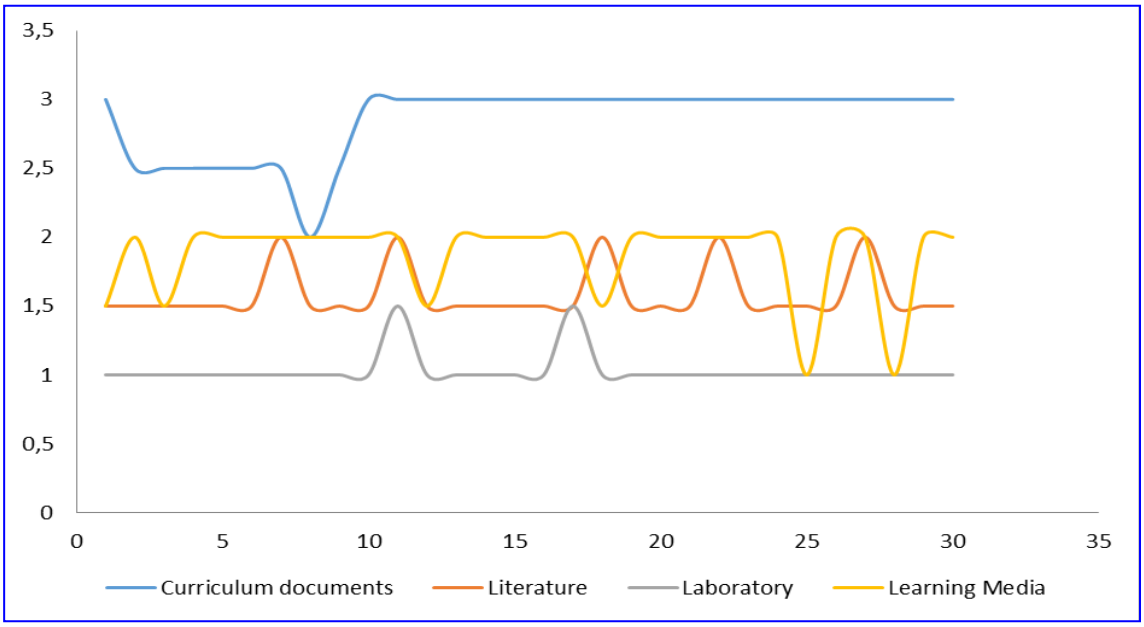

Figure 2. Parameter comparison result of Curriculum Implementation Index, x-axis = each parameters used for index; y=results of index ((Source: Data Processing, 2023)

Figure 2 also shows that learning media development is still relatively low, indicating that PowerPoint media only contains text and images. The pictures on the point do not fully represent the geodynamics aspect, essential for improving students' critical thinking skills. Even though the curriculum documents are completed, the learning activities only meet the 2013 curriculum standards if the teacher applies geography learning standards. In Figure 2, the laboratory uses the lowest index, indicating that the teacher needs to fully understand that concrete concepts in physical geography must be conveyed in the field laboratory or school laboratory.

In the context of the constructivism paradigm in education, the findings in this study are also different from the results of previous research by (Anđelković et al., 2018), which stated that field laboratories should be the focus in the study of geography by improving the quality of the laboratory. The use of laboratories in geography learning is also still low, especially for physical geography materials that require an explanation of concrete concepts such as soil, landforms, erosion processes, etc. This is to the research of (Ridha & Puspita, 2021 Moorman et al., 2020 Baker et al., 2015), which stated that GIS learning could not be adequately conducted because the schools do not provide GIS laboratories and teachers are not ready to use GIS software. In addition, this concrete concept will make learning easier in field laboratories such as the central geography laboratory. Schiappa & Smith's (2019) research stated that learning in the field will increase student motivation and make learning more contextual and comprehensive. On the other hand, this finding contrasts the results of research by Vlček et al. (2018), which emphasizes that schools and geography teachers must accommodate the uniqueness of geography by providing sufficient laboratory facilities.

A gap between the new curriculum's characteristics and geography learning implementation could be found in the essential aspects. Interview results also show that the learning methods applied are irrelevant to the characteristics of the 2013 curriculum as a new curriculum. From 2013 until now, most teachers have been unable to design geography learning that can increase students' creativity and collaboration in the classroom. Creativity and collaboration are

the most fundamental things in the 2013 curriculum (new curriculum). Creativity should be formed by applying the student-centered learning approach associated with field observation.

Geography teachers have yet to use media developed by several institutions, such as the geology agency, BRIN, and the Google Earth Engine. The media developed by the institution have been validated and have excellent graphics. For example, remote sensing learning will be exciting and easy if the teacher uses the Google Earth engine as the leading learning media. This finding is in line with previous findings by (Baker et al., 2015) which states that geography teachers must be able to utilize geospatial technology to make learning run ideally. Wang et al. (2022) also found that GIS-based learning can improve the quality of inquiry learning compared to conventional learning. This is because textbooks generally only narratively convey the basic concepts of remote sensing. Using these media will fulfill the principle of explaining concrete concepts, especially in physical geography. In addition, students will be more motivated in learning, which will impact improving learning outcomes cognitively. If students are motivated, it will be easier for the teacher to manage the class and improve students' behavior. This is based on the findings of Bernhäuserová et al. (2022), which stated that there are still many weaknesses in GIS learning in schools, especially related to teachers' understanding of geospatial technology. The development of geography learning media is still limited, and proper media development procedures have not been undertaken. Teachers are still given full authority to develop learning media, which means there is no oversight of the media created by the teacher. If the teacher makes a mistake while developing media, such as physical geography material based on text narrative, the material delivery to students is fragile. In addition, the teacher's error in developing the learning media will cause the material to be incompatible with the spatial context in the study of geography. This is supported by the results of research by (Ridha et al., 2019), which stated that as many as 73% of questions in geography learning in Indonesia are not by the spatial context. The three parameters show the gap between planning and the implementation of a new curriculum in Indonesia, which will result in curriculum objectives that are difficult to achieve. The 2013 curriculum's focus on observation and analysis skills was not followed by sufficient literature and adequate laboratories, making it challenging to convey concrete concepts and allow students to conduct analysis.

The findings of this study also show that teachers need help understanding the content of geography learning. Teachers have yet to be able to distinguish how to deliver material in the fields of physical geography and human geography. Generally, using PowerPoint media containing only narrative text will result in low learning motivation among students. Text in PowerPoint can only be used for human geography material. Secondary data must also support this to strengthen the material. However, generally, teachers still need to convey essential concepts and examples of limited application of concepts.

Conversely, in learning physical geography, the teacher should display pictures and animations that represent concepts in physical geography. Physical geography material will not be possible to convey if the teacher is limited to lecturing using PowerPoint media or books that contain narration only. However, teachers can already understand that in the 2013 curriculum, students are emphasized as being more active in learning. This finding is supported by the results of a study by Bodzin et al. (2014), which stated that the number of years the teacher has been teaching does not affect improving the quality of learning while learning based on geospatial technology is still limited to being carried out in urban environments.

Furthermore, the study also found that geography teachers in Indonesia referred to only three geography textbooks. These findings contrast the results of a study by Riabova and Pogodin (2021), which stated that contemporary learning should focus on

improving critical thinking and developing soft skills. This can make teachers and students unwilling to receive new knowledge from other sources that are more worthy of reference. The material delivered by teachers is a significant factor in improving the quality of geography learning, so many proper references are needed. If referring to the character of the new curriculum that focuses on the concept of constructivism, then the reference should be more derived from the research results (scientific journals). Teachers of the new curriculum should accommodate geography learning content that examines nature and human relationships in a spatial context. This result is in line with the results reported by Harris & de Bruin (2018), which state that learning that uses the surrounding environment as a learning resource will increase students' creativity.

The headmaster's role in implementing the curriculum is significant to avoid misunderstandings in the implementation of the curriculum. This finding is supported by Gunawan (2017), who explained that the principal must strictly guide teachers in implementing the new curriculum. Curriculum changes often make teachers unprepared for implementation in the classroom. Building a learning atmosphere that suits the curriculum takes a long time. According to Purnama (2018), in implementing the 2013 curriculum (new curriculum), teachers play an important role as facilitators and motivators for students. The new curriculum's character is more comprehensive than the previous curriculum; however, not all teachers are ready to implement it.

The 2013 curriculum can only be fulfilled if the teacher has understood the content and objectives of the curriculum. In this study, geography teachers considered that the 2013 curriculum was easy to implement, but school facilities could not meet the standards required for optimal implementation of the 2013 curriculum. Geography laboratories have yet to be a priority for schools to build. Schools prioritize the existence of sciences and language laboratories, even though the role of geography is currently vital, especially regarding trends in environmental damage and disasters. This is based on the findings of Tian et al. (2022), who stated that learning geography focused on field studies can increase student learning motivation. Based on this condition, the teacher can direct students to study geography in the field, especially in learning physical geography, which must be conveyed concretely. Around the school, teachers can invite students to study soil, rock, and climate in an integrated manner by taking advantage of the time available.

If the school gives more time, the teacher can invite students to other places with ideal landscapes or places with a high level of disaster vulnerability so that students can understand material related to disaster mitigation. This is supported by the research findings of Zhang et al. (2023), which stated that students can improve spatial thinking skills by introducing a sense of place. The teacher must intensively introduce the diverse distribution of geospatial phenomena to students. Therefore, learning geography should not only be local, especially by referring to several textbooks provided by the government. According to Pujiono's research (2014), changing teachers' mindsets to apply the student-centered learning approach takes a long time. The role of teachers is most important in implementing the new curriculum. Therefore, the initial focus of implementing the new curriculum should be changing teachers' mindsets, which will impact the development of learning methods and resources. The selection of learning methods is one of the indicators in implementing the curriculum (Sutrisna & Wasino, 2010). The utilization of learning resources will increase students' motivation. As learning motivation increases, students' learning outcomes will also improve. This is supported by Budiani (2017), who explained that the readiness to implement the 2013 curriculum (new curriculum) includes teacher readiness, books, infrastructure, and learning plans. However, it is contrary to the research

results by Stec et al. (2019) that the development of learning systems must be improved, especially in the technology aspect.

If the mindset changes, then the curriculum change will succeed, and the teacher will still refer to the previous curriculum because, in general, teacher learning in the classroom is not monitored consistently. The findings follow the research results of (Hakim, 2017; Mardiana, 2017; Subagiyo, 2014) that there is a difference between KTSP 2006 (previous curriculum) and curriculum 2013 (new curriculum), which includes learning strategies, subject units, learning hours, and the assessment process of graduation competency standards.

Every learning method has its weaknesses and advantages. Learning methods containing the game are unsuitable for subject matter focusing on abstract concepts. This finding follows the research results by (Retnawati et al., 2015) that teachers' knowledge of lesson content must be balanced with pedagogical competence. However, teachers' role in regulating learning patterns remains vital because not all geographic prison content corresponds to interactive learning.

Geography learning that is not delivered ideally will cause students' learning motivation to be low. The 2013 curriculum is essential in changing the learning paradigm and the teacher's role. Still, this study found that the teacher was not ready at the implementation stage and did not understand the content based on the teaching characteristics and media needed. The teacher must build awareness that learning geography is field learning to meet the 2013 curriculum standards and fulfill the principles of geography. Geography laboratories must also be built not only in schools but primarily in the field. With adequate field laboratories, learning geography will be exciting and by geography principles that emphasize a spatial approach. Geography learning that does not use a spatial approach will cause geography to be no different from other earth science fields.

CONCLUSION

The curriculum implementation index shows that literacy and laboratory aspects still need to be improved, indicating teachers cannot use geographic literacy, which can currently be found on digital platforms. The low use of laboratories indicates that teachers need help understanding that the field laboratory is the leading geography laboratory. The curriculum implementation index used in this study shows comprehensive results and several schools' learning conditions. The quality of geography learning can be known regarding learning methods and all the resources used in learning. In this study, it was found that the laboratory use index was still low. Therefore, it was necessary to improve the quality of learning, train teachers, and improve laboratory facilities. Future research could focus on laboratory or index development for school geography laboratory activities.

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