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## PROJECT-BASED INDONESIAN LANGUAGE COURSE INNOVATION TO IMPROVE STUDENT'S CRITICAL THINKING

Fitriani Lubis<sup>1)</sup>, Achmad Yuhdi<sup>2)</sup>, Atika Wasilah<sup>3)</sup>, Amayra Tannoubi<sup>4)</sup>

<sup>1)</sup>Universitas Negeri Medan, Medan, Indonesia  
E-mail: [rivianivandi@gmail.com](mailto:rivianivandi@gmail.com)

<sup>2)</sup>Universitas Negeri Medan, Medan, Indonesia  
E-mail: [yuduhdiachmad@unimed.ac.id](mailto:yuduhdiachmad@unimed.ac.id)

<sup>3)</sup>Universitas Negeri Medan, Medan, Indonesia  
E-mail: [atikawasilah@unimed.ac.id](mailto:atikawasilah@unimed.ac.id)

<sup>4)</sup> University of Jendouba, Av. de l'UMA, Tunisia  
E-mail: [atanoubi@yahoo.fr](mailto:atanoubi@yahoo.fr)

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**Abstract.** This research aims to develop and assess the feasibility of project-based Indonesian language textbooks in enhancing critical thinking among Medan State University students. Following the 4-D model of Research & Development, the process involves analysis, textbook design, material development, and dissemination. Needs analysis includes front-end and material design analyses to formulate learning objectives. The design stage entails compiling project-based learning materials, selecting media, and designing the book's specifications. In the development stage, textbooks are produced and validated by experts, with validation results exceeding 87% for both material and media. Dissemination involves distributing the textbooks to students to test practicality, resulting in a practicality test score of 87.74%. Validation and implementation scores indicate "very feasible" status without the need for revision. Consequently, the project-based Indonesian language course innovation is deemed "valid" and eligible for use as the primary teaching material at Medan State University, promising to enhance students' critical thinking skills.

**Keywords:** Critical Thinking, Indonesian MKDU, Innovation, Indonesian MKDU, Project Based Learning, Textbooks

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### I. INTRODUCTION

As an institution, higher education is known as the center of civilization in modern society (Mokski et al., 2023; Schofer et al., 2021). This paradigm provides a label that the society within it can give birth to inspiration, thoughts, ideas, or a work that can determine the direction of a nation's journey. The Ministry of Education and Culture (Kemendikbud) has stipulated Regulation of the Minister of Education and Culture of the Republic of Indonesia Number 22 of 2020 concerning the Strategic Plan of the Ministry of Education and Culture for 2020-2024. The regulation sets three main targets that are expected to be achieved well, including 1) Increasing the quality of learning and relevance of higher education; 2) Increasing the quality of lecturers and educational staff; and 3) The realization of quality governance at the Directorate General of Higher Education.

Look at targets 1 and 2. Universities must carry out transformations in implementing higher education that are relevant to the current dynamics of society and the rapid development of modern science and technology. So,

universities, in this case, must be able to disrupt themselves and prepare students as lifelong learners who are responsive and adaptive to current developments. For this reason, a university needs to provide opportunities for each student to develop potential according to each student's specialization through learning that is oriented toward meaningful learning experiences.

To achieve a meaningful learning experience, a method, model, or strategy is needed that can guide students to engage in it. Project-based learning is a learning model that uses problems as a basis for collecting and integrating new knowledge based on real experiences and activities (Hariyanto et al., 2023; Ningsih et al., 2020). This learning not only allows students to understand something but can also produce products that are meaningful and useful (Maros et al., 2023; Pawar et al., 2020).

Research conducted by (Issa & Khataibeh, 2021; Listiqowati et al., 2022; Loyens et al., 2023; Oyewo et al., 2022; Sari & Prasetyo, 2021), shows that project-based learning significantly improves students' critical thinking skills compared to conventional learning. Critical thinking is

a high-level thinking ability to process information obtained using rational logic critically (Kabataş Memiş & Çakan Akkaş, 2020; Rahdar et al., 2018; Sari & Prasetyo, 2021).

Providing critical thinking skills for students certainly requires a forum that can play a role in determining the development of student quality and competence (Kwangmuang et al., 2021; Supriyatno et al., 2020; Susanti & Utomo, 2023). Within the scope of lectures, the forum must be presented well by a lecturer through the courses given to students. In this case, the Indonesian language course, as a general subject that all students must study, is expected to require students to have critical thinking skills through project-based learning.

Based on observations observed in the learning process for Indonesian language courses at Medan State University, lecturers in the same field of science have not been able to provide teaching materials that can guide students in a structured manner to produce learning that is oriented towards meaningful learning. The chairman of the Unimed senate always conveys this evaluation, Prof. Dr. Syawal Gultom, M.Pd., at every semester learning evaluation and preparation event, specifically MKU at Unimed. He wants the products resulting from MKU Indonesian lectures to be able to create students who have high-level thinking skills, are creative, and are polite in communication so that Unimed's vision to become a pioneer of innovation at regional, national, and international levels can be achieved. This is in line with research (Nuryani & Bahtiar, 2019), which reveals the important role of Indonesian language courses in higher education to stimulate and encourage students to have a critical attitude and thinking towards the problems faced by the Indonesian nation. For this reason, it is necessary to design teaching materials that are expected to meet the expectations stated above.

In this research, an innovative project-based Indonesian language course will be developed to improve the critical thinking skills of Medan State University students. This innovation is realized in the form of a textbook that contains a learning plan for students to carry out lecture activities clearly oriented toward the final project of the three lectures.

The specific objective of this research is to develop and validate the feasibility of a project-based Indonesian language textbook that aims to improve students' critical thinking skills. The intended outcomes include a structured and clear guide for students to complete the six tasks outlined in the Indonesian National Qualification Framework (KKNI). The textbook will also assist students in designing research proposals and Student Creativity Program (PKM) proposals that are encouraged annually by the university. The feasibility of the developed textbook will be assessed based on its effectiveness in enhancing students' critical thinking skills and its alignment with the objectives of the Indonesian National Qualification Framework (KKNI).

## II. METHODS

This research is a type of development research or research and development (R&D). Research and

development are a research method used to develop or validate products used in education and learning. This research uses the Research & Development method, referring to the 4-D model of development research design developed by Thigaranjan et al. This model consists of four development stages, namely the definition stage, design stage, development stage, and dissemination stage.

The needs analysis in the definition stage consists of two main components: front-end analysis and material design analysis. Based on the front-end analysis, it was found that lecturers had not yet provided structured teaching materials to support meaningful learning. Students also expressed a need for teaching materials that facilitate both independent and cooperative learning. These findings were then used to formulate learning objectives, which include enhancing critical thinking skills through project-based assignments.

The design process for the project-based learning materials involved several key considerations to ensure their appropriateness and effectiveness. First, the materials were carefully compiled, with project-based tasks selected to align with the curriculum's objective of enhancing students' critical thinking. These tasks were structured to guide students through a series of projects, helping them complete six assignments outlined in the Indonesian National Qualification Framework (KKNI). Next, media selection focused on producing the textbooks as physical resources, specifically in B5 format with approximately 200 pages. This format was chosen to ensure ease of use in both classroom settings and independent study environments. Finally, the textbook design was crafted to ensure clarity, with a consistent layout and appropriate text spacing. Illustrations were included to aid comprehension, and formative assessments were embedded within the content to actively engage students and reinforce learning outcomes.

In the development stage, the textbook was produced based on the predetermined design and subsequently validated by experts. The criteria used for validation included content feasibility, presentation, language, and the contextual relevance of the material. Subject matter experts evaluated whether the content aligned with the expected competencies and its relevance to learning needs, while media experts assessed the graphic design and layout of the textbook.

The practicality test was conducted by distributing the textbooks to students to evaluate their ease of use and effectiveness in the learning process. The criteria used to assess practicality included the ease of understanding the material, the ease of using the textbook, and its usefulness in supporting both independent and collaborative learning.

The data collected in this research and development consists of two types: quantitative data (data obtained from validation scores of learning experts and practitioners) and qualitative data (in the form of descriptions of the results of textbook development). The data collection technique in this research is in the form of a questionnaire used to analyze the need for teaching materials for students and validation instruments for material and media experts in the feasibility evaluation activity of Project-Based Indonesian Language

Course Innovation to Improve Critical Thinking for Medan State University Students.

Data analysis is carried out by calculating and presenting the results of needs analysis, expert validation, and learning practitioner assessments. The data from the validation questionnaire is used as a basis for quality and revisions to

improve the textbooks being developed. Furthermore, the level of validation of the assessment based on the questionnaire uses eligibility criteria as shown in the following Table 1.

Table 1. Criteria For Feasibility Assessment of Teaching Materials

Percentage	Eligibility Criteria	Information
81%-100%	Very Worth It	No need to revise
61%-80%	Worthy	No need to revise
41%-60%	Decent Enough	Revision
21%-40%	Not Worth It	Revision
0%-20%	Very Inadequate	Revision

If the textbook being developed does not meet the very appropriate quality, the project-based Indonesian language course innovation to improve critical thinking for Medan State University students will be revised until it meets the quality that is suitable for use. However, if the criteria have met the Very Eligible criteria and there is nothing that needs to be revised, then the Project-Based Indonesian Language Course Innovation to Improve Critical Thinking for Medan State University Students has met the feasibility and validity requirements as the main Indonesian MKDU textbook.

### III. RESULTS

This innovative research and development for the Indonesian language course produced a project-based textbook to improve the critical thinking skills of Medan State University students. The research results are presented based on the development stages that have been carried out, which include the definition stage, design stage, development stage, and dissemination stage. The presentation of the research results is described as follows:

#### 1. Define

The definition phase is divided into four phases, namely, front-end analysis, concept analysis, task analysis, and formulation of learning objectives.

##### Front-end Analysis

Based on the results of observations, information was obtained that in the process of learning Indonesian language courses at Medan State University, lecturers in the same field of science have not been able to provide teaching materials that can guide students in a structured manner to produce learning that is oriented towards meaningful learning. Teaching and learning activities carried out by lecturers and students still rely on teaching materials that are developed only based on the demands of the Indonesian language course so that students are only guided to carry out lectures in a monotonous manner. Therefore, it is necessary to implement this innovation in the form of a textbook that contains a learning plan for students to carry out lecture activities clearly oriented toward a meaningful end-of-course project. The following are the results of a questionnaire

analyzing student needs regarding innovation in Indonesian language courses.

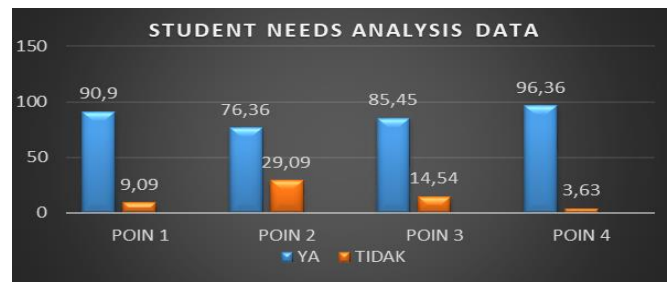


Figure 1. Diagram of Student Needs Analysis Results

Based on the diagram resulting from the analysis of student needs above, it is known that as many as 90.9% of students feel the need to understand more deeply the scope and usefulness of general Indonesian language courses (Point 1). Furthermore, as many as 76.36% of students have not been given project-based assignments that can support an in-depth understanding of the material (Point 2). Then only 14.54% of students had no problems carrying out the demands of the six KKN assignments in the Indonesian language course (Point 3). Finally, as many as 96.36% of students felt the need to have teaching materials that could facilitate cooperative and independent learning activities to support understanding in Indonesian language courses (Point 4). Because of these considerations, it is necessary to design innovative project-based general Indonesian language courses to improve the critical thinking of Medan State University students.

The report above presents the findings of an examination of the necessities that students at Medan State University had for general Indonesian language instruction. The results demonstrate a number of important issues, such as the need for a more thorough comprehension of the course's objectives and scope, the dearth of project-based assignments to facilitate in-depth comprehension of the subject matter, and the difficulties in completing KKN assignments that correspond with students' skill levels. Furthermore, the study highlights the requirement for instructional resources that support both independent and cooperative learning. These results are corroborated by

earlier research conducted by Each and Suppasetseree (2021), which highlighted the significance of comprehending learning objectives and the use of cooperative learning to improve motivation and comprehension of the subject matter.

*Concept Analysis*

Concept analysis is an activity to determine the main concepts that will be developed and then arranged in a detailed and important structure. The concept of innovative teaching materials was developed through general Indonesian language subject competencies, which then became the basis for developing learning materials. Then the material developed is integrated into learning according to student needs and project-based learning. This process was carried out, and the results of project-based general Indonesian language course innovations were obtained to improve students' critical thinking.

Prior research by Liu et al. (2020) and Munna and Kalam, (2021) emphasizes how crucial it is to provide instructional materials that meet students' requirements in order to improve the efficacy of learning. According to their study, knowledge and learning interest may be raised by tailoring instructional materials to each student's requirements and preferred method of learning. Furthermore, Hikmah et al.

(2023) research highlights how crucial it is to use project-based learning to improve students' analytical and critical thinking abilities. These results offer empirical backing for the creative strategy used to create project-based learning materials and curricula for general Indonesian language courses with the goal of improving students' critical thinking abilities. Therefore, these actions are in line with the most recent trend of raising the standard of higher education by creating flexible and creative teaching strategies.

*Analysis of tasks and objectives for formulating learning objectives*

This activity is carried out to determine and assess what abilities and competencies will be presented in the teaching materials that will be designed, so that the overall tasks that must be included in the teaching materials are obtained in accordance with the competencies that have been determined. Then the formulation of objectives is carried out by combining the results of the analysis of concepts and tasks to identify user behavior, which is then compiled with a description of the material in the teaching materials. The following is a table of task analysis and formulation of learning objectives.

Table 2. Task Analysis and Formulation of Learning Objectives

Basic Competencies for Indonesian Language Subjects According to Decree of the Director General of Higher Education, Ministry of National Education of the Republic of Indonesia No. 43/DIKTI/Kep/2006:

- 1) Position of Indonesian: (a) history of Indonesian; (b) state language; (c) language of unity; (d) language of science, technology, and the arts; and (e) function and role of Indonesian in nation-building.
- 2) Write (a) papers, (b) book or chapter summaries, and (d) book reviews.
- 3) Reading to write: (a) reading scientific writing or articles; (b) reading popular writing; and (c) accessing information via the internet.
- 4) Speaking for academic purposes: (a) presentations, (b) giving seminars, and (c) giving speeches in formal situations.

Course Learning Outcomes (CPMK)	Study Materials/Learning Materials
1) CPMK-1 is able to explain the position of the Indonesian language and the history of its development.	a) The position and function of the Indonesian language b) Standard and non-standard Indonesian and their characteristics c) Academic texts and non-academic texts
2) CPMK-2: Able to understand academic texts, differentiate them from non-academic texts, and identify academic texts in various micro-genres.	d) Book review text e) Proposal text and its types f) Report text
3) CPMK-3 is able to produce book review texts and film reviews.	g) Scientific articles
4) CPMK-4 is able to produce research proposal texts and activity proposals.	
5) CPMK-5 is able to produce text research reports and activity reports.	
6) CPMK-6 is able to produce scientific article texts.	

**Material Description Specifications in Teaching Materials:**

Course Competency Map	Based on the Indonesian MKDU signs as well as the achievements and learning objectives in the RPS.
Explanation of 6 Level KKNi Duties	<b>TR.</b> Practice at the end of each section of learning material and formative tests. <b>CBR.</b> Make a reading report from two Indonesian books. <b>CJR.</b> Make a reading report from two scientific journal articles about the use of Indonesian for academic purposes.

	<p><b>MR.</b> Producing research proposals or activity proposals that are guided by the PKM (Student Creativity Program) format.</p> <p><b>RI.</b> Review research reports in the form of theses to analyze structure, micro-genres, and correct use of language and spelling.</p> <p><b>PR.</b> Compile scientific articles to be published in terSINTA journals.</p>
Part 1. Introduction	Know and understand the origins, history, position, and function of the Indonesian language as well as the use of Indonesian in various academic activities.
Part 2. Academic Text	Understand the definition and characteristics of academic texts and be able to identify macro and micro-genres of academic texts.
Part 3. Review Text	Understand the definition, structure, and reconstruction of the review text. Guiding students in completing CBR assignments as an example of review text.
Part 4. Proposal Text	Understand and identify research/activity proposals and produce PKM (Student Creativity Program) proposals.
Part 5. Report Text	Understand and identify micro-genre relationships in report texts and produce research reports through mini-research guidance.
Part 6. Text of Scientific Articles	Understand, review, and analyze the structure and rules of writing scientific journal articles, as well as assigning scientific article writing projects to be published in national journals.

## 2. Design

The purpose of the design stage is to obtain an initial design of learning materials. The course innovation being developed is a project-based Indonesian language course book that will be used as the main teaching material for MKDU Indonesian, which can improve the quality of the learning process as well as increase interactive skills and make learning easier for students. Whatever the steps at this design stage are, they are as follows:

### a) Preparation of questionnaires

This stage prepares a questionnaire grid that is given to students and experts as validators. The preparation of a student needs questionnaire is used to identify needs and test student responses to the teaching materials being developed. Then, an assessment questionnaire is prepared to assess the suitability of the textbook being developed.

### b) Media and Format Selection

The media chosen as an introduction to teaching materials are books that will be used as mandatory teaching materials in general Indonesian language courses. The book writing format used is as follows:

#### (1). The outside of the book (cover)

The cover section is divided into two, namely the front cover and the back cover. In textbooks, the front cover contains the main title, subtitle, author's name, and publisher's name. On the back cover, the contents include the main title, book synopsis, publisher's name, and ISBN number.

#### (2). Parts of the book (preliminaries, book contents, postliminaries)

The first subsection in the book is the preliminaries, which consist of several pages. Starting from the first page, which is filled with the main title, copyright, dedication, foreword, and table of contents, The second sub-section in the textbook is the main content of the book, which explains all the material that will be presented. On this page, there are material points that will be presented, accompanied by explanations. At the end, the main content then explains a summary of the material discussed. The final part is to provide assignments and formative questions that students need to answer and work on to test their level of understanding of the material presented. The final subsection of the textbook is postliminaries, whose contents include several pages starting with the bibliography, appendices, and author's biography.

#### (3). Textbook specifications

- i. Typed with a computer device.
- ii. Using Cambria font size 11.
- iii. The textbook contains around 200 pages.
- iv. The size of the B5 book is 17.5 cm x 25.5 cm.

## 3. Development

Activities at the development stage produced textbook products as an innovation for project-based Indonesian language courses to improve the critical thinking of Medan State University students and were carried out in the process of expert validation testing of textbooks. This validation aims to assess the quality of the materials and media for the teaching materials being developed as well as obtain suggestions for improvement in the product. Validation was carried out by two experts, namely a material expert and a media expert, for developing Indonesian language learning tools.

### a. Textbook Innovation Products

The form or form of project-based Indonesian language course innovation is in the form of printed textbooks. The textbook is designed in accordance with the applicable textbook writing format. The design of the material in the textbook departs from the general Indonesian language course guidelines which are then developed through CPMK and the course learning objectives. The material in the textbook is designed on a project basis to provide a meaningful learning experience for students. The material presented in the textbook consists of several material coverages which include (1) The position and function of the Indonesian language, (2) Standard and non-standard Indonesian and their characteristics, (3) Academic texts and non-academic texts, (4) Review texts books, (5) Proposal texts and their types, (6) Report texts, and (7) Scientific articles. The following is a picture of a textbook that includes the outside of the book and the contents of the book as a result of the Project-Based Indonesian Language Course Innovation.



Figure 2. Display of Indonesian MKDU Textbook Innovation

b. Textbook Eligibility

A project-based Indonesian language course innovation to improve the critical thinking of Medan State University students has been developed and validated by material and learning media experts. Textbooks that are declared valid or suitable for use will be tested in the form of student responses to the textbooks being developed. The value obtained from the validation results by experts will be adjusted to the teaching material assessment criteria. From these criteria, conclusions will be drawn about the feasibility or unfeasibility of the teaching materials being developed.

1) Material Expert Validation

The validation of teaching material products is intended to find out suggestions and criticism from material experts regarding the appropriateness of the material content, presentation, language, and contextual assessment. The material expert's assessment obtained a score of 87.35% with the criteria "very appropriate" and the status "no need for revision". The validation of project-based Indonesian language course innovation to improve the critical thinking of Medan State University students obtained an assessment that it was suitable for use, which was then tested in the field. The following is data from validation results from material experts.

Table 3. Material Expert Validation Results.

No	Aspect	Content Eligibility	Validation
1	Feasibility of Presentation	Suitability of material to course competencies	93,33
		Material accuracy	88
		Supporting learning materials	93,33
		Up-to-date material	86,6
		<b>Total Value</b>	<b>90, 24%</b>
		2	Feasibility of Contextual
Presentation support	90		
Presentation of learning	80		
Coherence and consistency of thought flow	90		
<b>Total Value</b>	<b>85%</b>		
3	Assessment Language		
		Communicative	80
		Dialogic and interactive	80
		Suitability to students' language development	80
		Conformity to language rules	100
		<b>Total Value</b>	<b>86,66%</b>
4	Assessment Indicators	Contextual nature	90

	Contextual components	85
	<b>Total Value</b>	<b>87,5%</b>
<b>Total</b>	<b>Average percentage</b>	<b>87,35%</b>

Criteria	Very worthy
Based on the results of the material expert validation, it is known that the material expert validation obtained a score on the appropriateness aspect of content with a percentage value of 90.24%, the appropriateness aspect of presentation with a percentage value of 85%, the linguistic appropriateness aspect with a percentage value of 86.66%, and the contextual aspect amounting to 87.5%. Then the average result of the material expert assessment was 87.35%. This means that the textbook is in the "very appropriate" category and "does not need to be revised," so it can be said to be valid for use as a	textbook for Project-Based Indonesian Language Course Innovation to Improve Critical Thinking for Medan State University Students.
	2) Media Expert Validation
	The purpose of media expert validation is to test the graphic presentation of textbooks as a Project-Based Indonesian Language Course Innovation to Improve Critical Thinking of Medan State University Students. The following is data from media expert validation.

Table 4. Media Expert Validation Results

No	Graphic Aspects	Assessment Items	Mark		
1	Textbook Size	Suitability of size for standard course teaching materials	4		
		The suitability of the size of the book to the content of the material	5		
		<b>Total Value</b>	<b>90%</b>		
2	Textbook Main View	The appearance of the layout elements on the main page and back harmoniously has rhythm, unity, and is consistent.	4		
		Displays a good center point	4		
		The layout elements are harmonious and clarify the function	5		
		The size of the letters in the title of the teaching materials is more dominant and proportional than the size of the author's name.	5		
		The color of the title of the teaching material contrasts with the background color	4		
		Describe the content or teaching material and reveal the character of the object.	4		
		The shape, color, and cover image represent the Indonesian language course.	5		
		<b>Total Value</b>	<b>88,57%</b>		
		3	Content Design	The placement of layout elements is consistent based on patterns	4
				The separation between paragraphs is clear.	5
Print area and margins are proportional.	4				
Adjacent page margins are proportional.	4				
Spacing between text and illustrations is appropriate.	4				
Correct placement of learning activity titles, learning activity subtitles, and page numbers	5				
The placement of titles, subtitles, illustrations, and image captions does not interfere with understanding.	5				
	Don't use too many fonts.	4			

The use of variations in letters (bold, italic, all capital, small capital) is not excessive.	5
The spacing between lines of text is normal.	4
The level or hierarchy of titles is clear, consistent, and proportional	5
Able to reveal the meaning or significance of objects	4
Accurate and proportional shape	4
Creative and dynamic	4
<b>Total Value</b>	<b>87,14%</b>
<b>Total Score</b>	<b>101</b>
<b>Final score (%)</b>	<b>87,82</b>

Based on this table, the media expert validation results for the size aspect of teaching materials obtained a percentage of 90%, the design of teaching materials was 88.75%, and the design of the content of teaching materials was 87.14%, with all three in the "very feasible" category. And the average media expert validation result was 87.82%. This means that teaching materials can be said to be valid in media presentations to be used as textbooks for Project-Based Indonesian Language Course Innovation to Improve Critical Thinking of Medan State University Students.

#### 4. Dissemination Stage (Dessiminate)

The final stage in development research is the dessiminate stage. This stage is the implementation stage of the textbook, which is carried out to see how effective the use of the

textbook being developed is. This stage also aims to introduce the product so that it can be accepted by users and conduct product trials. Therefore, testing was carried out in the form of a practical test through student responses to the use of the Project-Based Indonesian Language Course Innovation textbook to see the success of its use in the field. The practicality test of the developed teaching materials aims to find out how students respond to the teaching materials that have been developed. This practicality test was given to students from the Faculty of FBS and FMIPA Class of 2021. The following is a summary of the results of the assessment of student responses to Project-Based Indonesian Language Course Innovations to Improve Critical Thinking for Medan State University Students.

Table 5. Practicality Test Results for Students

No	Valuation Statement	Average value
<b>Ease of Use</b>		
1	The material in the textbook is easy to understand	88,60%
2	The presentation of material in textbooks is practical, and I can study it repeatedly	86,92%
3	The descriptions of the material and exercises in the textbook are clearly well understood	85,35%
4	The language used in the textbook is easy for me to understand.	87,06%
5	I can study independently according to my learning abilities	87,62%
<b>Attractiveness of The Looks</b>		
6	The presentation design of the textbook is interesting to look at	88,79%
7	The content of the material in the textbook is equipped with illustrations, pictures, and photos that are appropriate to the learning material.	87,06%
8	I can clearly read the writing on the handout	87,62%
<b>Benefit</b>		
9	Textbooks help me understand Indonesian language material	84,50%
10	The material in the textbook helps me apply it in everyday life, such as reviewing books, designing research proposals, and writing scientific articles.	89,65%
11	The textbook guided me in carrying out six KKNi tasks	91,37%
12	Textbooks make me active in studying Indonesian language courses.	85,48%
13	Project assignments help improve critical thinking skills	90,51%
<b>Cumulative average value:</b>		<b>87,74%</b>
<b>Very worthy (no need for revision).</b>		

Based on data from the practicality test results of textbooks for students, the average score was 87.74% in the categories

"very appropriate" and "no need for revision". This means that the Project-Based Indonesian Language Course Innovation to Improve Critical Thinking of Medan State University Students has met the practicality test, so it can be said to be effective for use as teaching material for MKDU Indonesian Language at Medan State University.

#### IV. DISCUSSION

The research and development conducted in this study have resulted in the creation of project-based Indonesian language course book products. Validation results indicate a material validation score of 87.35%, a media validation score of 87.82%, and a practicality test score of 81.23%. With all three scores falling within the range of 81% to 100%, categorized as "Very Appropriate," it is evident that the textbook is deemed suitable for immediate implementation without the need for revision. Consequently, the Project-Based Indonesian Language Course Innovation to Improve Critical Thinking of Medan State University Students is considered appropriate for adoption as teaching material for general Indonesian Language courses at Medan State University.

Prior studies by Ahshan (2021), El-Sayad et al. (2021), and Tzenios (2020) emphasized the need to create instructional materials that meet the requirements of students in order to improve learning efficacy and engagement. The strong validation ratings for the project-based Indonesian language course book products show that these conclusions are supported by the current research. Furthermore, Ahmad's (2021) proposal for developing responsive curricula reinforces the applicability of the innovation shown in this study (Gale et al., 2020; Kilag et al., 2023; Li et al., 2021). The project-based Indonesian language course materials created in this research serve as evidence of the continuity and applicability of meeting students' requirements through creative teaching methods, as these data reveal (Halim et al., 2023; Hidayati et al., 2023; Ramadhan et al., 2023; Saimon et al., 2023).

In language education, project-based learning (PBL) has proven to be a very successful method for developing critical thinking abilities. PBL's capacity to encourage students' active participation and deep engagement is one of its main benefits. PBL helps students apply language skills in relevant circumstances and fosters a better grasp of language structures and functions by immersing them in real-world, realistic projects (Anggito et al., 2021; Witarsa & Muhammad, 2023). Additionally, PBL promotes cooperation and teamwork by giving students the opportunity to work together to solve problems that call for critical thinking and judgment. As students plan, carry out, and reflect on their projects, they acquire critical thinking abilities, including analysis, assessment, and synthesis (Gale et al., 2020; Witarsa & Muhammad, 2023). Furthermore, PBL encourages inquiry-based learning, in which students are urged to probe for clarification, investigate many points of view, and pose questions in order to develop the habit of challenging presumptions and taking into account opposing views (Issa & Khataibeh, 2021; Oyewo et al., 2022; Sari & Prasetyo, 2021). In the end, PBL's dynamic, hands-on approach improves

language fluency while simultaneously giving students the critical thinking abilities needed to succeed in a variety of academic, professional, and real-world settings (Mokski et al., 2023; Pawar et al., 2020).

#### V. Conclusions

The research and development of project-based Indonesian language textbooks aimed at improving the critical thinking skills of Medan State University students were conducted using the Research and Development (R&D) model, specifically the 4-D model, which comprises four stages: define, design, develop, and disseminate. The study involved analyzing previously used teaching materials, identifying student challenges, and determining the content and concepts for textbook development. The next stage focused on designing the textbooks with a project-based approach, followed by the development of the textbooks, which included expert validation and limited trials. The final stage involved disseminating the validated textbooks to students. The results of the research produced project-based textbooks, with validation scores showing 87.35% for content, 87.82% for media, and 81.23% for practicality. These scores fall within the 81%-100% range, categorized as "Highly Suitable," meaning no further revisions were needed.

The "valid" and "highly feasible" status of these textbooks indicates their strong potential as primary teaching materials for general Indonesian language courses at Medan State University. Their structured design aligns with the educational goal of fostering critical thinking and ensures practical usability in classroom settings. The use of these textbooks is expected to enhance students' critical thinking by offering project-based learning experiences that promote in-depth analysis, problem-solving, and independent thinking. This will ultimately contribute to improving the overall quality of student learning outcomes, supporting the university's mission to develop students equipped with essential critical thinking skills.

Future research could explore the effectiveness of these textbooks in different educational settings, such as at other universities or even at the high school level. Additionally, future studies could assess how project-based learning through these textbooks influences other skills, such as creative and collaborative thinking. Another promising direction for further research would be to examine the adaptation of these textbooks to digital or hybrid learning environments, considering the growing reliance on technology in modern education.

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