

DEVELOPING AN ENGLISH LEARNING MODULE BASED ON CRITICAL THINKING AND PROBLEM SOLVING FOR SENIOR HIGH SCHOOL STUDENTS: SPORTS AND HEALTH CHAPTER

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ABSTRACT

This study aims to develop an English learning module on the topic of Sport and Health for Grade X students of MA Ash Shalihin Gowa, which is intended to strengthen students' critical thinking and problem-solving skills in the context of English learning. The study employed a Research and Development (R&D) approach using the ADDIE model, which consists of the Analysis, Design, Development, Implementation, and Evaluation stages. The needs analysis was conducted through interviews with the teacher and questionnaires distributed to students to identify the existing learning conditions and students' needs. However, due to time and situational constraints, the implementation stage was not carried out. Nevertheless, the product evaluation was conducted through expert validation to determine the feasibility of the developed module. The module was designed with clear learning objectives aligned with the Merdeka Curriculum, contextual sport and health materials, structured learning activities, and relevant evaluations connected to students' daily lives. In addition to integrating listening, speaking, reading, and writing skills, the module is also designed to encourage students to identify problems, analyze situations, engage in discussions, and plan solutions. The validation results indicated that the module was categorized as highly valid in terms of content (4.82), presentation (4.81), language (4.85), and graphic design (4.85). Therefore, the module is considered feasible to be used as supplementary learning material for teaching sport and health topics.

Keywords: English learning module, sport and health, critical thinking, problem solving, ADDIE model

1) INTRODUCTION

The development of English language learning in the current educational context requires not only the mastery of linguistic competence but also the integration of higher-order thinking skills, such as critical thinking and problem-solving. In line with the implementation of the Merdeka Curriculum, students are expected to actively engage in meaningful learning processes that enable them to analyze, evaluate, and reflect on information rather than merely memorize it. Therefore, learning materials should be designed to support these competencies in a structured, contextual, and engaging manner.

Paper presented at The 5th ICONELE on April 16th-17th, 2026 English Education
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Development is a systematic, planned, and sustainable process aimed at creating or improving educational products to meet dynamic learning needs (Branch, 2009). In education, the development of learning modules is a strategic effort to provide teaching materials that are not only informative but also applicable and contextual. Well-designed modules can support independent learning by presenting clear objectives, organized content, interactive activities, and integrated evaluations that guide students through meaningful learning experiences.

However, in practice, many English learning materials still focus on basic comprehension and memorization, particularly in teaching narrative texts. These materials often lack structured activities that promote deeper thinking skills, resulting in students' difficulties in analyzing information, interpreting meanings, and generating logical solutions. This indicates a gap between the expected competencies and the existing instructional materials, especially in fostering critical thinking and problem-solving skills as essential 21st-century competencies (Trilling & Fadel, 2009).

Based on these considerations, the development of an English learning module based on critical thinking and problem-solving skills becomes essential. This module is designed to include interactive and contextual activities that encourage students to analyze, evaluate, and solve problems related to real-life situations. The theme "Sports and Health" is selected due to its relevance to students' daily lives, making learning more engaging and meaningful. It is expected that this module will not only improve students' language skills but also enhance their critical thinking and problem-solving abilities.

2) METHOD

This study employed a Research and Development (R&D) design aimed at developing and validating an English learning module for Grade X students. Research and Development is a method used to produce and test the effectiveness of educational products (Borg & Gall, 2003). The development process in this study was adapted from the ADDIE model, which consists of five stages: Analysis, Design, Development, Implementation, and Evaluation (Molenda, 2015). However, due to time limitations, the implementation stage was not conducted. The remaining stages were systematically carried out to ensure that the developed product met the standards of instructional materials.

The population of this study consisted of Grade X students at Madrasah Aliyah Ash-Shalihin Gowa. A sample of 25 students was selected as respondents for the needs analysis stage. In addition, one English teacher was involved as a key informant to provide in-depth information

regarding students' learning needs and existing instructional materials. The participants were selected using purposive sampling, which allows researchers to choose participants based on specific characteristics relevant to the study (Etikan, Musa, & Alkassim, 2016).

Data were collected using several instruments. Questionnaires were distributed to students to identify their needs, preferences, and difficulties in learning English, particularly in the "Sports and Health" topic. Semi-structured interviews were conducted with the teacher to gain deeper insights into classroom practices and teaching challenges. In addition, expert validation sheets were used to evaluate the feasibility of the developed module in terms of content, language, presentation, and graphical aspects. The use of multiple instruments aimed to ensure the credibility of the data through triangulation (Cohen, Manion, & Morrison, 2018).

The data analysis was conducted using both quantitative and qualitative approaches. Quantitative data obtained from questionnaires and validation sheets were analyzed using mean scores to determine the level of validity of the module, categorized based on a Likert scale. Meanwhile, qualitative data from interviews were analyzed through data reduction, data display, and conclusion drawing to identify key themes related to students' needs and instructional problems (Miles, Huberman, & Saldaña, 2014). The development procedures followed the ADDIE stages: analysis of needs and existing materials, design of the module structure and learning activities, development and revision of the module, and evaluation through expert validation to determine its feasibility as a supplementary learning material.

3) RESULTS

The Result of Analysis Phase

The results of the needs analysis were obtained through questionnaires distributed to 25 students and interviews conducted with one English teacher. The findings indicated that the existing English learning materials, particularly in the "Sports and Health" topic, were not well-structured and did not sufficiently support the development of students' critical thinking and problem-solving skills. Students experienced difficulties in analyzing information, understanding key concepts related to health and sports, and generating logical solutions to real-life problems presented in the learning materials.

The results of the questionnaire indicated students' preferences in terms of learning materials, learning activities, and instructional strategies, which are summarized in the following tables.

Table 1. Results of The Learning Ability

No	Questions	Answers
1.	If the material is about Simple Future Tense (Chapter III: Sports and Health), how would you prefer to express it?	Write it down in the task book = 68% Showing off in pairs with friends = 40% Demonstrating in front of classmates alone = 16%
2.	If the material is about expressions, what kind of expressions do you like to learn the most?	Activities at school = 52% Activities in class = 40% Activities at home = 32% Expressing opinions = 20% Expressing solutions = 16% All the answers mentioned above = 12%

Table 2. The Result of The Learning Priority

No	Questions	Answers
1.	What form of learning material do you like?	Picture form = 52% Text = 40% Dialogue = 28% Presentation = 28%
2.	What kind of book design are you most interested in?	Picture = 76% Dialogue = 40% Presentation = 16% Critical thinking exercise = 4%
3.	What kind of picture design do you like in a textbook?	Cartoon = 68% Real-life picture = 56% Caricature = 20%
4.	When creating short dialogue, what do you need most?	Examples of written conversations in the book = 64% Audio/video = 44% Examples of conversations from teachers = 36% Original photos = 24% Others (games) = 4%

Table 3. The Result of Learning Problems

No	Questions	Answers
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1.	What difficulties do you sometimes experience when learning English? (You may choose more than one).	Not knowing English vocabulary and pronunciation = 52% Not having English books and dictionaries = 36% Lacking motivation to learn English = 32% Not understanding the material (in translating English texts and the teacher's explanations) = 28% The material in the textbook does not provide a complete explanation = 20% I lack confidence in giving reasons or arguments = 20% I find it difficult to analyze Texts = 12% I don't have any difficulties = 12% I feel embarrassed to speak in front of the class = 8% I don't like doing assignments from the teacher = 4%
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Table 4. The Result of Learning Style

No	Questions	Answers
1.	Do you like it when the teacher provides opening activities before the lesson begins (such as an introduction or light activities)?	Yes = 84% No = 16%
2.	What types of opening activities do you like the most? (Choose up to 3 activities)?	It is enough to pray = 76% Ice Breaking = 60% Warning up = 36% Inspiration stories = 32% Problem-solving games = 20%
3.	When class starts, what do you prefer the teacher to do?	teacher's explanation = 60% Warning up = 44% Choose to read the instructions in the book = 36% Analyze a problem = 8%

4.	What kind of learning method do you prefer in each chapter of the lesson?	By watching learning Video = 56% By playing games = 48% By accepting theory = 24% By learning to solves Problems = 20% All the answers mentioned above = 8%
5.	What learning model do you prefer?	Discussion = 72% Couple = 40% Individual = 28%
6.	If you are asked to do a project in class, which one do you prefer?	Individual project = 44% Group project = 75% Partner project = 20%
7.	If you were asked to give a presentation, which would you prefer?	Group presentation = 68% Partner presentation = 44% Individual presentation = 32%
8.	Do you like it when lessons are accompanied by games (game learning)?	Yes = 92% No = 12%

Based on the results of the student needs questionnaire, it was found that students prefer learning materials that are visually engaging, interactive, and supported by pictures and videos. They also tend to favor group-based activities and contextual tasks related to their daily lives, as these approaches help them better understand the material and express their ideas more effectively.

The Result of Design Phase

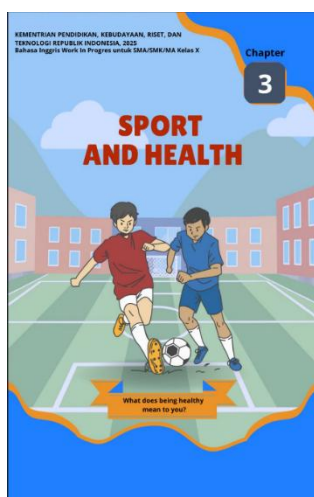
In the design stage, the results of the needs analysis provided a foundation for developing the syllabus and learning module. The design was based on students' needs, learning objectives, and the Merdeka Curriculum. It included key components such as learning objectives, materials, time allocation, learning activities, and evaluation. The materials were developed under the theme "Sports and Health" to ensure relevance to students' daily lives.

Furthermore, the design emphasized the integration of critical thinking and problem-solving skills into learning activities. Based on the findings, the module incorporated visually engaging elements such as pictures and videos, as well as interactive and contextual tasks. In addition, group-based and pair activities were included to align with students' preferences, aiming to enhance their understanding, participation, and ability to express ideas effectively.

The Result of Development Phase

At this stage, the researcher developed the module based on the previously designed syllabus. The module was developed by integrating materials related to the “Sports and Health” theme with critical thinking and problem-solving stages. The structure of the module in each unit consists of the cover, learning objectives, main learning activities, and evaluation tasks. In addition, the module incorporates contextual materials that are relevant to students’ daily lives, as well as visually engaging elements such as pictures and videos to attract students’ interest. Student-centered activities, including group work, pair discussions, and interactive tasks, are also included to support active and meaningful learning. The following section presents several examples of the module before and after development.

Before



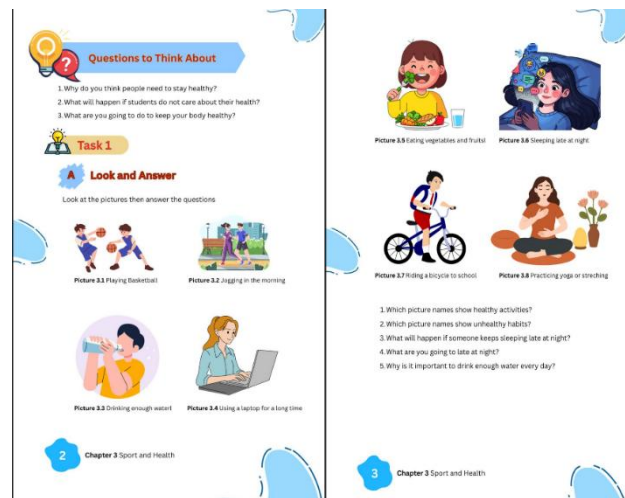
After

Figure 1. Module Cover Before and After Development

Before development, the cover of the Sport and Health module mainly illustrated a single type of physical activity, emphasizing sports activities without clearly representing broader health concepts or students’ daily life contexts. The visual appearance focused more on physical movement and did not explicitly reflect communicative language learning objectives. After development, the cover was redesigned to be more contextual and representative of students’ real-life experiences by showing various healthy activities such as exercising, cycling, and outdoor physical movement. The updated cover visually reflects the integration of sports, health, and daily

routines, supporting the communicative and contextual learning approach promoted in the developed module.

Before



After



Figure 2 Learning Activities Part 1 Before and After Development

Before the development, the learning activities in the Sport and Health module were mainly presented through picture-based questions and simple tasks that focused on identifying healthy and unhealthy activities. Although students were encouraged to observe pictures and answer guiding questions, the activities provided limited contextual explanation and weak connections to students' daily lives. After the development, the learning activities were redesigned to begin with a clear introductory section that explains the importance of health in real-life contexts. The revised

module presents the activities more systematically by combining contextual explanations, visual stimuli, and reflective questions, helping students better understand health concepts, relate them to their daily habits, and engage in more meaningful thinking and discussion.

The Result of Evaluation Phase

Table 5. The Result of Syllabus Validation

Aspect	Score	Category
Learning Material	4.90	Very Valid
Learning Objectives	4.95	Very Valid
Learning Activities	4.90	Very Valid
Skills	4.85	Very Valid
Activity	4.80	Very Valid
Evaluation	4.90	Very Valid

Table 6. The Result of Module Validation

Aspect	Score	Category
Content Feasibility	4.82	Very Valid
Presentation Feasibility	4.81	Very Valid
Language Feasibility	4.85	Very Valid
Graphic Feasibility	4.85	Very Valid

4) DISCUSSION

Analysis Phase

The findings of the analysis stage revealed a gap between the expectations of the Merdeka Curriculum and actual classroom practices. The existing learning materials were still dominated by text-based and memorization-oriented activities, which limited students' opportunities to develop critical thinking and problem-solving skills. Students also experienced difficulties in vocabulary mastery, pronunciation, and understanding the material due to limited explanations in the textbooks. This finding is in line with the view that effective learning materials should facilitate active engagement and support the development of higher-order thinking skills (Richards, 2001).

In addition, the results of the needs analysis indicated that students preferred visually engaging and interactive learning materials supported by pictures and videos. They also showed a

strong preference for group-based and pair activities, as well as contextual tasks related to their daily lives, particularly within the “Sports and Health” topic. These findings are consistent with student-centered learning principles, which emphasize active participation, collaboration, and meaningful learning experiences (Brown, 2007). Therefore, the analysis stage provided a strong foundation for developing learning materials that integrate critical thinking and problem-solving skills based on students’ needs.

Design Phase

In the design stage, the syllabus was developed based on the results of the needs analysis, learning objectives, and the Merdeka Curriculum. The integration of critical thinking and problem-solving stages into learning activities reflects the idea that learning should involve active cognitive processes such as analyzing, evaluating, and making decisions (Anderson & Krathwohl, 2001). Furthermore, the design emphasized the use of contextual materials related to the “Sports and Health” theme, as well as visually engaging elements such as pictures and videos. Group-based and pair activities were also incorporated to align with students’ preferences identified in the needs analysis. This indicates that the design stage successfully connected theoretical principles with students’ actual learning needs.

Development Phase

In the development stage, the designed syllabus was transformed into a structured and comprehensive learning module. The module integrated critical thinking and problem-solving stages into each activity, allowing students to actively participate in the learning process. Various learning inputs, such as texts, dialogues, pictures, and videos, were included to support students in understanding and evaluating information more effectively. In addition, interactive and student-centered activities, such as group discussions and pair work, were incorporated based on students’ preferences. This process is in line with instructional design principles that emphasize systematic development to produce effective learning materials (Dick, Carey, & Carey, 2015). Compared to the previous materials, the developed module showed improvements in terms of organization, activity variation, and visual design, which contributed to increased student engagement.

Evaluation Phase

In the evaluation stage, the developed module was validated by expert validators to assess its feasibility in terms of content, presentation, language, and graphical aspects. The validation results indicated that the module achieved a very valid level, suggesting that it is appropriate to be used as a supplementary learning resource. This evaluation process is consistent with instructional evaluation principles, which emphasize the importance of expert review to ensure the quality and effectiveness of learning materials before implementation (Gronlund & Waugh, 2009). Overall, the findings indicate that the module is relevant, systematic, and capable of supporting students' English learning as well as the development of critical thinking and problem-solving skills.

5) CONCLUSION

This study aimed to develop an English learning module based on critical thinking and problem-solving skills for Grade X students at Madrasah Aliyah Ash-Shalihin Gowa, particularly on the "Sports and Health" topic. The development process followed the ADDIE model, consisting of analysis, design, development, and evaluation stages.

The findings from the analysis stage revealed that the existing learning materials were still limited in supporting students' higher-order thinking skills and were dominated by text-based and memorization-oriented activities. Students expressed a preference for visually engaging, interactive, and contextual learning materials supported by pictures and videos. They also showed a strong interest in group-based and pair activities, which help them better understand the material and express their ideas.

Based on these findings, the module was designed and developed by integrating critical thinking and problem-solving stages into each learning activity. The module also incorporated contextual materials, visually engaging elements, and student-centered activities such as discussions, group work, and interactive tasks. The development results showed that the module had better organization, more varied activities, and more attractive visual design compared to the previous materials.

The evaluation results indicated that the developed module achieved a very valid level based on expert validation in terms of content, language, presentation, and graphical aspects. Therefore, it can be concluded that the developed English learning module is feasible, relevant, and effective as a supplementary learning material to support students' English learning as well as the development of critical thinking and problem-solving skills.

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