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DEVELOPMENT OF PROBLEM-BASED TEACHING MATERIALS ON THE ROLE OF ECONOMIC ACTORS TO FOSTER STUDENTS' CRITICAL THINKING IN MADRASAH ALIYAH

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Abstrak

This study aims to develop problem-based teaching materials on the role of economic actors to improve the critical thinking skills of 10th-grade students at MA Muhammadiyah Balassuka, Gowa Regency. The study uses the Research and Development (R&D) method with the ADDIE model, which includes the stages of analysis, design, development, implementation, and evaluation. The research population consisted of all tenth-grade students, while the sample consisted of 27 students selected purposively, along with an economics teacher as a feasibility test respondent. Data sources included the results of validation by subject matter experts and language experts, observation of the learning process, and teacher and student response questionnaires. Data collection techniques included validation sheets, questionnaires, and documentation. The data were analyzed using quantitative and qualitative approaches. Quantitative analysis was performed to calculate the validity and response percentages using the criteria of very good (80–100%), good (60–79%), fair (40–59%), and poor (<40%). Qualitative analysis was used to interpret validator input, observation results, and respondent responses. The results showed that subject matter experts obtained a score of 90.5% and language experts obtained a score of 93.75%, which is considered highly valid. Teacher feasibility tests reached 92.3%, while student responses showed an effectiveness of 97.7%. Implementation of the module showed an increase in students' critical thinking skills through active discussion, the ability to construct arguments, and evaluate economic solutions. Thus, this problem-based module is declared feasible and effective for use as an alternative economic teaching material that encourages active learning and the development of higher-order thinking skills.

Keywords Problem-Based Teaching Materials, Critical Thinking, Madrasah Aliyah, Material on the Role of Economic Actors.

INTRODUCTION

Economics education plays a strategic role in shaping students' ability to understand the relationship between theory and complex economic realities (Chairani et al., 2024); (Amri et al., 2020); (Mahmudin, 2023). Through economic instruction, students are expected to be able to examine how economic actors interact in meeting the unlimited needs of life with limited resources (Triansyah et al., 2023); (Riswan et al., 2022). However, the practice of economic learning in many educational units, including Madrasah Aliyah, is still dominated by conventional methods such as lectures and memorization of concepts, which results in the low critical thinking ability of students in analyzing real economic phenomena. In fact, critical thinking is a high-level cognitive skill that is a prerequisite for students to be able to evaluate, reason, and make rational economic decisions in their daily lives (Wahyuni et al., 2019); (Mislia et al., 2019); (Alkurnia et al., 2019).

The main problem in economics learning is the lack of innovation in teaching materials that are able to integrate concepts with context. The textbooks and student worksheets (LKS) that are generally used only emphasize the factual knowledge aspect, and have not encouraged students to solve economic problems analytically and creatively (Anzelina et al., 2024). This condition causes the learning process to be passive and does not foster the ability to think reflectively or solve complex problems (Dewi & Kuntjoro, 2024); (Syahfitri & Sulaiman, 2023); (Saadah & Irvan, 2019). Therefore, teaching materials are needed that are able to present a challenging and student-centered learning situation, so that students are actively involved in finding solutions to economic problems that are relevant to their lives.

One of the approaches that has proven effective to overcome this problem is *Problem-Based Learning* (PBL). This approach is oriented towards solving contextual problems through a critical, collaborative, and reflective thinking process (Hafizah et al., 2024); (Sholihah & Lastariwati, 2020); (Hidayah et al., 2021). The PBL model places problems as a learning stimulus, where students are required to identify, analyze, and find solutions through discussions and group work. Some previous research (Muzakir, 2019); (Purwanti et al., 2019) shows that the consistent application of PBL can improve critical thinking skills, learning motivation, and student learning outcomes in various subjects. In the context of economic learning, PBL has the potential to encourage students to understand the cause-and-effect relationship between economic actors, as well as foster argumentative skills in explaining actual economic phenomena.

The topic of "the role of economic actors" is one of the important materials in the economics curriculum that is very relevant to a problem-based approach. Through this topic, students can examine how the interaction between consumer households, producers, governments, and foreign communities affects the economic balance. By presenting real-world cases such as fluctuations in the price of basic goods, subsidy policies, or the dynamics of international trade, learning can be directly linked to students' daily experiences. This is expected not only to strengthen conceptual understanding but also to foster critical awareness of socio-economic issues in their environment (Wahyuni et al., 2019).

Based on preliminary observations at MA Muhammadiyah Balassuka, Gowa Regency, it is evident that the implementation of problem-based teaching materials has not been optimized. Classroom observations, interviews with economics teachers, and a review of learning documents show that the learning process is still conventional, dominated by lectures, memorization of concepts, and the use of textbooks that focus on theory. This condition prevents students from being actively involved in analyzing economic issues that are relevant to their lives. In addition, it was found that the teaching materials used did not provide case studies relevant to the students' socio-economic conditions, did not include exercises that encouraged analysis of the actions of economic actors, and did not develop problem scenarios that could train students' ability to formulate arguments and alternative solutions. As a result, students' critical thinking skills were still relatively low, as evidenced by their difficulty in identifying problems, developing reasoning, and drawing logical conclusions.

Madrasahs have actually taken a number of steps to improve the quality of learning, such as implementing academic supervision and providing additional learning resources. However, these efforts have not been able to significantly change learning patterns. Various planned policies, such as teacher training on active learning, the development of more applicable economics modules, and increased cooperation among teachers in designing teaching materials, are still in the early stages and have not yet had a tangible impact in the classroom. Based on these conditions, the development of problem-based teaching materials relevant to the subject matter of economic actors is very important to increase student engagement and strengthen their critical thinking skills in a more focused manner.

Several previous studies have also strengthened the relevance of the application of problem-based teaching materials to improve students' critical thinking skills. Yanti et al. (2015) and Indri

Rochmatika (2023) found that PBL-based modules were effective in improving critical thinking skills in learning, while Sari et al. (2022) and Magdalena et al. (2024) Suggests that a similar approach can connect academic knowledge to students' daily lives. However, these studies have not been widely applied in the context of economic learning, especially at the Madrasah Aliyah level. In addition, most of the previous research focused on the development of digital media such as *E-Module*, while this research emphasizes the development of printed teaching materials that can be implemented flexibly in school environments with technological limitations.

This study aims to: (1) test the validity of problem-based teaching materials on the role of economic actors, (2) assess the practicality of teaching materials in their application in the classroom, and (3) analyze the effectiveness of these teaching materials in improving students' critical thinking skills. Through the development of these teaching materials, it is hoped that economic learning innovations that are more interactive, contextual, and oriented towards the development of high-level thinking skills will be created. In addition to making theoretical contributions in the field of curriculum development and learning design, this research also has practical implications for economics teachers at Madrasah Aliyah as an alternative learning model that is able to foster students' independence and learning activity.

METHOD

This study uses the *Research and Development* (R&D) with the aim of developing problem-based teaching materials (*Problem-Based Learning*) on the role of economic actors, as well as testing the level of validity, practicality, and effectiveness in improving students' critical thinking skills. The R&D method was chosen because it provides a systematic framework for producing innovative and tested educational products through a continuous development and evaluation process (Yunita et al., 2024). The research subjects consisted of two validators (material experts and linguists), one economics teacher, and 27 students of class X of MA Muhammadiyah Balassuka. This research was carried out in the even semester of the 2024/2025 academic year, which is between January and May 2025.

The development model used in this study refers to the ADDIE model, which consists of five main stages, namely *Analysis*, *Design*, *Development*, *Implementation*, and *Evaluation* (Cahyono, 2017). This model was chosen because it is simple, systematic, and allows the process of revision and improvement of products at every stage, so as to produce quality teaching materials (Hidayat &

Nizar, 2021); (Fitriana et al., 2024).

The first stage is analysis, which aims to identify needs and problems in the economic learning process. The results of observations at MA Muhammadiyah Balassuka show that economic learning is still dominated by lecture methods and memorization of concepts, while the teaching materials used do not encourage students' active involvement in critical thinking and solving contextual problems. The analysis was carried out on four aspects, namely performance analysis, student characteristics analysis, learning material analysis, and learning objective analysis. The results of this analysis are the basis for the development of problem-based teaching materials that lead students to actively participate, think reflectively, and be able to relate economic theory to real phenomena in daily life.

The second stage is design, which is the process of compiling the structure and components of problem-based teaching materials according to the results of the needs analysis. At this stage, the determination of basic competencies and learning indicators based on the applicable curriculum is carried out, the preparation of teaching material designs that contain problem orientation, case analysis, group discussions, and reflections, as well as the design of research instruments such as expert validation sheets, teacher and student response questionnaires, and learning implementation observation sheets. The product produced at this stage is in the form of an initial draft of a problem-based economics learning module with the topic "The Role of Economic Actors in Economic Activities," which displays contextual economic cases as a stimulus for student learning.

The third stage is development, where the design of teaching materials is realized into a real product in the form of a printed module. This process involves validation activities by experts to assess the quality of content, language, and coherence between components. Validation is carried out by two groups of validators, namely material experts and linguists. Subject matter experts assess the suitability of the content with the curriculum, the depth of economic concepts, and its relationship with critical thinking skills, while linguists assess the linguistic aspects, readability, and clarity of the terms used. The validation data is analyzed using the percentage formula, and the product is said to be valid if it obtains a minimum score of 80%. The results of this validation are used as the basis for revision and improvement of the module before it is tested in class.

The fourth stage is implementation, which will be held at MA Muhammadiyah Balassuka, Gowa Regency, in the even semester of the 2024/2025 academic year. The trial was carried out on 27 students in class X. The goal is to assess the practicality of teaching materials from the user side

(teachers and students) and test their effectiveness in improving critical thinking skills. At this stage, the learning process is observed through observation sheets of teacher and student activities, while response questionnaires are given to teachers and students to obtain data on the clarity of content, ease of use, and relevance of teaching materials to the context of daily life. In addition, a critical thinking test was also given to assess the improvement of students' cognitive abilities after using problem-based teaching materials.

The last stage is evaluation, which is carried out to assess the overall process and results of the development of teaching materials. The evaluation was carried out formative and summative. Formative evaluations are conducted at each stage of development to provide feedback used in the revision process, while summative evaluations are conducted after field implementation to assess the final effectiveness of the product. The data obtained were analyzed quantitatively and qualitatively. Quantitative analysis was used to calculate the percentage of validation results and response questionnaires using the criteria: very good (80–100%), good (60–79%), fair (40–59%), and poor (<40%). Qualitative analysis is used to interpret the results of observations and input from validators and respondents to strengthen the research findings.

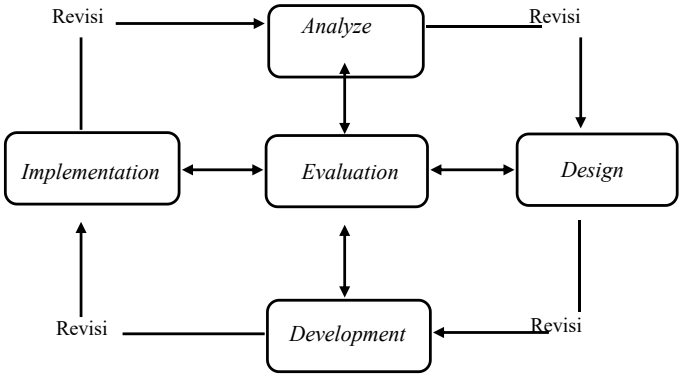

Figure 1. ADDIE Model Development Stage Chart

This study was conducted at Muhammadiyah Balassuka High School, located in Balassuka, Tombolo Pao District, Gowa Regency, South Sulawesi. The data used in this study included expert validation data (material and language), user response data (teachers and students), data from observations of the learning process, and learning outcome data in the form of critical thinking skills tests. The data sources were obtained from two expert validators, one economics teacher, and 27 tenth-grade students at Muhammadiyah Balassuka High School. Data collection techniques included observation to determine teacher and student activities during implementation, questionnaires to obtain expert, teacher, and student responses to the module, tests to measure

improvements in critical thinking skills, and documentation to obtain supporting data on school conditions and the learning process. The data obtained were analyzed using quantitative techniques through the calculation of validation and questionnaire results to determine the module's suitability category, as well as qualitative techniques through the interpretation of observation results, field notes, and input from validators and users to strengthen the research findings.

FINDINGS AND DISCUSSION

Findings

This research produces a product in the form of problem-based teaching materials (Problem-Based Learning) on *the Role of Economic Actors,* which is designed to improve the critical thinking skills of grade X students of Madrasah Aliyah. The development process follows the ADDIE model, which includes the stages of analysis, design, development, implementation, and evaluation. Each stage provides results that support the creation of valid, practical, and effective teaching materials for use in economic learning.

Stages of Analysis

At the analysis stage, it was found that economics learning at MA Muhammadiyah Balassuka was still conventional, characterized by the dominance of lecture and memorization methods, so that students were not actively involved in contextual economic analysis or problem solving. The teaching materials used also focused more on theory and were not connected to socio-economic realities, which affected the low critical thinking skills of students. This condition indicates the need to develop problem-based teaching materials that can encourage students to learn through the analysis of real cases related to the role of economic actors.

Table 1. Identify Relevant Issues for Teaching Materials

No.	Aspects observed	Observation Description
1.	Identify Problems in the learning process	1) There is a lack of examples of economic cases that are close to students' lives that can be used as critical analysis material. 2) The lack of practice questions or activities that invite students to analyze the impact of economic actors' actions on society and the environment. 3) There has been no development of problem scenarios that spur students to develop alternative arguments and solutions.
2.	The Need for Problem-Based Teaching Materials	1) Teaching materials must present real or simulated cases that illustrate conflicts, dilemmas, or the role of economic actors in a particular situation. 2) Provides a guide to critical questions that stimulate students to evaluate, compare, and predict the consequences of the actions of

		economic actors. 3) Contains activities that encourage group discussions, debates, and personal reflection to hone analytical and argumentative skills. 4) Accompanied by engaging visual or multimedia media to reinforce conceptual understanding and real context.
3.	Teacher and Environmental Readiness Analysis	1) Teachers need to be trained in problem-based learning methods and critical discussion facilitation techniques. 2) The school environment supports the use of technology and digital learning resources to enrich teaching materials. 3) Support from schools in providing time and facilities for active learning activities still needs to be strengthened

Source: Processed Data (2025)

Planning Stage

During the planning stage, a preliminary draft of the printed learning module was produced, containing problem orientation, presentation of economic concepts, case analysis, group discussion activities, and final reflections. Each sub-topic is structured around real economic issues, such as producer-consumer relations, commodity pricing policies, and the impact of international trade. The module also includes critical thinking guides and worksheets that guide students in identifying problems, collecting data, formulating solutions, and presenting their analysis in an argumentative manner.

Table 2. Design of Materials and Learning Flows

No	Phase	Learning Activities	Output/Critical Attitude
1	Problem Orientation	Teachers present real cases of conflicts between economic actors. Video link: *The Role of Economic Actors* - YouTube, Article: "Government Policy to Reduce Fuel Subsidies" from the education portal.	Students begin to ask questions and identify problems critically.
2	Concept Understanding	Students learn the concept of economic actors through interactive modules and videos.	Students relate concepts to given cases.
3	Problem Analysis	Students discuss in groups to identify the role of economic actors in the case and its impact.	Students develop argumentation and critical thinking in the analysis of the role of the perpetrator.
4	Solutions and Reflections	Students create alternative solutions to existing problems and reflect on emerging critical attitudes.	Students are able to consider a variety of viewpoints and make logical decisions.

Source: Processed Data (2025)

Development Stage

The development stage is carried out by involving a validation process that shows that the teaching materials developed have a level of very high validity, based on the assessment of two validators, namely material experts and linguists. Subject matter experts assess aspects of content

suitability with the curriculum, the accuracy of economic concepts, and their relevance to the development of critical thinking skills, while linguists assess sentence clarity, term suitability, and readability level for students.

Table 3. Recap of the Subject Matter Expert's assessment

No.	Aspects assessed	Assessment Score		Quantity (n)
		Validator I	Validator II	
A	**Content Eligibility**			
1.	Suitability of the material with the independent curriculum	4	5	9
2.	The material presented is in accordance with core competencies and basic competencies	4	5	9
3.	The material presented is in accordance with the learning objectives	4	5	9
4.	The material covers the role of households, companies, and governments as economic actors	4	5	9
5.	The information presented is accurate and in accordance with economic concepts	4	5	9
B	**Critical Thinking Skills**			
1.	The material encourages students to think critically	4	4	8
2.	The problems presented can spur a more in-depth analysis	4	4	8
C	**Presentation of the problem**			
1.	The problem given is relevant to real life	4	5	9
2.	Problems are structured systematically and clearly	4	5	9
D	**Learning Approach**			
1.	Problem-based approaches are used appropriately.	5	5	10
2.	Students are given the opportunity to find solutions to problems independently	5	5	10
3.	Assessments in teaching materials are appropriate to measure students' critical thinking processes	5	5	10
Sum		51	58	109
Average (∑x)		4,25	4,8	9,08
Percentage		85 %	96 %	90,5 %

Source: Processed Data (2025)

Table 3 shows that the results of subject matter experts' validation of content feasibility, curriculum suitability, language clarity, and relevance of teaching materials to learning objectives obtained an average score of 90.5%, which is classified as highly valid. This confirms that the content of the teaching materials is in line with basic competencies, supports the development of critical thinking, and includes case-based and problem-based activities that are relevant to the context of everyday economics.

Table 4. Linguist Assessment Recapitulation

No.	Aspects assessed	Assessment Score		Quantity (n)
		Validator I	Validator II	
1.	Conformity of sentence structure with good and correct Indonesian rules	5	5	10
2.	Consistent and accurate spelling usage (EYD/PUEBI)	5	5	10
3.	Diction/vocabulary is easy to understand by the target reader (according to age and level of education)	5	5	10
4.	Clarity of flow between sentences and between paragraphs	4	4	8
5.	General readability of the text (fluency when read, not confusing)	5	5	10
6.	Language style according to the purpose of the writing (formal, semi-formal, educational, etc.)	5	5	10
7.	Consistency of use of terms throughout the manuscript	4	4	8
8.	It does not contain ambiguity or double meaning	5	4	9
Sum		38	37	75
Average (∑x)		4,75	4,62	9,37
Percentage		95	96	90,5

Source: Processed Data (2025)

Table 4 shows that linguistic validation obtained an average score of 93.75% and was categorized as highly valid. These results confirm that the language used in the teaching materials is communicative, easy to understand, and appropriate for the cognitive development of students. Sentence structure, use of economic terms, and text readability were rated as good, although the validators suggested simplifying some abstract terms and adding visual illustrations. Overall, the teaching materials are deemed suitable for use and field testing.

Implementation Stage

A limited trial in class X MA Muhammadiyah Balassuka with 27 students and one economics teacher took place over three meetings using problem-based modules. Observations showed an increase in student activity in discussions, courage to express opinions, and the ability to analyze relationships between economic actors. The teacher questionnaire scored 92.3% (Very Practical), indicating that the module was easy to use, had a clear structure, and was effective in facilitating active and collaborative learning.

Table 5. Recapitulation of Teacher's Response

No.	Aspects assessed	Assessment Score
1.	The material in the teaching materials is in accordance with the curriculum and basic competencies	5
2.	The language used in the teaching materials is easy for students to understand	5
3.	The teaching material has covered the role of economic actors in full	5
4.	This teaching material is relevant to the context of students' lives	4
5.	The information presented is accurate and in accordance with economic concepts	5
6.	Teaching materials are easy to use in the learning process	5
7.	These teaching materials help increase student engagement in learning	5
8.	The problem-based activities presented effectively stimulate students to think critically	4
9.	The problem-based activities presented effectively stimulate students to think critically	4
10.	The time required to implement these teaching materials according to the learning schedule	5
11.	The use of these teaching materials improves students' analytical skills	5
12.	Students are better able to come up with logical reasons or arguments after using the teaching materials	4
13.	This teaching material helps students develop the ability to evaluate a problem	4
Sum		**60**
Average		**4,6**

Source: Processed Data (2025)

From the table above, the percentage of the level of practicality of the teaching materials is calculated as follows:

$P = 100\%\frac{\Sigma x}{n}$

$P = 100\%\frac{60}{65}$

$P = 92.3\%$

Information;

P : Percentage

Σx : Number of answers given by the teacher

n : Total score

Based on this calculation, the percentage of the product's practicality level through the test on teachers was obtained, which was 92.3%. If adjusted to the scale of the level of practicality, and is at a very practical vulnerability, the results of this individual trial show that the teaching materials are very good in terms of content and learning approach. Teaching materials are really worth using and support the improvement of students' critical thinking skills.

Meanwhile, the results of the student response questionnaire obtained a score **of 97.7%,** which is included in the very good category. Students stated that the problem-based modules help them understand economic material more easily because they are associated with real events, as

well as encourage them to think critically in finding solutions to given problems. In addition, students feel more motivated to learn because learning activities are challenging, interactive, and provide space for them to discuss and express their opinions.

Table 6. Results of Student Response Questionnaire Analyst

No.	Student Name	Total	Average	Percentage (%)
1.	Student 1	60	5,0	100
2.	Student 2	60	5,0	100
3.	Student 3	56	4,7	93,3
4.	Student 4	60	5,0	100
5.	Student 5	59	4,9	98,3
6.	Student 6	60	5,0	100
7.	Student 7	54	4,5	90
8.	Student 8	57	4,8	95
9.	Student 9	60	5,0	100
10.	Students 10	60	5,0	100
11.	Student 11	59	4,9	98,3
12.	Student 12	60	5,0	100
13.	Student 13	59	4,9	98,3
14.	Students 14	60	5,0	100
15.	Students 15	55	4,6	91,7
16.	Students 16	60	5,0	100
17.	Student 17	60	5,0	100
18.	Students 18	60	5,0	100
19.	Student 19	58	4,8	96,7
20.	Students 20	58	4,8	96,7
21.	Students 21	60	5,0	100
22.	Student 22	59	4,9	98,3
23.	Student 23	58	4,8	96,7
24.	Student 24	56	4,7	93,3
25.	Students 25	59	4,9	98,3
26.	Students 26	55	4,6	91,7
27.	Student 27	60	5,0	100
Total Average		**58,6**	**4,9**	**97.7**

Source: Processed Data (2025)

From the table above, the percentage of the effectiveness level of teaching materials is calculated as follows:

$$P = 100\%\frac{\Sigma x}{n}$$

$$P = 100\%\frac{1582}{1620}$$

$$P = 97.7\%$$

Information:

P : Percentage
Σx : Number of answers given by students
n : Total score

The results of the assessment of the class trial that have been presented in the table can be calculated. The percentage of assessment of learning media products is as follows. ∑x = 1582, n = 1620, P = 97.7%. Based on this calculation, the percentage of student response to teaching materials was 97.7%. Based on the effectiveness scale, the results are included in the category of very effective.

The results can be concluded that students respond positively to the problem-based teaching materials developed. Based on the results of the class trial, it can be concluded that the problem-based teaching materials developed have met the learning effectiveness indicators, namely:

1) Improving student learning activities, shown through learning observation;
2) Received a positive response from students, as evidenced by the results of the questionnaire, with the very good category;
3) Improve students' critical thinking skills.

Evaluation Stage

The evaluation stage is carried out to assess the overall process and results of the development of problem-based teaching materials that have been implemented. Evaluation data were obtained from the results of expert validation, teacher and student response questionnaires, and the results of critical thinking tests. Data analysis shows that the teaching materials developed meet the criteria of being very valid, very practical, and effective.

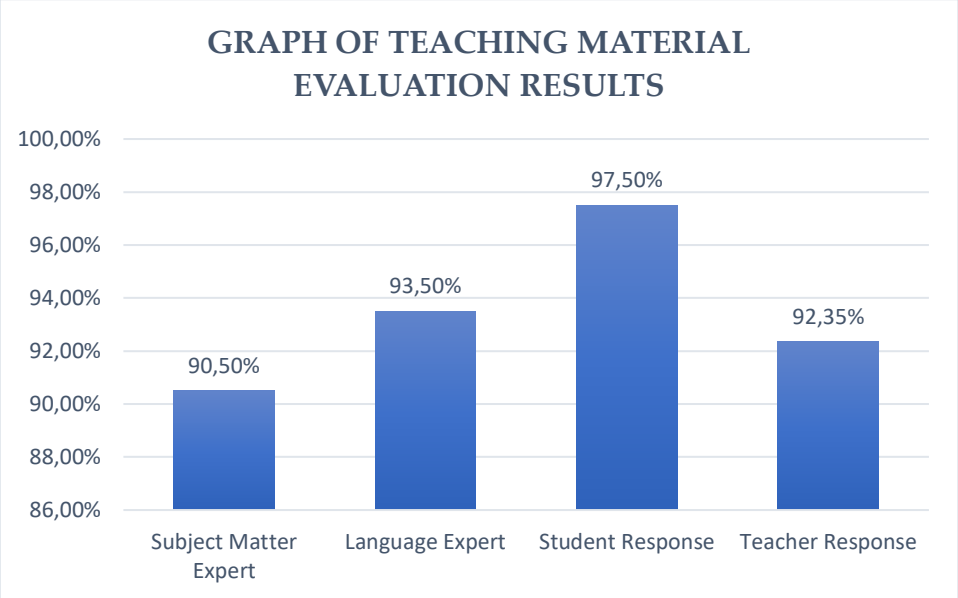

Figure 2. Graph of Teaching Material Evaluation Results

This graph shows that all aspects of the evaluation of material expert validation, linguist validation, practicality through teacher response, and effectiveness through student response obtained a score above 80%, which indicates that the teaching material is considered valid, efficient, and practical, so that it is suitable for use in learning.

Discussion

The results of the study indicate that the development of problem-based teaching materials on the subject of Economic Actors at MA Muhammadiyah Balassuka has a positive impact on the learning process and outcomes, particularly in improving students' critical thinking skills. The application of systematically designed Problem-Based Learning (PBL) shifts learning from teacher-centered to student-centered, encouraging students to actively construct knowledge through reflection, analysis, and collaboration (Komariah et al., 2024; Latifah et al., 2025; Ningrum et al., 2024). Teaching materials validated by subject matter experts (90.5%) and language experts (93.75%) were found to be curriculum-appropriate, clearly structured, and easy to read, emphasizing the importance of validation in ensuring learning quality (Ulfah et al., 2025). The addition of contextual illustrations and the simplification of economic terms helped students understand complex economic concepts more effectively.

Problem-based learning materials are considered very practical by teachers (92.3%) and students (97.7%), easy to use, and capable of creating meaningful learning experiences. This product increases student participation, encourages critical thinking, and fosters interest in learning economics. These findings are consistent with the study by Rasya et al. (2024) that PBL increases student engagement through active roles in investigation and problem solving. The high level of practicality also indicates the suitability of the teaching material design to the characteristics of the learning environment, time, and teacher abilities.

The effectiveness of teaching materials, proven through the increase in students' critical thinking scores from an average of 68.5 to 87.3, shows that the application of PBL in economic learning is able to stimulate the development of high-level thinking skills. These results are in line with the findings Kusuma et al. (2024) and Robbani (2025) that critical thinking skills can be developed effectively through learning that emphasizes the process of analysis, evaluation, and evidence-based decision-making. In this study, the context of real economic problems presented in the module encourages students to do deep reasoning, connect concepts with empirical facts, and develop logical solutions to complex problems. Thus, problem-based teaching materials not only

improve conceptual understanding, but also shape critical thinking skills as an essential competency of the 21st century (Wardani & Fiorintina, 2023; Razak et al., 2022).

In addition, improving students' critical thinking skills is also related to the aspect of learning motivation. The problem-based learning process places students as active subjects, where they feel they have control over the learning that is being done. This is in accordance with the theory of *self-determination* (Atmaja, 2024) which explains that intrinsic motivation increases when students feel autonomous in the learning process, interact socially meaningfully, and gain competence through challenging problem-solving. In the context of this research, problem-based modules provide space for students to explore ideas, discuss with friends, and present the results of their thoughts, making the learning process more interesting and meaningful (Asih et al., 2022; Ramandani et al., 2024).

From the pedagogical side, the success of the development of this teaching material also shows that the PBL approach is relevant to be applied in economic learning at the Madrasah Aliyah level. As a discipline that is in direct contact with social reality, economics urgently needs a learning approach that leads students to think critically about the phenomena of daily life. PBL facilitates this by presenting real context as a starting point for learning. In line with opinion Paat et al. (2024)Problem-based learning helps students develop high-level thinking skills through real-world problem-solving-oriented inquiry and discovery activities. Thus, the teaching materials developed not only strengthen the cognitive dimension of students, but also build social awareness and the ability to make scientific arguments on economic issues.

The results of this study also reinforce various previous findings. Research conducted by Izzah et al. (2025) shows that problem-based teaching materials are able to improve critical thinking skills in learning activities, while Nurbaya et al. (2022) prove that a similar approach can relate academic concepts to students' real lives. The similarity of these findings confirms that PBL is an adaptive and effective cross-disciplinary learning strategy to develop critical thinking skills in various subject contexts. Thus, the results of this study add to empirical evidence that the development of problem-based teaching materials in economics subjects can be an innovative model that is relevant to be applied in madrassas and public schools.

In practical terms, the results of this study show that problem-based teaching materials have important implications for teachers and educational institutions. For teachers, these modules can be used as guidelines for designing more interactive, contextual, and process-oriented learning, while encouraging students to think critically and solve economic problems independently. while for

educational institutions, the development of such teaching materials serves as an example of good practice in efforts to improve the quality of economic learning in line with the demands of the independent learning curriculum. Overall, through a systematic development process, expert validation, and field testing, these teaching materials have been proven to be valid, practical, and effective, capable of increasing student engagement and critical thinking skills in understanding the role of economic actors, thereby contributing theoretically and practically to the realization of active, meaningful learning that is relevant to students' real lives.

CONCLUSION

Based on the results of the research that has been conducted, it can be concluded that the development of problem-based teaching materials (*Problem-Based Learning*) on *the Role of Economic Actors* material has proven to be valid, practical, and effective in improving students' critical thinking skills at MA Muhammadiyah Balassuka. The validation results showed a very high level of validity in terms of content and language, while the practicality tests from teachers and students also showed excellent results. In addition, the application of this teaching material is actually able to increase students' active involvement in the learning process and foster analytical and argumentative thinking skills towards economic phenomena presented contextually. Thus, this problem-based teaching material is suitable for use as an innovative alternative in economic learning at Madrasah Aliyah. In line with these results, it is recommended that economics teachers utilize these problem-based teaching materials both as the main learning resource and as a complement to textbooks to encourage students to think critically through solving real problems in the surrounding environment. Educational institutions can use this research as a reference in developing similar teaching materials in other subjects so that learning becomes more contextual and meaningful. The next research is suggested to develop problem-based teaching materials in the form of digital or *e-modules* to expand access and adapt to technology-based learning needs. In addition, trials with a wider scope are needed to test the consistency of the effectiveness of teaching materials in different school contexts and different student characteristics.

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