THE NEEDS ANALYSIS OF ELEMENTARY SCHOOL TEACHERS FOR MERDEKA CURRICULUM-BASED E MODULE ON NATURAL AND SOCIAL SCIENCES

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Abstract: The purpose of this study is to analyze the level of teachers' needs on a Merdeka Curriculum-based E module for Natural and Social Sciences. The subjects were 36 elementary school teachers from 6 districts. The research instrument used was a questionnaire. The results of the study showed that the average value of the Merdeka Curriculum teaching module of Natural and Social Sciences requirement was 3.64 (much needed); (2) the average need for Merdeka Curriculum teaching e-modules is 3.61 (very much needed); (3) the average need for teaching module development is 3.78 (very much needed); (4) the average need for literacy-based and differentiated science teaching modules is 3.7 (much needed); (5) the average need for an interesting, contextual, and pictures-based Natural and Social Sciences teaching module is 3.76 and (6) the average need for Natural and Social Sciences teaching module which contains a HOTS-based assessment is 3.58 (very much needed). The description of the needs analysis shows that elementary school teachers need (1) The Development of teaching modules in both digital and non-digital forms, one of which is in the Natural and Social Sciences subject (2) Natural and Social Sciences teaching modules that have attractive, contextual criteria, are equipped with pictures, and also contain an assessment component which is based on HOTS (3) The teaching module is also literacy-based and differentiated. This research implies that the result of the needs analysis can be used as a basis for the development of the Merdeka Curriculum-Based E Module on Natural and Social Sciences.

Keywords: e-module, merdeka curriculum, natural and social sciences, elementary school

ANALISIS KEBUTUHAN GURU SEKOLAH DASAR TERHADAP E-MODUL BERBASIS KURIKULUM MERDEKA PADA MATA PELAJARAN ILMU PENGETAHUAN ALAM DAN SOSIAL

Abstrak: Tujuan penelitian ini adalah menganalisis tingkat kebutuhan guru terhadap e-modul IPAS berbasis Kurikulum Merdeka. Subjek penelitian adalah 36 guru SD dari 6...
kabupaten. Instrumen penelitian yang digunakan adalah angket. Hasil penelitian menunjukkan bahwa nilai rata-rata tingkat kebutuhan terhadap modul ajar IPAS kurikulum merdeka 3,63 (sangat dibutuhkan); (2) rata-rata kebutuhan e-modul ajar kurikulum merdeka 3,61 (sangat dibutuhkan); (3) rata-rata kebutuhan pengembangan modul ajar sebesar 3,78 (sangat dibutuhkan); (4) rata-rata kebutuhan modul ajar IPAS yang berbasis literasi dan berdiferensiasi sebesar 3,7 (sangat dibutuhkan); (5) rata-rata kebutuhan modul ajar IPAS yang menarik, kontekstual, dan dilengkapi gambar-gambar sebesar 3,76 serta (6) rata-rata kebutuhan modul ajar IPAS yang memuat penilaian berbasis HOTS sebesar 3,58 (sangat dibutuhkan). Deskripsi analisis kebutuhan menunjukkan bahwa guru SD membutuhkan (1) Pengembangan modul ajar baik dalam bentuk digital maupun nondigital, salah satunya di mata pelajaran IPAS (2) Modul ajar IPAS yang memiliki kriteria menarik, kontekstual, dilengkapi gambar-gambar, dan juga memuat komponen penilaian yang berbasis HOTS (3) Modul ajar tersebut juga berbasis literasi dan berdiferensiasi. Penelitian ini berimplikasi bahwa hasil analisis kebutuhan dapat sebagai dasar pengembangan e-modul IPAS berbasis Kurikulum Merdeka.

Kata kunci: e-modul, kurikulum merdeka, ilmu pengetahuan alam dan sosial, sekolah dasar

INTRODUCTION

The curriculum currently being implemented in Indonesia is the Merdeka learning curriculum. The Merdeka learning curriculum was born to be a solution to support post-pandemic learning recovery in Indonesia. During the pandemic, the world of education in Indonesia underwent significant changes. Initially, learning was carried out face-to-face (offline) and changed to online (Nisa & Kusumawati, 2023). Nisa and Kusumawati stated that after the pandemic, learning has changed from synchronous to asynchronous. This ultimately affects all things such as learning methods, learning media, etc. The Covid-19 pandemic has also had an extraordinary impact on the world of education, one of which is learning loss (Jojor & Sihotang, 2022). Learning Loss is a form of gloom in the world of education (Zhao, 2021). Learning loss is the non-optimal implementation of learning activities and processes caused by several things (Huang et al., 2020). So, learning loss needs special attention from various parties starting from school principals, teachers, parents and local education agencies (Maulyda et al., 2022).

The Merdeka curriculum is a curriculum that provides varied learning and focuses on essential content so that students can deepen concepts and achieve competency. In the Merdeka learning curriculum, there is a principle of the Pancasila student profile which was not previously available in the previous curriculum (K-13). The Pancasila learning profile consists of 6 dimensions. Achieve a Pancasila student profile, it can be approached with 4 learning approaches/activities, namely intracurricular, extracurricular, school culture, and projects to strengthen Pancasila profiles. The basis of intracurricular learning activities is learning outcomes.

One of the learning tools used to realize the Pancasila student profile and learning outcomes is a teaching module based on the Merdeka curriculum. The Merdeka curriculum is implemented starting from the Early Childhood Education level up to tertiary institutions which is carried out in stages, for example at the Elementary School level the implementation of the new Merdeka curriculum is carried out for students in grades I and IV in ready schools. In addition to some of the things that have been described above, the difference between the Merdeka curriculum and the previous
curriculum (K-13) is in terms of subjects. For example, at the Elementary School level, science and social studies are combined to become science-integrated (Kemendikbudristek, 2022). This is so that students can better understand and manage the natural and social environment in an integrated manner (Nuraini, Dwi; Anggraini, Lanny; Misiyanto, Mulia, 2022).

The implementation of the Merdeka curriculum that has just begun certainly has challenge and chances (Arifa, 2022). Besides that, it also has various problems (Muhajir et al., 2021). According to Arifa (2022), some of the challenges in implementing the Merdeka Curriculum include competency readiness, skills, the mindset of educators as implementers of education, infrastructure readiness, as well as facilities and infrastructure. Meanwhile, Muhajir, et al (2021) stated the challenges and opportunities for implementing the Merdeka curriculum at the university level. The challenge in implementing the Merdeka curriculum is that the standard of assessment between one tertiary institution and other tertiary institutions will be different. While the opportunity for implementing the Merdeka curriculum is that learning takes place more flexibly, according to the needs and desires of the students, directly involved.

One of them is related to learning devices. The teaching module is one of the learning tools in the implementation of the Merdeka curriculum (Maulida, 2022). Setiawan, et al explains ways to develop Merdeka Curriculum teaching modules, especially for English subjects. This is done because there are still many English teachers who are confused about preparing teaching modules (Setiawan et al., 2022a). According to Maulida, the Merdeka curriculum teaching module is a substitute for lesson plans which are formatted and varied in nature and include learning material/content, learning methods, interpretation, and evaluation techniques which are arranged systematically and rivetingly to achieve the expected indicators of success. Meanwhile, Setiawan said that teaching modules refer to several media tools or facilities, methods, instructions, and guidelines that are designed in a systematic, interesting, and certain way according to the needs of students. The teaching modules in the Merdeka curriculum are quite a crucial device for the smooth implementation of learning with a new mode or paradigm, especially when it is associated with the transformation of the industrial and digital revolutions (Maipita et al., 2021).

Previous researchers have conducted research on the independent curriculum, one of which is analyzing the needs for teaching materials in the independent curriculum. In particular, needs analysis for teaching e-modules in science subjects is still rarely carried out. Existing research analyzes the level of need for teaching e-modules in the subjects of Pancasila Education (Yulia Friska et al., 2023), Islamic Religious Education at undergraduate level (Khairat & Alfurqan, 2023), English in Senior High School (Setiawan et al., 2022), and the importance of teaching e-modules for elementary school children (Khusna & Febrianto, 2021). Analysis of the need for e-modules for science subjects at elementary school level is still very rare, especially for the material on Changing Energy, no one has done research. There is needs analysis research on e-modules for science lessons at elementary school level with different materials and approaches, namely with STEAM (Mabsutsah & Yushardi, 2022) and others with local wisdom (Dewi & Suniasih, 2023).

Based on the explanation above, the researcher conducted a needs analysis research for the development of the Merdeka Curriculum-based e-module on Natural and Social Sciences. The results of this study are in the form of average scores, category level of needs, and an overview of the needs to develop the Merdeka Curriculum-based module
on Natural and Social Sciences. This research will also be used as a preliminary study for further research, namely the development of a science teaching e-module on energy conversion material for elementary school level.

METHODS

This study method is descriptive research applying a survey approach. The subjects were 36 elementary school teachers in Semarang, Salatiga, Boyolali, Magelang, Sragen, and Malang. The research was conducted for one month in June 2023. The research instrument used was a questionnaire with a Likert scale of 1 to 4. The needs analysis includes six indicators. These indicators are (1) The need for Merdeka curriculum teaching modules in the Natural and Social Sciences subject (2) The need for Merdeka curriculum teaching e-modules (3) The need for Merdeka curriculum teaching module development (4) Orientation for developing teaching modules, (5) Criteria for teaching modules and (6) Components Evaluation. The questionnaire consists of 10 questions. Data collected through questionnaires was then analyzed using the statistical descriptive method. Questionnaire answers from research subjects were categorized based on a Likert scale. The data were analyzed by calculating the Mean value (M) and shown by the graph. Based on the results of the mean value, the questions in the questionnaire representing 6 indicators are categorized into four namely the level of need, that are much needed, needed, less needed, and not needed.

RESULT AND DISCUSSION

Result

The results of the level of development needs of the Merdeka Curriculum teaching module of Natural and Social Sciences are shown in Tables 1 to 6.

<table>
<thead>
<tr>
<th>Table 1. The need for Merdeka curriculum teaching modules in the Natural and Social Sciences</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
</tr>
<tr>
<td>1</td>
</tr>
<tr>
<td><strong>Average Score</strong></td>
</tr>
</tbody>
</table>

Based on Table 1, the average score for the need for Merdeka curriculum teaching modules in the Natural and Social Sciences subject with a Likert scale of 1-4 is 3.64 (much needed), answered by 36 respondents of teachers in the Elementary School.

<table>
<thead>
<tr>
<th>Table 2. The need for Merdeka curriculum teaching e-modules</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
</tr>
<tr>
<td>1</td>
</tr>
<tr>
<td><strong>Average Score</strong></td>
</tr>
</tbody>
</table>

Source: private document
Based on Table 2, the average score for the need for Merdeka curriculum teaching e-modules with a Likert scale of 1-4 is 3.61 (much needed), answered by 36 respondents of teachers in the Elementary School.

### Table 3. The need for Merdeka curriculum teaching module development

<table>
<thead>
<tr>
<th>No</th>
<th>Question</th>
<th>Average Score n=(36)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Do you need the development of the Merdeka Curriculum-Based Teaching Module?</td>
<td>3.81</td>
<td>Much needed</td>
</tr>
<tr>
<td>2</td>
<td>Do you need the development of the Merdeka Curriculum-Based Teaching Module for all of the subjects?</td>
<td>3.75</td>
<td>Much needed</td>
</tr>
</tbody>
</table>

**Average Score**

3.78 Much needed

*Source: private document*

Based on Table 3, the average score for the need for Merdeka curriculum teaching module development with a Likert scale of 1-4 is 3.78 (much needed), answered by 36 respondents of teachers in the Elementary School.

### Table 4. Orientation for developing teaching modules

<table>
<thead>
<tr>
<th>No</th>
<th>Question</th>
<th>Average Score n=(36)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Do you need teaching modules that regard the uniqueness/distinctiveness of students (differentiated teaching modules)?</td>
<td>3.72</td>
<td>Much needed</td>
</tr>
<tr>
<td>2</td>
<td>Do you need a Literacy-based Teaching Module?</td>
<td>3.69</td>
<td>Much needed</td>
</tr>
</tbody>
</table>

**Average Score**

3.71 Much needed

*Source: private document*

Based on Table 4, the average score about the orientation for developing teaching modules with a Likert scale of 1-4 is 3.71 (much needed), answered by 36 respondents of teachers in the Elementary School.

### Table 5. Criteria for teaching modules

<table>
<thead>
<tr>
<th>No</th>
<th>Question</th>
<th>Average Score n=(36)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Do you need teaching modules that have attractive, meaningful, and challenging criteria?</td>
<td>3.78</td>
<td>Much needed</td>
</tr>
<tr>
<td>2</td>
<td>Do you need Teaching Modules that have relevant and contextual criteria?</td>
<td>3.75</td>
<td>Much needed</td>
</tr>
<tr>
<td>3</td>
<td>Do you need the Natural and Social Sciences that are equipped with interesting pictures that explain the topic more clearly?</td>
<td>3.75</td>
<td>Much needed</td>
</tr>
</tbody>
</table>

**Average Score**

3.76 Much needed

*Source: private document*

Based on Table 5, the average score about the criteria for teaching modules with a Likert scale of 1-4 is 3.76 (much needed), answered by 36 respondents of teachers in the Elementary School.
Table 6. Components Evaluation

<table>
<thead>
<tr>
<th>No</th>
<th>Question</th>
<th>Average Score n=(36)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Do you need Teaching Modules whose assessment components are Higher Order Thinking Skills (HOTS) oriented?</td>
<td>3.58</td>
<td>Much needed</td>
</tr>
</tbody>
</table>

Average Score: 3.58, Much needed

Source: private document

Based on Table 6, the average score about the evaluation of modules with a Likert scale of 1-4 is 3.58 (much needed), answered by 36 respondents of teachers in the Elementary School. The average scores of the need for Merdeka Curriculum-Based E Module in six indicators are shown in Figure 1.

**Discussion**

Based on the result of the needs analysis of Elementary School Teachers for Merdeka Curriculum-Based E Module on Natural and Social Sciences using questionnaires with Likert scale of 1-4, there are six indicators, namely (1) The need for Merdeka curriculum teaching modules in the Natural and Social Sciences subject (2) The need for Merdeka curriculum teaching e-modules (3) The need for Merdeka curriculum teaching module development (4) Orientation for developing teaching modules, (5) Criteria for teaching modules and (6) Components Evaluation. The mean score of all indicators is 3.68 (much needed). This is in line with the results of a need assessment of other research conducted by . The results are strengthened by previous research by and .

The subjects were 36 elementary school teachers in Semarang, Salatiga, Boyolali, Magelang, Sragen, and Malang. The teachers work in SD Islam Terpadu Mutiara Boyolali, SDN Jatibarang 02 Semarang, SDIT Cahaya Bangsa Semarang, MIN 2 Semarang, SDN Ungaran 02 Semarang, SDN 2 Rejosari Semarang, SD Islamic Green School Salatiga, Ministry of Religion Magelang, SD Islam Plus Haji Muhammad Subandi Semarang, SDN 1 Kembang Boyolali, SD Negeri Patemon 02 Semarang, MI Muhammadiyah Sribit Sidoharjo Sragen, SDN Koripan 02 Kec. Susukan Semarang, SDN Tlogomas 2 Malang, SD Muhammadiyah Plus Salatiga, MI Darussalam Reksosari Semarang, and SDIT Al Firdaus Semarang. The results of the needs analysis show that of 36 elementary school teachers, 100% of them said that need Merdeka Curriculum-based e-module on Natural and Social Sciences.

Need analysis is very important in development research for Merdeka Curriculum-Based E Module. This is following the results of research conducted by . They stated that needs analysis plays an important role in supporting and increasing success in activities and learning. In line with this, said that need analysis has the aim of providing optimal functional value to the product by first determining the initial problems that can be used as reasons in product development. Teaching modules are one of the most essential teaching materials in learning. The development of teaching materials including teaching modules is needed so that learning can run as we expect. Following the research conducted by , the making of teaching materials is based on a needs analysis. Digital modules (e-module) have advantages over non-digital modules. According to , one of the advantages is that it can reduce the use of paper in the learning process. The student responses when using electronic modules were better than using printed modules.
The description of the needs analysis shows that elementary school teachers need (1) The Development of teaching modules in both digital and non-digital forms, one of which is in the Natural and Social Sciences subject (2) Natural and Social Sciences teaching modules that have attractive, contextual criteria, are equipped with pictures, and also contain an assessment component which is based on HOTS (3) The teaching module is also literacy-based and differentiated. It is strengthened by Ndiung et al. stated that the development of differentiated teaching modules according to the characteristics of the Merdeka curriculum is urgent to be developed in learning activities.

According to previous research, needs analysis is very important in teaching because it allows teachers, students, teaching materials, and teaching procedures to integrate harmoniously to improve the learning process. As explained by Asrizal, et al, it is very important to carry out a needs analysis as a preliminary study with the aim of finding out the problems, real conditions and potential related to the object to be developed (Asrizal et al., 2020). Based on theory in conducting research, preliminary studies such as needs analysis are very important, because researchers need to determine the suitability of the preliminary study process before conducting a full-scale study (Pauline-Graf & Mandel, 2019). The process varies depending on the type of preliminary research study the researcher chooses.

CONCLUSIONS

The level of teacher needs for module E based on the Merdeka Curriculum for Science obtained through a questionnaire with six indicators, are: (1) the average value of the Merdeka Curriculum teaching module of Natural and Social Sciences requirement was 3.64 (much needed); (2) the average need for Merdeka Curriculum teaching e-modules is 3.61 (very much needed); (3) the average need for teaching module development is 3.78 (very much needed); (4) the average need for literacy-based and differentiated science teaching modules is 3.7 (much needed); (5) the average need for an interesting, contextual, and pictures-based Natural and Social Sciences teaching module is 3.76 and (6) the average need for Natural and Social Sciences teaching module which contains a HOTS-based assessment is 3.58 (very much needed). The description of the needs analysis shows that elementary school teachers need (1) The Development of teaching modules in both digital and non-digital forms, one of which is in the Natural and Social Sciences subject (2) Natural and Social Sciences teaching modules that have attractive, contextual criteria, are equipped with pictures and also contain an assessment component which is based on HOTS (3) The teaching module is also literacy-based and differentiated. The results of this need analysis can be used as a basis for the development of the Merdeka Curriculum-Based E Module on Natural and Social Sciences. This research implications is the result of the needs analysis can be used as a basis for the development of Merdeka Curriculum-Based E Module on Natural and Social Sciences. Based on research findings, it is recommended that science teachers and educational practitioners, especially at the elementary school level, can develop teaching e-modules based on the needs analysis investigated in this research.

REFERENCES


