

# Development of Teaching Materials for Organizational Behavior with 3D Realist Videos based on Project Based Learning

Lenti Susanna Saragih<sup>1\*</sup>, Jufri Darma<sup>2\*</sup>, Sabda Dian Nurani Siahaan<sup>3\*</sup>

{[lenti@unimed.ac.id](mailto:lenti@unimed.ac.id)<sup>1\*</sup>, [jurfridarma@unimed.ac.id](mailto:jurfridarma@unimed.ac.id)<sup>2\*</sup>, [sabda@unimed.ac.id](mailto:sabda@unimed.ac.id)<sup>3\*</sup>}

Business Education Study Program, Economics Faculty of Universitas Negeri Medan, Indonesia<sup>1</sup>  
Accounting Education Study Program, Economics Faculty of Universitas Negeri Medan, Indonesia<sup>2</sup>  
Entrepreneurship Study Program, Economics Faculty of Universitas Negeri Medan, Indonesia<sup>3</sup>

**Abstract.** Find out the level of feasibility and practicality of teaching materials for Organizational Behavior with 3D Realist videos based on Project Learning is the purpose of this study. The R&D Method used in this study using the ADDIE model. ADDIE model is Analysis, Design, Development, Implementation and Evaluation). Combining materials, learning videos, youtube links and journals for study case materials, project design and also quizzes in one 3D teaching material using Professional Pageflip 3D software used for development this teaching materials. Data collection techniques in this study used observation and questionnaires with research instruments in the form of validation sheets for expert assessments, namely material and media experts as well as student response questionnaires. The tests carried out are feasibility tests and also practicality tests. Based on the results of the study, it can be concluded that teaching materials for Organizational Behavior with 3D Realist videos Based on Project Based Learning are feasible and practical to use.

**Keywords:** 3D Teaching Materials, Project Based Learning

## 1 Introduction

This digital era offers different kind new technologies that could help ease all life aspects. These comforts demand everyone to come up and able to do better in a project. In learning, the project method has been carried out to make it easier for students to master the material discussed. According to Fathurrohman (2016), project-based learning (PjBS) is a learning model that uses projects or activities as a means of learning to achieve the competence of attitudes, knowledge and skills achieved by students [1]. PjBS is able to facilitate learning oriented to Higher Order Thinking Skills (HOTS) according to the program developed by the Ministry of Education and Culture through the Directorate General of Teachers and Education Personnel (Ditjen GTK) in an effort to improve the quality of learning and improve the quality of graduates (Ariana 2018) [2].

Teaching materials are one of the means that can increase the effectiveness of the learning process. The habit of using various teaching materials makes it easy to improve the quality of student learning outcomes as expected. The facts that occur in the field are often educators only use books as teaching materials so that the teaching materials used are less attractive and the possibility of the required learning outcomes is not achieved. A lecturer is required to be

creative in compiling teaching materials that are innovative, varied, interesting, contextual, and in accordance with the level of student needs. Teaching materials should be more interactive, interesting, easy to understand, involving learners and not monotonous. Not only with books, textbooks but also with interesting videos that can facilitate the process of mastering the material. Interesting teaching materials are expected to be the capital of lecturers so that students are able to provide creative ideas and innovations in compiling and implementing projects. The use of 3D animation in teaching materials can be applied in the development of teaching materials so that students are expected to be able to understand the material taught better. According to Nababan (2023), Project Based Learning can be used when educators want to condition active learner-centered learning where students have a more interesting learning experience and produce a work based on real problems (contextual) that occur in everyday life [3]. It is also important to remember that the materials used must be in line with the current curriculum, keep pace with technological developments that can be used within a certain period of time, and be easy for students to understand (Nurhayati, 2020) [4]. In accordance with the achievement of unimed goals, namely by optimizing HOTS-based learning using the Merdeka Belajar Kampus Merdeka (MBKM) Curriculum, students are not only required to understand science, but also must have adequate soft skills that are useful in the world of work. Students are given independence in learning by providing convenience in accessing all existing teaching materials. The main problem is that the available teaching materials are not sufficient, so books by authors other than Universitas Negeri Medan (UNIMED) are still used, especially for learning in organizational behavior courses, where requirements and needs are clearly different. The MBKM curriculum that focuses students on mastering lecture material with a project-based application applied at Universitas Negeri Medan requires students to complete 6 types of assignments, namely Routine Tasks (both group and individual), Critical Book Review (CBR), Critical Journal Review (CJR), Mini Research (MR), Mini Project (MP), and Idea Engineering (RI). The problem in this study is: Are Organizational Behavior Teaching Materials with Project Based Learning Realist 3D Videos feasible and practical to use in learning? Meanwhile, the purpose of the study is to determine the level of feasibility and practicality of Organizational Behavior Teaching Materials with Project-Based Learning Realist 3D Videos in improving Student Learning Outcomes.

## **2 Theoretical Reviews**

The independent learning curriculum demands creative and innovative learning with the aim of creating learner-focused learning. Through this, it is expected to create meaningful and quality learning. One of the efforts in creating creative learning is the use of teaching materials based on three dimension (3D). There are many software that can be used in developing 3D teaching materials, one of which is PageFlipse Professional. According to Salsabila (2013: 12) 3D PageFlip Professional software is a type of software that allows you to create animated displays to create interactive learning media for your students [5]. While Saefullah (2016: 1) suggests that PageFlip Professional 3D-based digital book is a publication consisting of text, images, video, or sound, and can be published in digital form that can be read through a computer or other electronic device [6]. Permana and TS (2016) suggest that 3D PageFlip Professional is a display that can be accessed and used through a computer and can be downloaded on Google [7]. Chien & Wu (2020) [8] categorizing teaching materials can be said to be good if it includes five things, such as: (1) Self-study. This means that the module

must be able to enable learners to learn independently without relying on others. (2) Self-contained. This means that the material and the skills to be acquired are one package, so the material must present the entire material so that the student can learn it thoroughly. (3) Standalone. This means that students can use the modules together or independently without the need for any other media's help. (4) Adaptability. This means that the teaching materials must be flexible in use, follow technological developments, and be used over a period of time. (5) User friendly. This means that the material must be easy for students to understand.

One of the learning models related to student activeness and critical thinking is the Project Based Learning (PBL) Model. According to Sinta, et al (2022) The project-based learning model improves critical thinking and analytical skills, provides conditions for solving real-world complex problems, and creates a culture of thinking among students. Project-based learning processes are not only teacher-centered, but also require students to take an active role in the learning activities. [9]. Nurhayati and Haryati (2020) suggest that Project-based learning can be implemented if the following conditions are met: a) Educators must be able to identify basic competencies that emphasize further aspects of skills or knowledge at the level of application, analysis, synthesis and evaluation. b) Educators can choose the materials and topics used as project topics in a way that is interesting. c) Educators must be able to promote learners' motivation when working on projects. d) Availability of appropriate facilities and learning resources. e) Educators should consider the suitability of project time to the academic calendar that allows for project activities. [4].

Asih, et al (2022) conducted a research entitled Professional Pageflip 3D Assisted Exposition Text Teaching Materials for High School using the ADDIE development model. The results showed that Pageflip Professional's 3D media is very suitable for the learning process. [10]. Furthermore, Fitri, et al (2021) conducted a research entitled Development of E-Modules Using Professional 3D Pageflip on Momentum and Impulse Materials. The research model used is the development model of Borg and Gall. This research uses research instruments, questionnaires, expert and media validation as well as student perception questionnaires. The results showed that the E-module was developed using the 3D Pageflip Professional application with the final format of the exe program and the module framework consisting of module covers, module position maps, learning activities per sub-chapter with examples and practice questions and final formative tests, containing material, videos, animations, simulations. The advantages of this e-module are that it can be run immediately, the video displayed is three-dimensional, can be used for distance learning, and contains a final formative test as a measure of student ability [11].

### **3 Research Methods**

Research and development (R&D) model in this study refers to ADDIE model. ADDIE model proposed by Dick and Carry in 1996 (Mulyatiningsih 2016) [12] and Drljaca, et al (2017) [13]. ADDIE model has a development cycle consist of five phases of development, which are, analysis, design, development, implementation and evaluation. The stages in the development of the ADDIE R&D model carried out consist of:

1. Analysis. The initial stage by analyzing the feasibility and requirements of product development which can be started with an analysis of problems in existing products that are less relevant to current needs, not in accordance with the technology used and so on. This stage is also known as the needs analysis stage. The stages of analysis referred to in this research include determining basic problems in the learning process, so that the development

of learning materials is needed, as well as alternative relevant tools to achieve the final goals stated in the curriculum. The stages of analysis used include: Curriculum Analysis, Instructional Analysis, (analysis of instructional learning objectives that contain the competencies needed, the final objectives of lectures, graduate profiles, and learning design) and Student Analysis through analysis of student character and knowledge which aims to determine the level of student understanding of the material presented.

2. Design. The purpose of this phase is to draft the teaching materials. The result of the draft is called the initial draft and includes media selection, format selection. At this stage, the selection of the format of the content design, the selection of learning strategies and learning resources that correspond to the principles, characteristics, and steps are carried out and must be consistent with the learning model used. Tentative draft. The initial design of teaching materials includes the preparation of teaching materials according to the RPS, lecture contract, basic competencies and competency indicators.

3. Development. The stage of realizing the product design produced at the design stage into a real product, until producing a product that has been validated by experts. The stages in this point include: Product creation and expert validation.

4. Implementation. The purpose of using products in this model is to get feedback on the created/developed product. Get early feedback by asking questions about your product development goals. Apply using the created product proposal as a reference. The phases at this point include: development attempt.

5. Evaluation. The evaluation stage aims to provide feedback to product users, so that revisions are made in accordance with the evaluation results or needs that have not been met by the product. The ultimate goal of evaluation is to measure the achievement of development goals. In this study, trials for evaluation were carried out on students of the 6th semester at the Business Education Study Program

This research was carried out for 1 year at the Business Education Study Program of Universitas Negeri Medan from January 2023 to December 2023. The research population as a source of data in this study is students in 6th semester Business Education study program of Universitas Negeri Medan consisting of class A (33 students) and B totaling 29 students. The sample selected in this study was class A consisting of 33 students. Data was collected using observations and questionnaires. This research instrument is in the form of validation sheets from material experts, observation sheets and questionnaires. Material validation sheets are used to find out how complete and deep the material is used while student response questionnaires are used to find out student responses to the teaching materials developed. Data collection techniques in this study were carried out by validator questionnaires and student questionnaires then analyzed with descriptive statistics with the following stages:

a. Feasibility Test

The design of the developed product is assessed by validators using validation sheets. The results of the assessment of all aspects are measured with the Likert Scale. The independent learning curriculum demands creative and innovative learning with the aim of creating

**Table 1.** *Likert Scale Instrument Item Answer*

Information	Scale
Very good/ very appropriate/ very decent/ very clear	5
good/ appropriate/ appropriate/ decent/ clear	4
less good / less appropriate / less feasible / less clear	3

not good/ inappropriate/ unworthy/ unclear	2
very unkind/ very inappropriate/ very unworthy/ very unclear	1

After the data is obtained, then to see the weight of each validator response by calculating its average score with the following formula Ismail (2019) [14].

$$\text{Average Total Score} = \frac{\text{Total Score}}{\text{Total Question}} \quad (1)$$

The feasibility category is measured based on the criteria proposed by Arikunto (2019) in accordance with table 2 where the data obtained in the form of quantitative data must first be changed with qualitative data with the following formula,

$$\text{Result} = \frac{\text{Average Score}}{\text{Maximum Score}} \times 100\% \quad (2)$$

**Table 2.** Eligibility Criteria Categories

Percentage	Eligibility Criteria	Score
0-21	Very Unworthy	1
21-40	Not Worth It	2
41-60	Pretty Decent	3
61-80	Proper	4
81-100	Very Worth It	5

Source: Arikunto 2019 [15]

#### b. Practicality Test

The practicality test of this book is assessed by students who aim to test the readability of the book on a predetermined sample. The practicality test tests in terms of learnability (instructions for use, letters displayed, Tools on teaching materials), efficiency (learning media can explainmatero, media helps students to be active in learning, case studies add skills, exercises increase student engagement, projects can increase student skills) and effectiveness of time (videos facilitate understanding, can be used anywhere, interesting quizzes, easy teaching materials understood by students). The range of total values from the resulting Likert scale is converted to a value criterion determined by the level of practicality of using the teaching material. The formula used in the practicality test in this study is:

$$\mathbf{Vp} = \frac{\text{TSEp}}{\text{s-max}} \times 100\% \quad (3)$$

Information:

Vp = Validity of Practicality

TSEp = Total Empirical Score of Practicality

S-max = Maximum expected score

After knowing the value of practicality, to describe the results of practicality can be seen from the following criteria:

**Table 3.** Practicality Criteria

Information	Category	Information
75,01% - 100%	Very Practical	Can be used without revision
50,01% - 75,00%	Practical	Can be used with minor revisions

25,01% - 50,00%	Less Practical	It is recommended not to use
00,00% - 25,00%	Impractical	Cannot be used

Source: Arikunto 2019 [15]

## 4 Research and Results

### 4.1 Research

The results of ADDIE Model in this study can be explain below

#### Analysis

##### a. Curriculum Analysis

To prepare students for social change, culture, the world of work, and rapid technological advances, we need to better align our students' skills with the needs of the times. Connect not only with your industry and the world of work, but also with the rapidly changing future. Higher education must be able to design and implement innovative learning processes that allow students to achieve learning outcomes that optimally and consistently cover aspects of attitude, knowledge, and skills. To address this, Negeri Medan University collaborates with the KKNI Curriculum and the Merdeka Belajar Curriculum to create a complementary whole. Medan State University applies six types of assignments: Routine Tasks (TR), Critical Book Reports (CBR), Critical Journal Reviews (CJR), Mini Research (MR), Team Projects (TP), and Idea Engineering (RI) To do. KKNI's six tasks are expected to enable students to improve their work, skills and creativity in line with the requirements of an independent curriculum. Through team project assignments, students are challenged to create a specific product that corresponds to the course. Mini-research assignments require students to step into the real world, observe it, and compare theories learned on campus with real-world facts and current information. Integrating learning with case-based learning (case method) and project-based learning makes curriculum implementation more complete. It aims to stimulate students' minds and get them used to higher-level thinking when solving problems. To take this into account in our organizational behavior materials with 3D realistic project-based learning, we need to include six KKNI tasks and case studies in each chapter and design a project with deliverables to be achieved.

##### b. Instructional Analysis

The profiles of graduates of the Business Education degree program at the Faculty of Economics, University of Negeri Medan are as follows:

**Table 4.** Profile of Business Education Study Program Graduates

Nb	Main Profile of Graduates	Description
1	Educators	Master of Business Management Marketing and Entrepreneurship Expertise Program at SMK Business Management
2	Training instructors	Creative, innovative and able to develop teaching materials, plan, implementation and evaluate learning.
3	Self-employed	Able to compete with other entrepreneurs creatively and innovatively, so as to be able to prosper themselves and others.
4	MSME Consultant	Able to apply managerial skills in business and have initiative and integrity inwork.

5	Education researcher and Business management	Able to develop knowledge and apply abilities according to their fields creatively and innovatively according to the development of science.
---	--	--

---

Based on the competency standards contained in the Business Education study program, several competency standards were obtained in the Organizational Behavior course, including; (1) Able to analyze in depth about individual differences, organizational learning, emotional intelligence, feelings, attitudes, and values, (2) Able to analyze and apply group formation and group interaction, (3) Able to analyze power and politics, communication and leadership in organizations, and (4) Able to analyze diversity, culture, design and organizational development.

To meet the competency standards of the Organizational Behavior course, several basic competencies in the Organizational Behavior course were formulated, including; (1) Able to study in depth the differences about individuals in terms of ability and personality, (2) Able to analyze in depth about perception, individual decision making, personality and job satisfaction, (3) Able to analyze the concept of motivation, motivation theory and able to apply motivation by changing the nature of the work environment, the importance of employee involvement and assessing the relationship between payment plans based on skills, (4) Able to analyze group formation theory, types of groups, group success factors, and group interactions, (5) Able to implement the work team, work team effectiveness and handle conflicts in the work team, (6) Able to analyze the development of thoughts about conflicts, negotiations and able to carry out negotiations in conflict resolution, (7) Able to study in depth the basis of power, power tactics in groups and politics, (8) Able to analyze and implement the importance of communication, communication barriers in the organization and implement effective communication, (9) Able to analyze the measurement of leadership success in the organization, leadership development, leadership studies, roles and leadership styles of the organization, (10) Able to analyze the nature of organizational culture, sources of organizational culture, cultural dimensions in multinational companies, (11) Able to analyze the concept of organization as an open system, learning organization and horizontal organization, (12) Able to analyze the power for change and management of change in the organization, and (13) Able to analyze organizational development and organizational development techniques.

### *c. Student Analysis*

Student analysis was conducted through open interviews with students in the A class of the 6th semester business education program who were the subject of the study. Based on the interview results, we found that students really need more interactive, innovative and less boring learning materials. Students need learning materials that they can easily carry and use anywhere they go. In terms of learning material, students want material that is not monotonous, but students prefer material based on discussing cases that are happening and comparing it with theories in literature or journals as a problem-solving solution. Students need more concrete assignments and produce tangible outcomes, where these outcomes can be used in future career development as an educator. Project-based assignments are considered more challenging than having to answer long and theoretical questions alone. Working on

tasks in groups is considered very effective in terms of providing ideas, creativity and funds. Based on the results of the interview, Organizational Behavior teaching materials are prepared according to input from students. Based on the learning

## Design

### a. Printed book design

Based on the learning outcomes that have been determined, the researcher designed a competency map in the Organizational Behavior course. After designing a competency map in the Organizational Behavior course, the researcher then made a draft concept map for the course, which contains the composition of the material discussed in the Organizational Behavior book. The course concept map can be seen in the picture below:

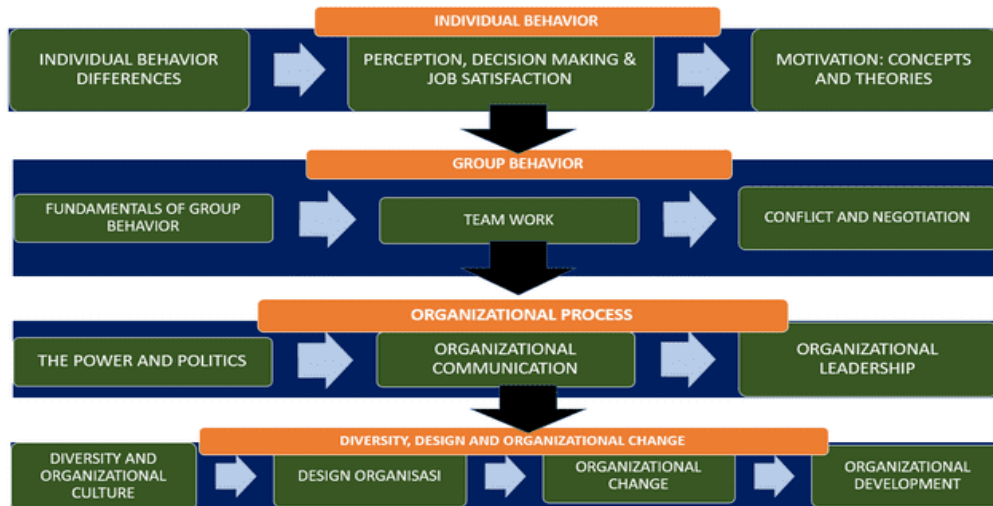


Figure 1. Concept Map of Organizational Behavior Course

After the material is prepared, the next stage is the preparation of semester plan (RPS) which is used as a reference for the allocation of each material at each meeting. The RPS design is in conjunction with the design of 6 KKNi tasks, project assignments and case studies. Each chapter defines the bill from the project task. This is done so that students understand the extent of the project work process and can also be used as a reference in determining project success. The case study chosen in each chapter is the latest cases that are being discussed. In addition to discussing problems and solving solutions, students are also asked to provide social criticism based on the problems raised. This is made because it is in accordance with the purpose of making this teaching material, which is based on Project Based Learning. In addition to materials and assignments, RPS also designed an assessment system and assessment standards for students during lectures. Lecture rules and agreements are contained in lecture contracts signed by students and lecturers.

### b. Realist 3D Design

In the design of 3D realist teaching materials, researchers chose one of the study topics, namely "Perception and Decision Making. To design 3D teaching materials, researchers use



Professional 3D Pageflip software. The choice of this application is because besides being easier to use, there is also software in free form and tutorials on using the application are also widely available on YouTube.

## Development

In this research phase, a development phase takes place, first through the creation of educational materials in the form of softcopy, and then through the development of 3D modules.

### *a. Development of Teaching Materials (Printed Book) Project Based Learning Based Organizational Behavior*

Product drafts that have been prepared at the design stage are then developed into teaching materials. Physical teaching materials are developed into 13 chapters according to the concept map of courses that have been compiled before.

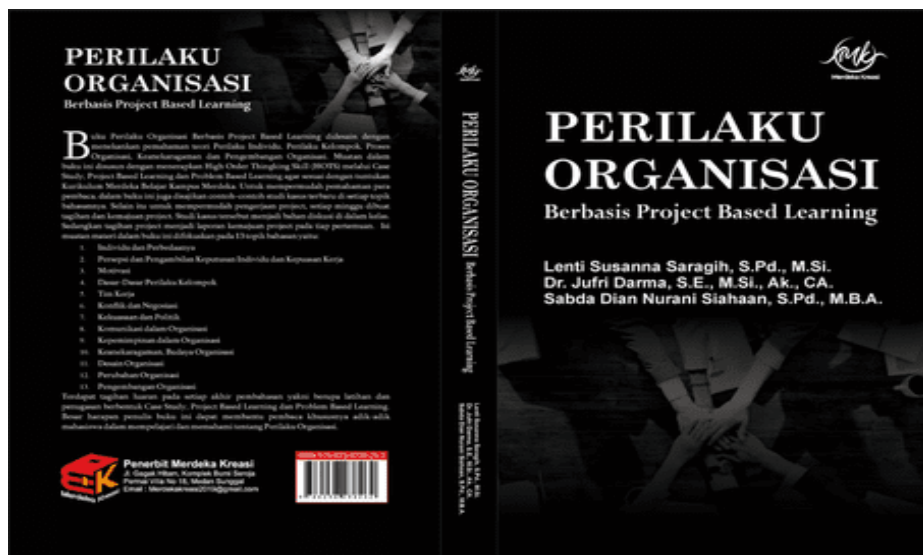


Figure 2. Cover of Printed Book

### *b. Development of Video Teaching Materials*

Materials in the form of physical books incorporate videos to help students understand the learning material. The video is then upload to the author's youtube media. There are 4 materials presented using videos including Chapter 2 Perception and Decision making, Chapter 5 Team Work, Chapter 11 Organization Design and Chapter 12 Organizational Change. Here's what the learning video looks like.

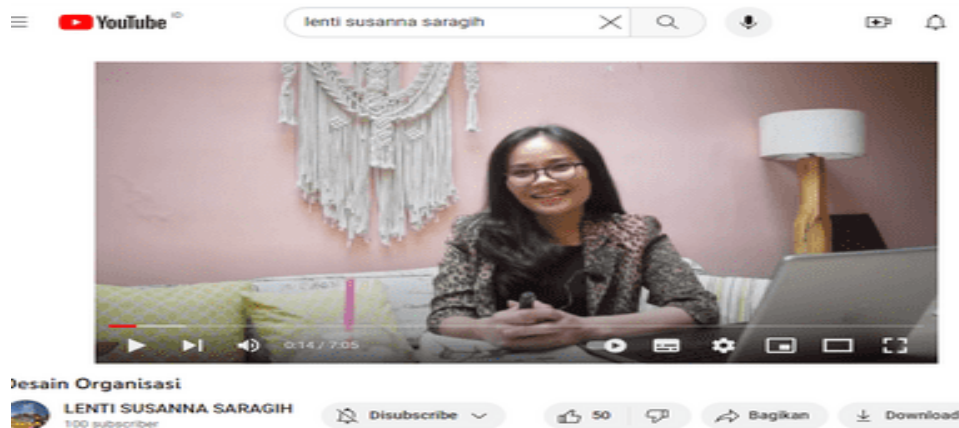


Figure 3. Youtube Footage 1

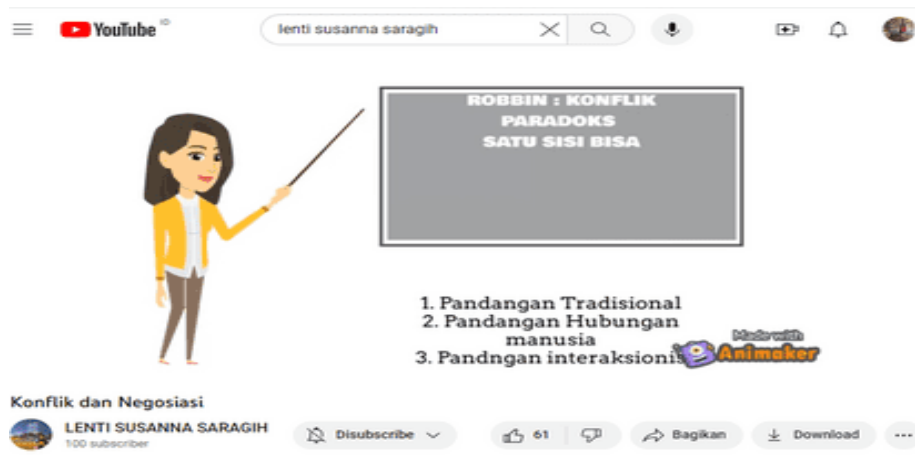


Figure 4. Youtube Footage 2

*c. Development of 3D Teaching Materials*

Book and video teaching materials are then developed into 3D teaching materials. The development of this educational material is done using professional 3D Pageflip software. Here are the steps to complete this phase:

Step 1. Prepare all materials in the form of pdfs, videos of teaching materials, links used, sounds, music, animated videos and also quiz questions. Step 2 Install 3D Page Flip Professional software to the device used. Step 3 Run the application, then select magazine when you want to start creating 3D books. The left column is all the tools that can be used to modify the 3D teaching materials. There are many settings options that can be used according to user creativity and innovation. While at the top there are several instructions ranging from entering data, editing pages, saving files that have been worked on, saving changes to each page, converting 3D books and also uploud 3D books. Step 4 Select create new, then select the

pdf that will be used as 3D teaching materials in the browser column then click open after selecting the file then check import link and click import now. Step 5 Click edit page to edit each page in the teaching materials. At this stage it can be done by adding links, videos, sounds, quizzes, images and so on to the teaching materials

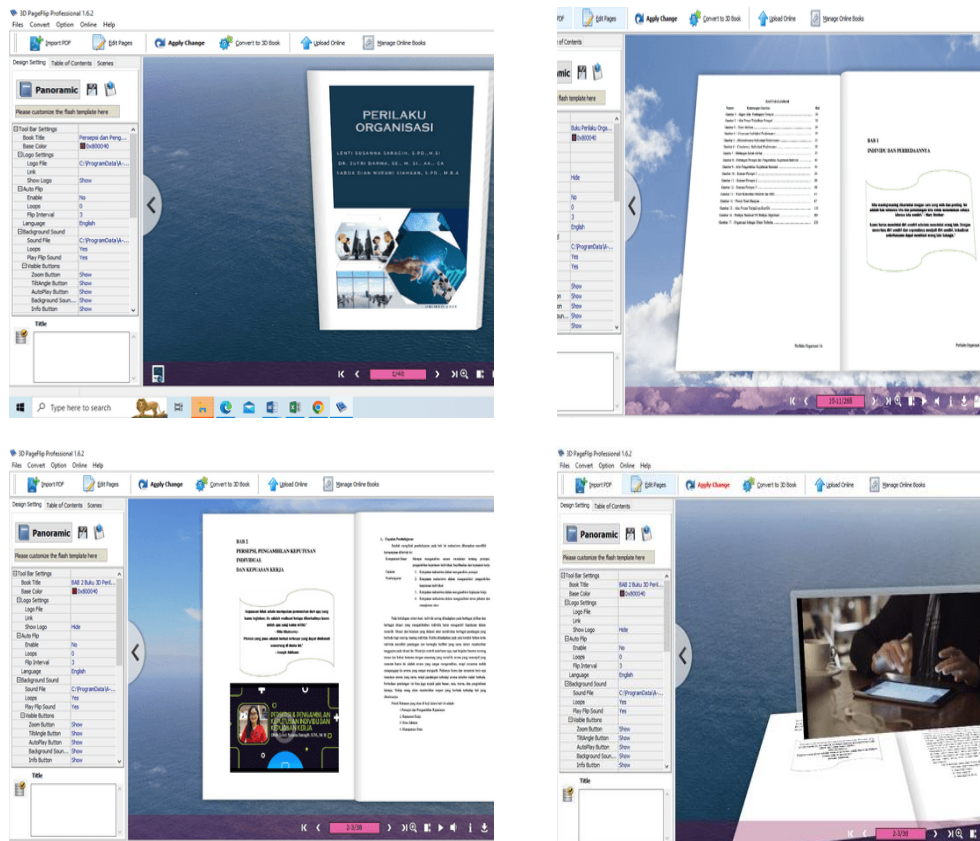


Figure 5. File input stages in Professional 3D PageFlip software

Step 6 Click the Convert to 3D Book Menu to save the work. Work results can be saved in the form of HTML, ZIP, EXE or 3DP which can then be shared with others (students). Step 7 Before closing the software first save the file by selecting the file menu and save, then specify the location to save the file.

## Implementation

### a. Feasibility Test

Feasibility test in this research involving 3 expert validators, namely senior lecturers at the Faculty of Economics. These three validators assess 2 categories, namely material experts assessed by 2 lecturers and media experts assessed by 1 lecturer. The aspects assessed in validation by the expert validator team are aspects of the feasibility of book content, aspects of

presentation and aspects of language. The validator's evaluation tools for the feasibility of this research result are shown in the table below:

**Table 5.** Feasibility Assessment Instrument for Organizational Behavior Teaching Materials with Project Based Learning Realist 3D Videos

N b	Aspects	Indicators	Item Number
1	Feasibility Aspects of Material Content	Compatibility of the teaching materials with RPS, Accuracy of the material, Suitability of KKNi Duties Project Based Learning, <i>Problem Based Learning</i> Case Studies and Exercises, Material support, Updates on relevant materials	1, 2, 3 4, 5, 6, 7 8, 9, 10 11, 12, 13, 14 15, 16, 17 18, 19, 20
2	Feasibility aspect of presentation	Serving technique, Supporting presentation,  Presentation of learning Completeness of learning	1, 2, 3 4, 5, 6, 7, 8, 9, 10 11, 12 13, 14, 15
3	Language feasibility aspects	Businesslike Communicative Dialogical and interactive, Compliance with the level of development of learners, Unity and cohesiveness, Use of terms, symbols and icons	1, 2, 3 4, 5 6, 7 8, 9 10, 11 12, 13

The results of the validation test of each indicator on the assessment aspect conducted by three expert validators in this book can be seen in the table below:

**Table 6.** Feasibility Aspect of Material Content

Nb	Indicators	Average	Percentage	Criterion
1	Compatibility of the content of teaching materials with teaching plan	4,44	89%	Very Worth It
2	Accuracy of the material,	4,17	83 %	Very Worth It
3	Suitability of KKNi Duties,	4,33	87 %	Very Worth It
4	Project Based Learning, <i>Problem Based Learning</i> Case Studies and Exercises	4,2	84%	Very Worth It
5	Supporting relevant material	4,66	93%	Very Worth It
6	Material up-to-date	4	80%	Proper
	Overall Assessment	4,28	86%	Very Worth It

Based on the table above, it can be explained that there are six material content feasibility indicators that are evaluated by validators. The first indicator is the appropriateness of the content of the teaching materials, and the RPS is expressed by three points in the description, with an average score of 4.44 and a percentage of 89%, which corresponds to the criterion of "very achievable". The second indicator, material accuracy, received an average rating of 4.17, with a percentage of 83% being one of the very practical criteria. The third indicator of the KKNI task received a score of 4.33, considering a proportion of 87% for the very practical criterion. The fourth indicator "Project-based learning", "Problem-based learning", "Case studies" and "Exercise" achieved an average score of 4.2, with a percentage of 84% in the very viable standard. It is. The fourth indicator of material support received an average score of 4.66, with a proportion of 93% falling under the highly viable criterion. The sixth indicator was modern substances, which received an average score of 4, with a proportion of 80% falling under the viable criterion. Admission criteria. From the above description, we can see that the overall rating on the feasibility aspect of the content is on average 4.28, with a percentage of 86% exactly falling within the feasibility criteria.

**Table 7.** Feasibility Aspects of Presentation (Design and Layout)

Nb	Indicators	Avarage	Percentage	Criteria
1	Serving Techniques	4,33	87%	Very Worth It
2	Presentation Support	4,52	90%	Very Worth It
3	Learning Presentation	4,50	90%	Very Worth It
4	Completeness of Presentation	4,88	98%	Very Worth It
	Overall Assessment	4,56	91%	Very Worth It

Based on the data in the table above, we can see that there are four indicators in the presentation feasibility aspect and the values of all indicators are within the highly feasible criteria. The first indicator is presentation skills, with an average rating of 4.33 and a value share of 87%, corresponding to a very achievable criterion. The second indicator has an average score of 4.52 and a value share of 90% for presentation proponents, which corresponds to a highly achievable criterion. The third indicator is the presentation of learning, which received an average score of 4.50, with 90% of the scores reaching the very attainable standard. The presentation completeness index yields an average score of 4.88. A score of 98% achieved the highly achievable standard. From the table above, it can be concluded that the overall evaluation of the expert verification regarding the feasibility aspect of the presentation achieved an average score of 4.56, with a score of 91% for the "very good" category and 86% is one very achievable standard.

**Table 8.** Language Eligibility Aspects

Nb	Indicators	Average	Percentage	Criteria
1	Smooth	4,56	91%	Very Worth It
2	Communicative	4,50	90%	Very Worth It
3	Dialogical and interactive,	4,33	87%	Very Worth It
4	Compliance with the level of development of learners,	4,33	87%	Very Worth It
5	Unity and cohesiveness,	4,17	83%	Very Worth It
6	Use of terms, symbols and icons	4,00	80%	Proper
	Overall Assessment	4,31	87%	Very Worth It

Based on the table above, it can be explained that there are six indicators in terms of linguistic feasibility. The simple indicator achieved a value of 4.56 with a value share of 91%. This is related to very achievable criteria. The Communication Index achieved an average score of 4.5 for the afternoon, achieving a score of 90% on a very good standard. The interactive and interactivity indicators achieved an average score of 4.33, with a percentage of scores of 97% falling within the very good standard. The indicators of adherence to the students' developmental level reached an average score of 4.33, with a percentage of scores of 87% meeting the "highly achievable" criterion. The coherence and cohesiveness index achieved a mean value of 4.17, with 83% of respondents meeting the highly achievable criteria. The indicator regarding the use of terms, symbols and icons reached a value of 4, with a value share of 80%, corresponding to a very achievable criterion. Overall, the linguistic feasibility aspect achieved an average score of 4.31 and the rating percentage recorded in the criteria of 87% is very feasible.

This states that Organizational Behavior Teaching Materials with video 3D Realist Based Project Based Learning are very feasible to use. However, there are several inputs from validators for improvements to this Organizational Behavior teaching material, including as in the table below.

**Table 9.** Feedback from Validators

Nb	Validator	Commentary
1	Validator	Include all book material in 3D, not just in the test chapter
2	Material	<ol style="list-style-type: none"> <li>1. In addition to videos to include youtube links in 3D teaching materials</li> <li>2. Write to pay attention because there are still typos</li> <li>3. Include quizzes in 3D materials</li> </ol>

*b. Revision of Teaching Materials*

Based on input from validators, researchers make improvements and revisions to existing teaching materials. All input from validators that have been summarized is then used as material for improving teaching materials both physical book teaching materials and 3D Realist teaching materials. Some of the revisions that have been made include:

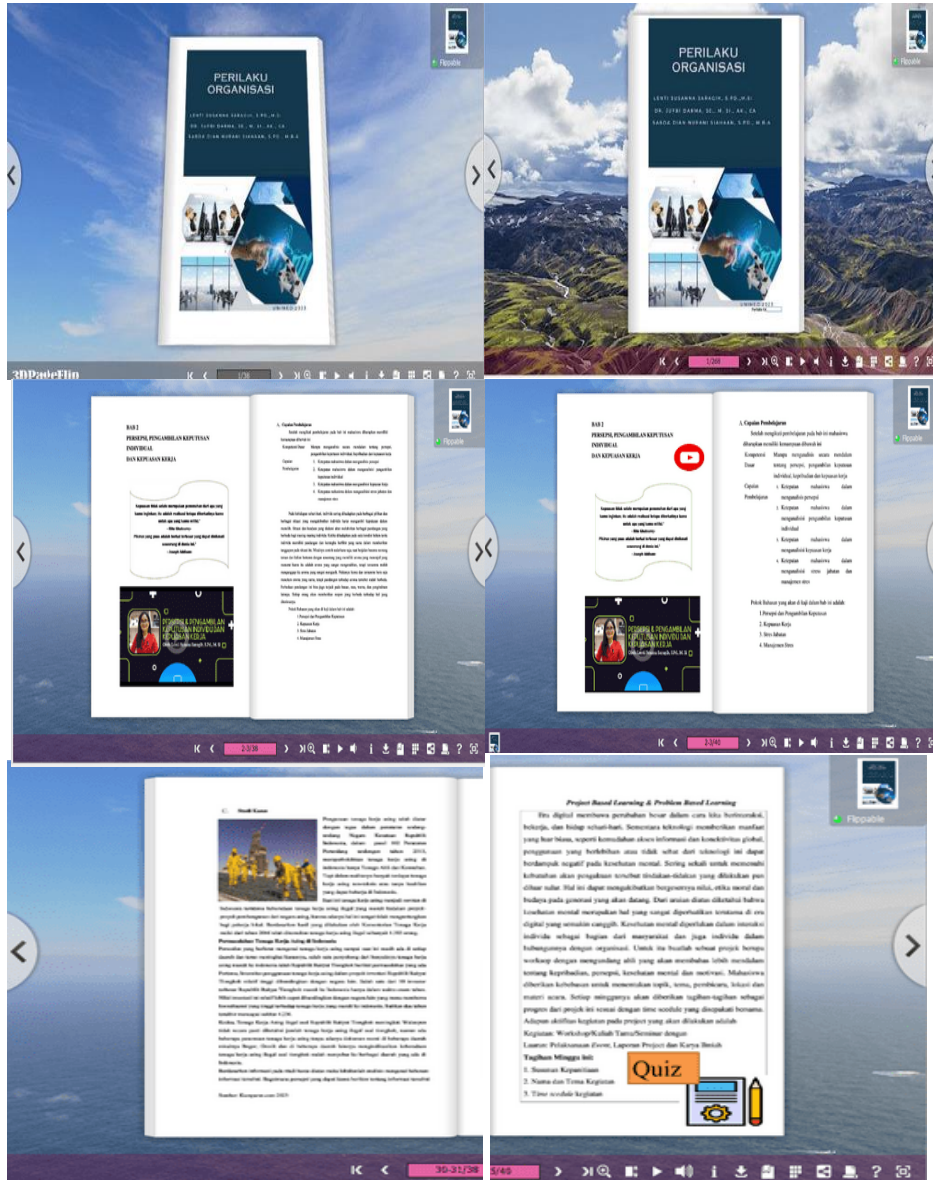


Figure 6. Video 3D Teaching Material Display Before and After Revision

*c. Practicality Test*

The practicality test of this book is assessed by students who aim to test the readability of the book on a predetermined sample. The practicality test tests the level of learnability, efficiency and effectiveness of time. The results of the pre-actance test can be seen in the table below.

Table 10. Test Results of Practicality of Teaching Materials for Organizational Behavior

Indicator	Question	Total Score (TSEp )	S-Maks	$VP = \frac{TSEp}{S-max} \times 100\%$	Category
Efficiency	1	153	165	92,73	Vary Practical
	2	156	165	94,55	Vary Practical
	3	150	165	90,91	Vary Practical
	4	142	165	86,06	Vary Practical
	5	147	165	89,09	Vary Practical
Score Efficiency		748	825	90,67	Vary Practical
Learnability	6	152	165	92,12	Vary Practical
	7	148	165	89,70	Vary Practical
	8	155	165	93,94	Vary Practical
Score Learnability		455	495	91,92	Vary Practical
Effectiveness of Time	9	150	165	90,91	Vary Practical
	10	149	165	90,30	Vary Practical
	11	139	165	84,24	Vary Practical
	12	153	165	92,73	Vary Practical
Score Effectiveness of Time		591	660	89,55	Vary Practical

From the data on the table above, we can see that in terms of usefulness to obtain a practical validity value (efficiency) of 90, 67% is included in the very practical category. This means that teaching materials for Organizational Behavior with Project-based 3D Realists can be used to explain the material, help students to actively participate in the learning process, case studies presented can increase student argumentation skills, exercises used can increase student involvement in learning and projects designed to increase student skills.

In terms of ease for users (learnability) obtained a practicality validity value of 91, 92% is included in the very practical category. This means that the instructions for using teaching materials are clear, the letters presented are easy to read, and the tools in the teaching material media are easy to use. While viewed in terms of time effectiveness, it is known that the value of practicality validity obtained is 89.55% included in the very practical category. This means that the presentation of videos in teaching materials facilitates understanding of the material, teaching materials are easy to use anywhere, quizzes can help evaluate and teaching materials are considered fun by students.

From the results of the analysis above, it can be concluded that judging from the three aspects above, namely usability, convenience for users and time effectiveness, teaching materials for Organizational Behavior with 3D Realist Based Based Project Learning is very practical to use. This is in line with the results of research presented by Fitri (2021) which said that the E-module was developed using the 3D Pageflip Professional application with the final format of the exe program and the module framework consisting of a module cover, module position map, learning activities per sub-chapter with examples and practice questions and final formative tests, containing material, videos, animations, practical simulations used by students [11].



## **Evaluation**

During this phase, consider the use of text and language in your materials and correct any typos found. The words expressed are easy for students to understand. The result was a product that was declared suitable for use, practical and highly effective.

## **4.2 Result**

The materials created are 3D materials and include teaching materials, videos, images, quiz questions, and even project assignments. The learning materials are created using professional 3D Page Flipper software. In addition to 3D teaching materials, we also produce ISBN-registered paper book teaching materials. The materials are designed based on the students' project assignments, and the project goals to be achieved are determined at each meeting. In addition to project tasks, the study material also includes KKNi tasks such as critical book review, critical journal review, mini-research, case study, idea engineering, and routine tasks. The development of this teaching material is in accordance with the results of research presented by Widura, et al (2021) which said that the Problem Based Learning and Project Based Learning Learning Models can improve student learning outcomes [16].

Based on the data from the study, it is known that the assessment of the three validators, both media validators and material validators, obtained an average value range in the range of 86%-91%, this states that Organizational Behavior Teaching Materials with Project Based Learning 3D Realist video in terms of content, presentation and language are very feasible to use. The same thing was also stated by Fitri, et al (2021) also stated that the development of the Professional Pageflip 3D e-module is worthy of being used to increase students' understanding in learning. Based on the data from the results of practicality testing, it can be seen that in terms of usefulness to obtain a practicality validity value (efficiency) of 90, 67% is in the very practical category. This means that teaching materials for Organizational Behavior with Project-based 3D Realists can be used to explain the material, help students to be active in the learning process, case studies presented can increase student argumentation skills, exercises used can increase student involvement in learning and projects designed to increase student skills.

In terms of ease for users (learnability) obtained a practicality validity value of 91, 92% is included in the very practical category. This means that the instructions for using teaching materials are clear, the letters presented are easy to read, and the tools in the teaching material media are easy to use. While viewed in terms of time effectiveness, it is known that the value of practicality validity obtained is 89.55% included in the very practical category. This means that the presentation of videos in teaching materials facilitates understanding of the material, teaching materials are easy to use anywhere, quizzes can help evaluate and teaching materials are considered fun by students. This is in accordance with the results of Firnanda's research (2022) also found that the use of visual-based teaching media can increase student learning motivation, which has an impact on improving student learning outcomes[17]. Based on the results of the analysis above, it can be concluded that judging from the three aspects above, namely usability, convenience for users and time effectiveness, teaching materials for Organizational Behavior with 3D Realist Based Project Learning is very practical to use. This is in line with the results of research presented by Fitri (2021) which said that the E-module was developed using the 3D Pageflip Professional application with the final format of the exe program and the module framework consisting of a module cover, module position

map, learning activities per sub-chapter with examples and practice questions and final formative tests, containing material, videos, animations, practical simulations used by students [11].

## **5 Conclusion and Recommendation**

### **5.1 Conclusion**

Product materials for the 3D Realist Project-Based Learning Organizational Behavior course are developed using the ADDIE development model: (1) Analysis, (2) Design, (3) Development, and (4) Implementation. Chapter 13, namely: (1) Individuals and their differences; (2) cognition, decision making, and job satisfaction; (3) Motivation. (4) Fundamentals of collective action. (5) Teamwork. (6) Disputes and negotiations. (7) Power and politics. (8) Communication within the organization. (9) Leadership in organizations. (10) Diversity, organizational culture. 11) Organizational design. 12) Organizational changes. 13) Organizational development. The feasibility of a teaching material product for an organizational behavior course with 3D realist project-based learning was developed and declared suitable for use in learning. Developed practical teaching materials for the course "Organizational Behavior" using 3D Realist Project Based Learning and declared that they can be used for learning.

### **5.2 Recommendation**

Since the research conducted is closely related to the limitations of the researchers, the following recommendations are summarized. The use of his project-based teaching materials with 3D videos has the potential to improve student learning outcomes and is therefore recommended for classroom use. Wi-Fi facilities in campus areas should be improved for easy access to learning materials, especially 3D video materials that are directly linked to links provided by instructors.

### **Acknowledgments**

We are deeply grateful to Universitas Negeri Medan for supporting and funding the research to develop this material. We hope that this teaching material will be particularly useful for the development of Business Education Program, Faculty Economics of Universitas Negeri Medan.

### **References**

- [1] Fathurohman, Muhammad. "Model Pembelajaran Inovatif: Alternatif Desain Pembelajaran yang Menyenangkan". Yogyakarta: Ar-Ruzz Media Group (2016)
- [2] Ariyana, Oky.dkk, "Hand-Out Based on High Order Thingking Skills", KEMENDIKBUD (2018)
- [3] Nababan, Damayanti., dkk, "Strategi Pembelajaran Project Based Learning", Jurnal Pendidikan Sosial dan Humaniora, Vol II No 2, pp 706-719 (2023)
- [4] Nurhayati, Ai Sri & Harianti, Dwi. "Model Pembelajaran Project Based Learning (PjBL)" (2020)
- [5] Salsabila, R.P. "Pengembangan Modul Elektronik Fisika sebagai Media Intruksional-Pokok Bahasan Hukum Newton pada Pembelajaran Fisika di SMA Jurnal Pembelajaran Fisika", 1 (1): 12-19 (2013)
- [6] Saefullah, I. "Membuat Buku Digital Mandiri".Indramayu: Kaonoe Book (2016)

- [7] Permana, A., TS, "Pengembangan Media Pembelajaran Interaktif Sistem Pengapian Berbasis Komputer-Untuk Pembelajaran di SMK Ma'arif Salam Magelang".Laporan Penelitian. Yogyakarta: Universitas Negeri Yogyakarta (2016)
- [8] Chien, S. P., & Wu, H. K. "Examining influences of science teachers' practices and beliefs about technology-based assessment on students' performances: A hierarchical linear modeling approach. *Computers and Education*", 157, 103986 (2020)
- [9] Sinta, Mulia., Halimatus, Sakdiah., Nanda, Novita., Fajrul, Wahdi, Ginting., Syafrizal. "Study Sample Project Based Learning (PjBL) untuk Meningkatkan Kemampuan HOTS Siswa pada Materi Hukum Grafitasi Newton di MAS Jabal Nur, *Jurnal Pendidikan Fisika& Terapan*, Vol 3 No 3, 2022
- [10] Asih, Nining Setia. Sobihah Rasyad. Juwanda, "Bahan Ajar Teks Eksposisi Berbantuan 3D Pageflip Profesional untuk SMA", *JPE (Jurnal Pendidikan Edutama)* Vol. 9 No. 1 Januari 2022 P-ISSN: 2339-2258, E-ISSN: 2548-821X, pp, 231-240 (2022)
- [11] Fitri, Hammiyati., Maison., Dwi Agus Kurniawan, "Pengembangan E-Modul Menggunakan 3D Pageflip Profesional pada Materi Momentum dan Impuls", *Repositori Unja: Jambi* (2021)
- [12] Mulyatiningsih, E., "Pengembangan Model Pembelajaran". Diakses dari <http://staff.uny.ac.id/sites/default/files/pengabdian/dra-endang-mulyatiningsih-mpd/7cdevelopment-model-pembelajaran.pdf>. Akses at September 2023 (2016)
- [13] Drljaca, D., Latinovic, B., Stankovic, Z., & Cvetkovic, D., "ADDIE model for development of e-courses". In *Documento procedente de la International Scientific Conference on Information Technology and Data Related Research SINTEZA* (2017)
- [14] Ismail., Nurdin., Sri, Hartati., "Metodologi Penelitian Sosial". Surabaya: Media Sahabat Cendekia. (2019)
- [15] Arikunto., "Prosedur Penelitian". Jakarta: Rineka Cipta (2019)
- [16] Widura, Wira Bayu. Aspini Arca., "Penerapan Model Pembelajaran-Problem Based Learning Untuk Meningkatkan Hasil Belajar Siswa", *Jurnal Ilmiah Pendidikan Profesi Guru*. Vol 4 No 2, pp 200-209 (2021)
- [17] Firnanda, Muhammadiyah Aditya., "Pengembangan Bahan Ajar Berbasis Visual Dimensi Bermuatan Problem Based Learning untuk Menumbuhkan Motivasi Belajar Mahasiswa Mata Kuliah Organisasi dan Arsitektur Komputer". *Repositori Univesitas Negeri Malang* (2022)