

Designing Citizenship Education Based on Outcome Based Education with Citizen Project Practices to Enhance Problem-Solving Skills

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Abstract. This study explores the development of an Outcome-Based Education (OBE) approach for civic education, integrating citizen project practices to enhance university students' problem-solving skills. Current civic education in Indonesia focuses heavily on theoretical knowledge, often neglecting critical thinking, character-building, and problem-solving competencies. The research employs the Borg and Gall development model, involving stages of preliminary research, design, testing, and evaluation. Findings indicate that OBE-based learning, combined with citizen projects, significantly improves students' critical thinking, communication, and problem-solving abilities. The study concludes that the proposed civic education model is valid and effective, providing a feasible approach for fostering 21st-century skills in higher education.

Keywords: Outcome-Based Education, OBE, Citizen, Problem-Solving Skills.

1 Introduction

In the era of globalization, civic education plays a vital role in shaping competent and character-driven citizens with the necessary problem-solving skills for societal challenges. Civic education at the higher education level, particularly in Indonesia, remains predominantly textual and conceptual. This is due to the educational approach that emphasizes theoretical teaching (civic knowledge) but lacks in developing critical thinking, character-building, and problem-solving skills (civic skills). Vontz, T.S, et al., emphasizes that civic education in the global era must be comprehensively designed with a focus on civic competence, which includes knowledge, attitude, and skills [17]. However, the current system of civic education in universities does not fully support the development of students' problem-solving skills [1]. Studies by Christiyoda show that civic education in many institutions remains verbalistic, lacks contextual relevance, and fails to produce significant learning outcomes applicable to real-life situations [2].

To address these issues, the Outcome-Based Education (OBE) approach is seen as a solution that can help students more effectively achieve civic competencies. OBE is a learning approach that focuses on outcomes, where learning is designed to ensure that learners can achieve targeted learning outcomes in terms of knowledge, attitude, and skills. In this context, the "citizen project" practice can be applied as part of OBE-based learning. A citizen project is a project-based approach in which students engage in research and problem-solving relevant to societal, national, and state issues [3]. Previous studies have shown that citizen project practices in civic education significantly contribute to students' development in critical thinking, communication, and teamwork. Through this practice, students not only understand theory but also apply their knowledge to solve real problems faced by society [4]. This study aims to develop an OBE-based civic education design with citizen project practices to enhance students' problem-solving skills. This learning design is expected to serve as a model that can be implemented in various higher education institutions, especially at Universitas Negeri Medan (UNIMED), as a step to improve the existing civic education system.

The urgency of this research is based on the need to improve students' problem-solving skills in the global era, where these skills are essential to address increasingly complex social, economic, and political challenges. According to [5], problem-solving skills are part of 21st-century competencies that students must master to compete globally. However, a study by [6] indicates that the current education system does not fully train students in problem-solving skills. Therefore, this research is crucial to providing more effective learning guidelines to improve students' problem-solving abilities so that they can become intelligent and responsible citizens.

2 Literature Review

OBE-oriented civic education with citizen project practices provides space for students to learn through inquiry, research, and problem-solving. This model is based on the concepts of inquiry learning, discovery learning, and problem-solving learning, where students are encouraged to actively participate in learning activities relevant to real life [7]. According [8], citizen projects are educational programs designed to help students develop various civic skills, including critical thinking, communication, and cooperation. Thus, project-based learning not only teaches theoretical civic knowledge but also facilitates students in applying that knowledge to real life. Additionally, research [9], shows that the application of OBE in civic education can enhance learning innovation and quality. Through OBE, students are encouraged to achieve predefined learning outcomes using contextual and project-based approaches [10]. Bullying prevention techniques can also be integrated into civic education through citizen projects. Studies show that this method helps students understand the impact of bullying and develop social skills to prevent it [11].

3 Method

This research utilizes the Borg & Gall development model, which involves several stages. The research subjects include students and lecturers involved in the Civic Education course at Universitas Negeri Medan (UNIMED). Data were collected through questionnaires,

interviews, and observations, and then analyzed descriptively and qualitatively using descriptive analysis techniques to measure students' problem-solving skills. The development process involved four stages: (1) preliminary research, (2) learning design, (3) product testing and revision, and (4) product effectiveness testing. The instruments used in this research include expert validation questionnaires. The expert validation questionnaire uses a Likert scale modified by the researcher into a 5-point scale. The evaluation criteria are classified into five levels as follows: (1) Poor, (2) Fair, (3) Good, (4) Very Good, (5) Excellent [12]. The expert validation grid is presented in Table 1.

Table 1. Expert Validation Grid

No.	Component	Sub-Components
I	Civic Education Course Learning Design	Definition, Purpose, and Scope of the Civic Education Course, Contextual Citizenship Issues
II	Outcome-Based Education-Oriented Learning Design	Portfolio-Based, Case Method Application, Team-Based Project
III	Citizen Project Practice Design	Strengthening Civic Knowledge, Civic Skills, Civic Disposition
IV	Problem-Solving Skills Design	Critical Thinking, Creative Ideas, Information/Data Literacy, Associating, Concluding

For assessing students' problem-solving skills, the observation sheet was used. The observation grid of learning outcomes is designed as shown in Table 2.

Table 2. Observation Grid for Problem-Solving Skills

No.	Critical Thinking & Problem-Solving Skills	QR	Communication & cooperation skills	QR	Contextual Learning Skills	QR	Creative & Innovative Skills	QR
1	Logical Thinking	...	Listening	...	Relevance	...	Reflection	...
2	Chronological Thinking	...	Ideas	...	Identifying	...	Introspection	...
3	Analytical Thinking	...	Informative	...	Data Collection	...	Abstraction	...
4	Synthesis Thinking	...	accommodative	...	Associating	...	Innovation	...
5	Decision-Making	...	Adaptive	...	Interpretation	...	Adoption	...

Notes: OR = Observation Results; *SN = Already Visible if most respondents (> 50%) demonstrate the indicator; *BN = Not Yet Visible if most respondents (> 50%) do not demonstrate the indicator.

Data analysis on students' problem-solving skills was conducted using qualitative descriptive analysis techniques, based on observations made during classroom and field activities.

4 Result and Discussion

4.1 Result

Stage One: Preliminary Research

Interviews with lecturers teaching Civic Education (MKU) reveal that this course significantly contributes to shaping graduate profiles and achieving learning outcomes that include competencies in attitude, knowledge, general skills, and specific skills. However, observations indicate that the implementation of the course, which should focus on developing students' problem-solving skills, has not been fully optimized. This is due to:

1. The civic education learning process has not yet integrated the three core components of civic knowledge, civic skills, and civic disposition. In practice, civic education remains focused on conceptual knowledge.
2. The Civic Education Program, as a general course, has not been designed to improve students' problem-solving skills. Therefore, an integrated approach to developing civic education through citizen project practices is needed to enhance students' problem-solving abilities.

Stage Two: Product Design

The civic education course learning design based on OBE with citizen project practices was developed by formulating learning outcomes (CPL) as presented in the following table.

Table 3. Learning Outcomes for Civic Education Based on OBE and Citizen Project Practices

Learning Design	Learning Outcomes
Civic Education Course Content Design	Students can demonstrate the ability to analyze, determine attitudes, and take action while studying content covering the following concepts: Definition, Purpose, Scope, Contextual Citizenship Issues
OBE-Based Learning Design	Students can analyze, determine attitudes, and take action during the learning process and produce outputs through: Portfolio, Case Method, Team-Based Project
Citizen Project Learning Design	Students can strengthen civic knowledge, civic skills, and civic disposition during the learning process
Problem-Solving Skills Design	Students can demonstrate critical thinking, creative ideas, information/data literacy, associating, and concluding skills

Stage Three: Product evaluation

This stage is the final step of the research. It involved evaluating the product by experts in civic education content and learning. Validation was conducted in May 2024, using a questionnaire with several assessment components. The results are shown in Table 4.

Table 4. Expert Evaluation Results

No.	Component	Indicator	Score	Category
1	Civic Education Course Content Design	Easy to understand	45	Good
	Civic Education Learning Outcomes Suitability		5	Good
	Contextual Elements in the Content		4.75	Good
	Update Content		4	Good
	Relevance of Case Studies to the Content		4.5	Good
	Total Score		22.75	Good
2	OBE-Oriented Learning Design	Problem-Based Learning	5	Very Good
	Contextual Learning		4	Good
	Case Method Application		4.5	Good
	Team-Based Project		4.75	Good
	Output-Oriented		4.5	Good
	Total Score		22.75	Good
3	Citizen Project Design	Curiosity-Driven	4.5	Good
	Addresses Citizenship Issues		5	Very good
	Intellectual Skills		4	Good
	Participation Skills		4.5	good
	Attitude Determination		4	Good
	Total Score		22.0	Good
4	Problem-Solving Skills Design	Stimulates Critical Thinking	5	Very Good
	Encourages Creative Ideas		4.5	Good
	Utilizes Information/Data Literacy		4	Good
	Promotes Associating		4	Good
	Supports Decision-Making and		4.75	Good

Conclusions			
Total Score		22.25	Good

The average total score from the expert evaluation is 448. Based on this score, the civic education course design is deemed fit for testing without the need for revisions. The percentage score is 89.75%, categorized as Good, as shown in Table 5.

Table 5. Expert Validation Testing

Validator	Validation Result	Criteria
Validator 1	90%	Very Good
Validator 2	88.5%	Good
Validator 3	91.5%	Very Good
Validator 4	89%	Good
Average	89.75%	Good

Small Group Testing

Small group testing involved six students randomly selected based on their performance level—high, medium, and low. They were asked to evaluate the learning design using a feasibility questionnaire. The data obtained are shown in the following table.

Table 6. Small Group User Testing Results

No	Aspect	Item	Indicator	Score	Category
1	Content	1	Easy to understand	5	Very Good
		2	Addresses current citizenship issues	5	Very Good
		3	Supported by information/data	4.5	Good
		4	Discussed in-depth	4	Good
		5	Easily accessible literature	4	Good
		Average		4.5	Good
2	Learning Process	6	Encourages curiosity	5	Very Good
		7	Problem-based	4.5	Good
		8	Contextual learning	4	Good
		9	Case method application	4.5	Good
		10	Team-based project	4.5	Good

	Average			4.5	Good
3	Learning Outcome	11	Assignments with clear guidance	4	Good
		12	Clear instructions on the worksheet	5	Very good
		13	Trains problem-solving skills	4	Good
		14	Produces useful outputs	4.5	Good
		15	Outputs presented and evaluated objectively	4	Good
	Average			4.3	Good

The results show an average score of 4.4 across all aspects, which falls under the "Good" category. The design is considered suitable for implementation in civic education learning.

Stage Four: Product Effectiveness Testing

The next stage involved testing the effectiveness of the product by implementing the civic education course design based on OBE with citizen project practices in a class. The results of the effectiveness test are shown below.

The data show an improvement in average learning outcomes from 66% in the pre-test to 88% in the post-test, indicating a 22% increase. Therefore, the product design is effective in enhancing students' learning outcomes, particularly their problem-solving skills.

4.2 Discussion

The research findings show that the civic education learning design based on Outcome-Based Education (OBE) with citizen project practices, including the content, process, and project designs, is valid and suitable for use in civic education courses. OBE-based learning is one of the main criteria for improving the quality of education by ensuring the achievement of knowledge, attitude, and psychomotor aspects [13]. Implementing the citizen project approach, which involves research, inquiry, and problem-solving, is crucial for achieving meaningful civic education [14]. The results are consistent with studies by [14], which found that OBE-based learning improves both the innovation and quality of learning, as well as students' ability to produce outputs. Similarly Morais, D. B., et al, demonstrated that OBE-based learning improves academic quality in knowledge and skill mastery [15].

The design of OBE-based civic education with citizen project practices developed in this research aims to enhance students' problem-solving skills, particularly critical thinking, communication, contextual learning, and creativity skills [16]. These 21st-century skills play an essential role in preparing students as the next generation of competent individuals for active participation in national development.

5 Conclusion

The research concludes that the design of civic education based on Outcome-Based Education (OBE) with citizen project practices, covering both content and process designs, has been validated and is feasible for implementation. This design improves students' problem-solving skills, including critical thinking, communication, contextual learning, and creativity.

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