

## Analysis of E-LKPD Needs Based on Geographical Inquiry to Stimulate Students Collaborative Abilities

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### Abstract

Collaborative abilities are one of the pillars that students must have in facing the complexity of the world, especially in world complexity, especially in abilities that can be trained by using E-LKPD in learning. Therefore, this research aims to determine the needs analysis for E-LKPD development. This type of research is quantitative and descriptive, using questionnaires, interviews, and observation data collection techniques. The research subjects were students in class XI-10 IPS at SMA Negeri 5 Samarinda. The data obtained was then analyzed using quantitative descriptive analysis techniques. Based on the data analysis, the curriculum requires LKPD as an attachment that must be provided in learning. The material presented in E-LKPD has informative and procedural characteristics. The analysis of student needs shows that 78% of students need E-LKPD, making it easier for them to understand the material, and 38% of students attract students' learning attention. Regarding the weaknesses of the E-LKPD used during geography learning, it is that the E-LKPD is not in accordance with the meaning of the E-LKPD itself, the E-LKPD is not in accordance with the curriculum used, the E-LKPD used by students has not attracted the students' learning attention. Based on the results of this research can provide an illustration that needs analysis seen from the curriculum aspect, material characteristics, and student characteristics is the main step in developing E-LKPD that is appropriate and innovative based on current needs.

**Keywords:** Need analysis, E-LKPD Bases on Geographical Inquiry, Collaborative Abilities

### INTRODUCTION

Collaborative abilities are one of the pillars that students must have in facing the world's complexity, especially in the Industrial Revolution 5.0. Collaborative abilities direct students to be aware of their role in collaborating with other individuals effectively and flexibly to achieve common goals (Taufiqurrahman & Junaidi, 2021). Therefore, students need to possess collaborative abilities.

Based on interviews conducted with the class XI-10 IPS geography teacher at SMA Negeri 5 Samarinda City in August 2023, students were less responsible for their

roles when carrying out group assignments. The teacher also said there was inequality in the distribution and execution of group assignments, and it was difficult for students to express their opinions (Cahya et al., 2023). This shows that students' contributions are relatively passive in group activities (Nahar et al., 2022; Khadijah et al., 2022; Talib et al., 2021; Campbell & Hodges, 2020). For this reason, students need to be familiarized with their collaborative abilities.

Students' collaborative abilities can be trained using teaching materials. The teaching material in question is E-LKPD (Electronic Student Activity Sheet). Not only

that, but E-LKPD can also improve students' collaborative abilities (Amelia, 2023; Nurwahidah et al., 2021). This can happen because the series of activities on E-LKPD directs students' activities to collaborate with each other (Rodliyah & Fadly, 2023). Therefore, E-LKPD can be a solution to overcome the problem of students' collaborative abilities.

Based on observations made in August 2023, it can be seen that the implementation of LKPD when teaching geography is limited. The LKPD used is not in accordance with the curriculum implemented in the learning (Sumarmi, 2023). Not only that, the presentation of the stimulus in the LKPD is only in the form of pictures, and the availability of phenomena as a learning stimulus does not yet show that it is up to date, apart from that, the series of activities arranged in the LKPD have not fully trained students to collaborate (Zahwa & Isnawati, 2020). Therefore, the presence of LKPD as supporting teaching materials is just a fantasy because LKPD has not been able to train students' abilities.

To overcome the problems of students' collaborative abilities and the problems of E-LKPD used in geography learning in class XI-10 SMA Negeri 5 Samarinda, the development of the LKPD is needed. In developing a product, a needs analysis is required (Pratama et al., 2022; Budiman et al., 2022; Watts et al., 2021). Needs analysis is used as a basis for product development because, in this analysis, it will be known that product problems are less relevant to target needs. Therefore, before developing E-LKPD for use in class XI-10 IPS SMA Negeri 5 Samarinda, it is necessary to know some analysis of E-LKPD needs.

Various similar previous studies have been carried out, such as analyzing the need for E-LKPD to stimulate critical thinking skills in solving problems (Julian & Suparman, 2019) that teachers and students need teaching materials in the form of E-LKPD in mathematics lessons using the inquiry model to stimulate students' critical

thinking skills in solving problems. Research Refe also explained that students need E-LKPD, which consists of supporting material in the E-LKPD. Then, the research entitled Analysis of the Need for Interactive E-LKPD based on Local Wisdom in Learning Exposition Texts based on Problem Analysis, context, and Solutions to E-LKPD problems in schools in learning has not been effective and meets E-LKPD standards in the independent curriculum. Therefore, much previous research has been carried out. Therefore, the difference between this research and previous research lies in the fact that students need E-LKPD, which is easy to access with various devices, there is stimulation in the form of visual and audio-visual, and students are directed to carry out geographical investigations to train their collaborative abilities.

Based on the description above, researchers are interested in conducting research titled "E-LKPD Needs Analysis Based on Geographical Inquiry to Stimulate Students' Collaborative Abilities". This research aims to be a basis for consideration before developing teaching materials, especially in this research, namely E-LKPD. Therefore, users can use this E-LKPD effectively and appropriately, including students in class XI-10 IPS at SMA Negeri 5 Samarinda City.

## RESEARCH METHODS

This type of research is quantitative descriptive. Descriptive research is a method that presents a clearer picture of research results (Ramdhan, 2021), and quantitative research is a method that emphasizes numbers (numerics), which are then analyzed using appropriate statistical methods (Sugiyono, 2019). Therefore, the quantitative descriptive research in this study is intended to describe quantitative data originating from data on e-LKPD needs by students in class XI-10 IPS at SMA Negeri 5 Samarinda City. The following is Figure 1. The framework for thinking in this research.

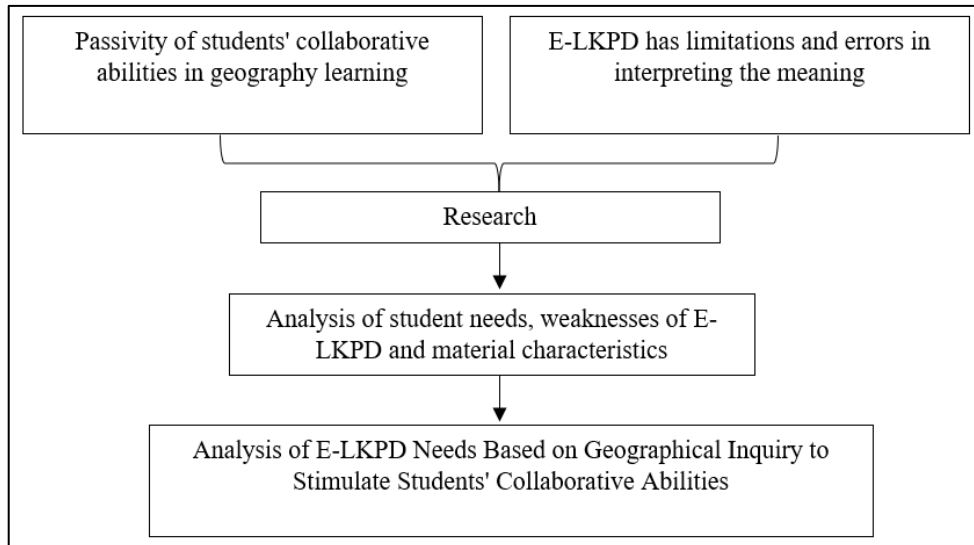


Figure 1. The Framework For Thinking In This Research (Source: Data Processing, 2024)

This research was conducted at SMA Negeri 5 Kota Samarinda, as presented in Figure 2. This research was conducted with 30 students in class XI-10 IPS SMA Negeri 5 Kota Samarinda as research subjects. The research subjects will fill out a questionnaire with alternative Likert scale answers, which will be determined to be the research

instrument. The questionnaire was determined to be the research instrument, and interviews were conducted with the class XI-10 IPS geography teacher at SMA Negeri Samarinda. Next, observations were also made of the LKPD used before development.

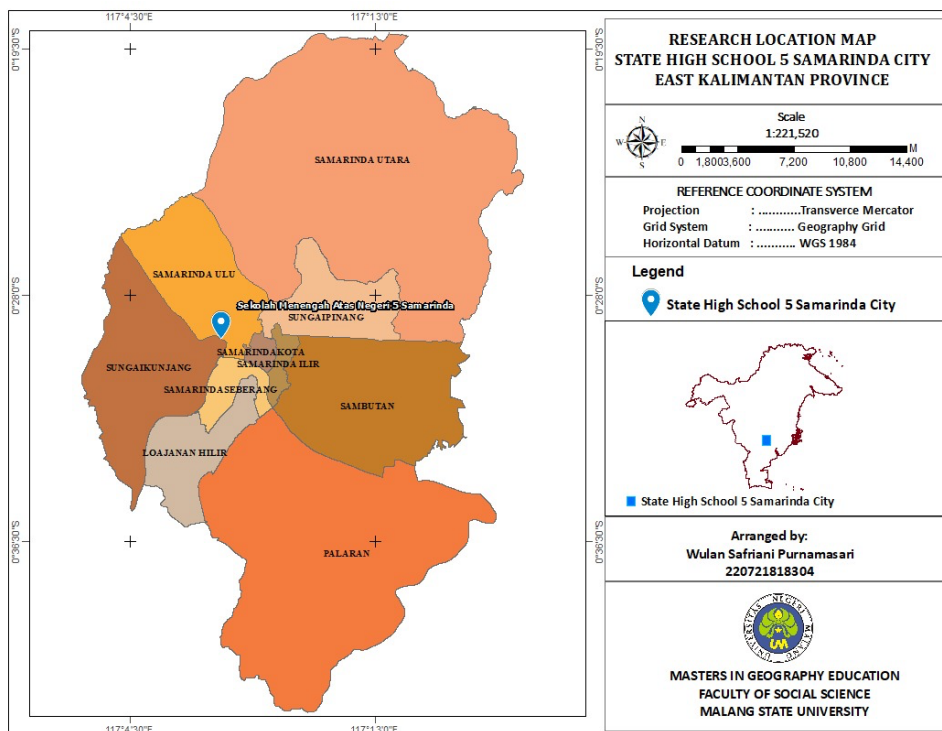


Figure 2. Research Sites (Source: Data Processing, 2024)

Questionnaire data will be analyzed using quantitative descriptive analysis techniques. The following is the percentage

calculation based on (Sari, 2022) the questionnaire data.

$$P = \frac{n}{N} \times 100\%$$

Description:

P : Score percentage (rounded)

n : Total score obtained

N : Maximum total score

## RESULTS AND DISCUSSION

This research aims to analyze the need for teaching materials in the form of E-LKPD. The needs analysis contains the problems experienced when implementing the LKPD so that the results will guide the development of the LKPD, especially in the product specifications section. The analysis of E-LKPD needs in this research focuses on curriculum and material analysis, as well as the analysis of student characteristics and weaknesses of the LKPD used. The following is an analysis of E-LKPD needs in this research:

### 1. Curriculum and Material Analysis

Curriculum analysis must be carried out in developing a product, especially in this research, namely E-LKPD. Curriculum analysis recognizes learning achievements in the independent curriculum (Wahyuni et al., 2022). Therefore, the E-LKPD that is developed must be in accordance with the curriculum used. This is because the essence of education lies in the curriculum (Cholilah et al., 2023). Therefore, the preparation and development of E-LKPD should refer to the implementation of the curriculum used so that there is harmony between curriculum demands and learning tools. In an interview with the class XI-10 IPS geography teacher at SMA Negeri 5 Samarinda explained that the independent curriculum guides geography learning. Therefore, learning tools must refer to the independent curriculum. The curriculum is a guideline for achieving educational goals. However, based on researchers' observations, the LKPD used

during geography learning conflicts with the curriculum used. LKPD is still guided by the K-13 curriculum, while the curriculum currently being used is the independent curriculum.

Based on the facts above, there is no compatibility between the LKPD and the curriculum used. According to research, to overcome the challenges of the independent curriculum, teaching materials that are in accordance with the independent curriculum are needed. It's the same with research (Sumarmi, 2023) who explained that one of the reasons for the development of the LKPD was because there was no conformity with the independent curriculum being implemented. Therefore, it is important to adapt the LKPD to the implemented curriculum.

LKPD is crucial in the independent curriculum. This aligns with the presentation that LKPD must be attached to the teaching module in the era of independent curriculum implementation. Therefore, the existence of LKPD has been verified as one of the teaching materials needed to support the implementation of the independent curriculum. Starting from the analysis of curriculum needs, the LKPD implemented for students in class XI-10 IPS SMA Negeri 5 Samarinda should be improved through development.

Material analysis must be carried out before developing teaching materials in LKPD. This is because the preparation of the LKPD must adapt to the characteristics of the material (Vadilla, 2022). Not all material characteristics can be presented in the LKPD.

The material presented in developing this LKPD is the environment, especially in the sub-material analyzing global environmental problems and their impact on life. Students are always closely connected to the living environment (Maulida & Yuliani, 2023). This makes the experience of learning environmental material not only at school but throughout the life of students (Khairati & Alberida, 2022). Therefore, in this material, students will be directed to carry out a series of analytical activities.

The environmental problem analysis activities carried out by students is located around the students (Nursalam et al., 2020), within Samarinda City's scope. Considering Samarinda as one of the buffer areas for IKN Nusantara (Fristikawati et al., 2022). For now, the situation of the Urban Heat Island (UHI) in Samarinda, according to research, has become serious; what's more, the development of IKN Nusantara can worsen climate conditions in Samarinda City. UHI conditions can result in an uncomfortable living environment, poor air quality, and cause environmental pollution (Ferdiansyah & Penggalih, 2022). Departing from the urgency of this environmental material, the need for this environmental material is discussed in depth in the LKPD.

## 2. Analysis of Student Character

One of the analyses needed in developing teaching materials is LKPD, namely analyzing students' character. Student character analysis is intended to analyze student behavior when learning, so this analysis needs to be carried out so that the development of LKPD adapts to the student's character (Bela et., 2021). Not only that, students will be the main users of the LKPD being developed.

The following is an analysis of the character and needs of students in learning based on filling out questionnaires for students in class XI-10 IPS SMA Negeri 5 Samarinda in August 2023.

### a. Personal Smartphone Ownership

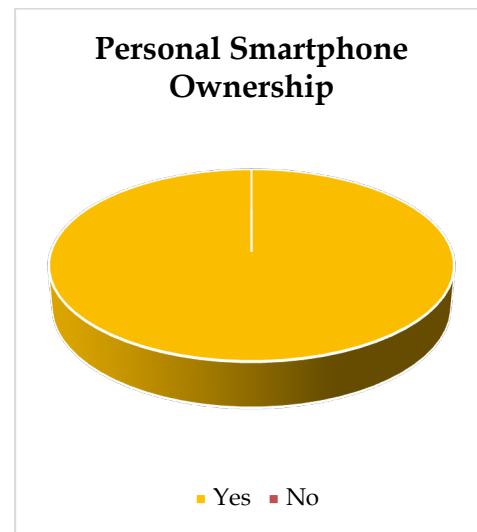


Figure 1. Personal Smartphone Ownership (Source: Data processing, 2024)

Based on the diagram above, it can be seen that 100% of the 30 students in class XI-10 IPS SMA Negeri 5 Samarinda have personal smartphones. This can be a supporting tool when using the developed E-LKPD. Research shows that the advantage of E-LKPD is that it can be accessed anywhere and at any time using a smartphone. Therefore, the main facility that must be available is a smartphone.

### b. Smartphone Use



Figure 2. Smartphone Use (Source: Data processing, 2024)



Based on the diagram above, it can be seen that 97% of students use smartphones for chatting, gaming, and browsing lessons. Starting from this, students have become accustomed to using smartphones for learning needs. This is in line with research (Nurjannah et al., 2022) that shows that the percentage of students using smartphones for browsing is greater than for gaming.

c. E-LKPD is Interesting and Helps Students Understand Learning

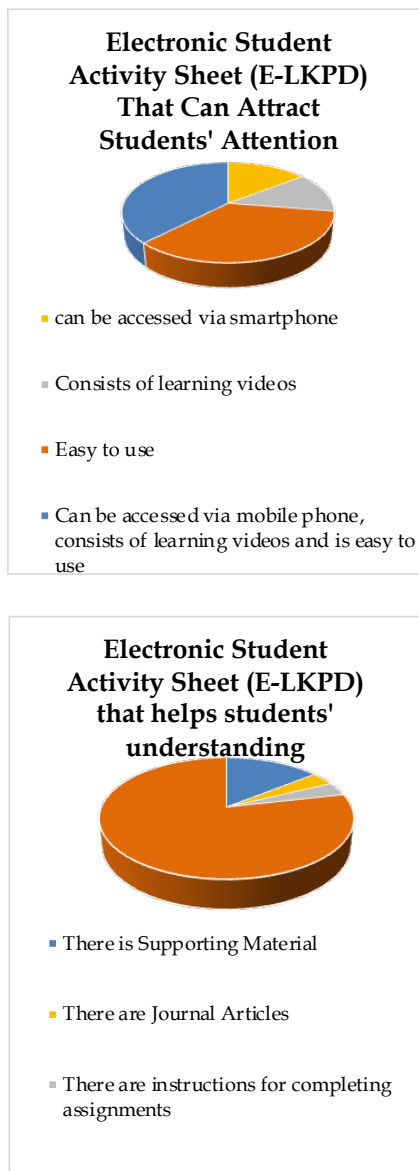


Figure 3. Electronic Student Activity Sheet (E-LKPD) ) which helps understanding and sparks students' learning attention (Source: Data processing, 2024)

According to the students' presentation in class availability of work instructions and ease of use for students (Caesavitri et al., 2023; Happy et al., 2023; Indriani & Sakti, 2022; Andini et al., 2022; Zahroh & Yuliani, 2021; Amthari et al., 2021). Therefore, E-LKPD can be prepared based on student needs.

d. Activities in E-LKPD

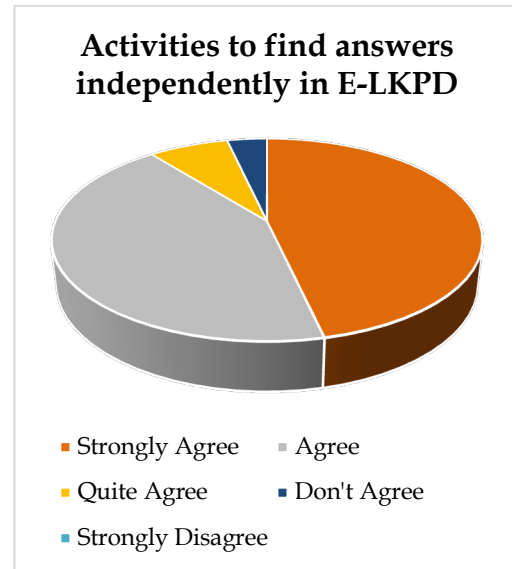


Figure 4. Activities To Find Answers Independently In E-LKPD Source: Data processing, 2024)

Based on the diagram above, it can be seen that 89% of the 30 students really appreciate learning activities that stimulate them to find answers independently. Therefore, e-LKPD which has the above components, according to students in class.

Interview activities were also carried out with class XI-10 geography teachers in August 2023. The geography teacher said that students' collaborative abilities also still need to be trained, considering that one of the demands of students in the 5.0 revolution is collaborative abilities. The state of the collaborative abilities of students in class XI-10 IPS at SMA Negeri 5 Samarinda is that students are less responsible for their role in group assignments. Geography teachers also say that there is inequality in

the distribution and execution of group assignments, and it is difficult for students to express their opinions (Cahya et al., 2023). This shows that students' contributions are relatively passive in group activities (Nahar et al., 2022; Budiarti, 2022; Talib et al., 2021; Campbell & Hodges, 2020). For this reason, it is necessary to familiarize students with collaborative skills through a series of learning activities on the developed LKPD. The ability to collaborate with each student can help students understand the material more easily (Hastomo & Septiyana, 2022).

### 3. Analysis of E-LKPD Weaknesses

Analysis of the weaknesses of the LKPD was discovered through observation activities in August 2023, including that the K-13 curriculum still guided the LKPD. This is in sharp contrast to the independent curriculum that has been implemented in geography learning because the LKPD and ATP are not compatible. LKPD should be prepared based on ATP to suit curriculum needs, be focused on learning outcomes and facilitate students' understanding of learning (Putri & Susilowibowo, 2023; Susilawati et al., 2020).

Not only that, the presentation of the stimulus has not accommodated the needs of students, one of which is the diversity of learning styles of students in class XI-10 IPS at SMA Negeri 5 Samarinda. It is known that in LKPD, the stimulus presentation is only visual. Meanwhile, the learning style of class XI-10 IPS students at SMA Negeri 5 Samarinda is not only visual. This results in the LKPD being used not being able to facilitate the diversity of students' learning styles because it only covers one type of learning style.

The weakness of the LKPD that has been implemented is not only that, but also that the learning activities in the LKPD that have been prepared do not fully direct students' collaborative skills. This is because E-LKPD only improves cognitive aspects and does not attempt to improve students' affective or psychomotor aspects

(Nurwahidah et al., 2021). This collaborative ability can be seen in work instructions that do not accommodate the learning model used (Mawaddah et al., 2022). It can be concluded that a needs analysis can be a strong foundation for developing LKPD, which was implemented in class XI-10 IPS at SMA Negeri 5 Samarinda.

To overcome the problem of students' collaborative abilities and the problems of LKPD used in geography learning in class XI-10 SMA Negeri 5 Samarinda, an E-LKPD based on a learning model is needed. By integrating the learning model in E-LKPD, you can answer problems that occur according to your needs. Students given various stimuli that show the latest, relevant to the material, and connected to the internet then work on activities based on learning models whose affective, cognitive, and psychomotor development can be measured (Subakti et al., 2021; Lailiah et al., 2021; Hwang et al., 2020). Therefore, e-LKPD is needed to integrate with the learning model to stimulate students' collaborative skills. One learning model that can be used is the geographical inquiry model.

Based on the research results presented, there are differences with relevant previous research. In (Julian & Suparman, 2019) research, the research method used to analyze the need for E-LKPD to stimulate critical thinking skills in solving problems was qualitative using interview and observation data collection techniques. In this research, the method used is descriptive quantitative with data collection techniques from questionnaires to students, interviews with geography teachers and observation of the use of the E-LKPD used.

Not only research by (Julian & Suparman, 2019), research by (Nurjannah et al., 2022) does not clearly explain the characteristics of the material presented on E-LKPD. Analyzing the characteristics of the material is very necessary, so that the presentation is effective. In this research, the characteristics of the material presented in

the E-LKPD are informative and procedural. This is because the learning outcomes in E-LKPD ask students to analyze environmental problems. In analyzing, appropriate procedures are needed.

In this research, a needs analysis was carried out by analyzing the curriculum and material characteristics, student analysis, and the weaknesses of the E-LKPD used in geography learning. This is done to develop E-LKPD that is appropriate to the curriculum used, the characteristics of the material, the characteristics of students as the main users, and the weaknesses of E-LKPD where the weaknesses of E-LKPD can be improved to develop and produce innovative E-LKPD based on the current situation. In Tressyalina et al (2023) research, the needs analysis carried out was only curriculum analysis, context analysis and solution analysis.

## CONCLUSION

Based on the analysis of the independent curriculum, which requires teaching materials in the form of E-LKPD which is guided by the independent curriculum, then based on the material analysis, the material on global environmental problems and their impact on life is the right material to be presented on the E-LKPD, then starting from the analysis of students it can be seen A total of 78% of the 30 students in class Furthermore, based on the analysis of the weaknesses of the LKPD that has been used, namely that the independent curriculum does not guide it, it does not facilitate the diversity of students' learning styles. Therefore, it can be concluded that development is needed in the LKPD used. The development carried out is the development of E-LKPD based on geographical inquiry to stimulate students' collaborative abilities. The conclusions of the research results should be in narrative form, not a pointer. Also, it should be clear, concise, and synchronized with the research questions.

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