DEVELOPMENT OF A PROBLEM BASED LEARNING E-MODULE WITH THE ASSISTANCE OF CANVA ON THE MATERY OF BALANCE AND ROTATIONAL DYNAMICS TO GROW STUDENTS’ INTEREST IN LEARNING

Bone Komala Senja1, Rosane Medriati1, Desy Hanisa Putri1
1Physics Education Study Program, University of Bengkulu
Email: bone9j@gmail.com

DOI: http://dx.doi.org/10.26418/jpmipa.v15i1.71909

Abstract
This study aims to determine the feasibility of developing the Problem Based Learning e-module developed using canva to foster student interest in learning. This research method uses R&D research with the ADDIE type. The instruments used were observation, interviews and needs analysis questionnaires which obtained results of 81.04% with categories strongly agreeing to develop e-modules. The design of the e-module learning media will be developed according to what has been prepared. Expert validation sheet instruments consisting of aspects of content feasibility, material presentation, language, media, PBL and interest in learning can be seen that the development of e-modules is very feasible with an average percentage of 88.54% and student perception results which has 3 aspects, namely the appearance, presentation of material and benefits has an average yield of 81.81% of 3 Bengkulu City High Schools which can be categorized as very good. It can therefore be concluded that the development of the E-module Problem Based Learning assisted by Canva on the material of balance and rotational dynamics to foster students’ interest in learning becomes a very viable product.

Keywords: E-Module, Interest in Learning, Problem Based Learning

INTRODUCTION
The development of technology and information in the current era of globalization is experiencing quite rapid development. This development has a significant impact on the world of education, where strategies and patterns in learning continue to develop (Fitriyah & Ghofur, 2021). Developments in the world of education must experience changes for the better by requiring teachers to know how to deliver learning to be more interesting and the skills needed by students can be fulfilled in the 21st century (Kimianti & Prasetyo, 2019).
In the 21st century, digital technology has become increasingly important to have learning and innovation skills, one of the innovations for teachers in creating creative learning so that learning is not monotonous. This innovation can be in the form of using learning media, using learning models/methods, and many other things. As one form of effort to increase students' motivation, interest and attention (Syahiddah et al., 2021).

Interest in learning is the main factor that determines the degree of student activity in the learning process which has a very big influence on learning outcomes (Ramadhany & Prihatnani, 2020). Interest in learning has a very important role in the learning process where if students have a high interest in learning, students will be able to learn well and can train students to think critically, carefully, logically and creatively, thus making students get good learning outcomes in their learning. In the learning process there needs to be a trigger to make students happy so that they can train students' interest in learning, one of which is by innovating learning media such as using e-modules that are interesting and good for use in learning.

The use of teaching materials by utilizing technology is considered to make the delivery of learning easier and also more interesting (Divayana et al., 2019). One of the teaching materials that utilizes technology such as e-modules. E-modules are teaching materials that are packaged digitally containing materials, methods, limitations and assessment methods that are designed systematically and interestingly to achieve learning competencies according to the level of complexity electronically (Ramadayanty et al., 2021). E-modules can be used as an efficient and effective learning alternative, as well as interactive in the form of audio, images, animations and videos. Electronic modules are one of the teaching materials that are arranged systematically with language that can adjust to students' abilities. So as not to confuse students in understanding the material when studying independently (Laili et al., 2019). E-modules can help teachers facilitate students in learning (Asrial et al., 2020). Students feel actively involved in learning and effective when modules are used in learning (Moradi et al., 2018).

One of the lessons that requires teaching materials in the form of electronic modules (e-modules) is physics. Physics is a science that is basically a collection of knowledge, ways of thinking and investigation. The science in question is the science that studies the properties and symptoms of objects in nature that are experienced by the five senses (Hutabarat & Hasibuan, 2020). Physics lessons still seem difficult to understand because they have abstract concepts and are not easily linked to daily events in human life (Miswati et al., 2020). This requires educators to be creative in creating and developing learning media so that students can be more interested in studying physics and the material presented can truly be understood by students. Apart from learning media, its implementation also requires a learning model so that learning is not monotonous. The method of learning carried out by teachers in the teaching and learning process can influence students’ interest in learning (Medriati, 2013).
There are many learning models that can be used to create effective and enjoyable learning, one of which is using the learning model such as Problem Based Learning recommended in the 2013 curriculum. According to Sutirman (2013) in Setiabudi et al. (2022) PBL has the characteristic of using real problems as the beginning of learning related to the material studied and its application which is then translated into groups through cooperative communication. Judging from these characteristics, PBL can also train students to solve problems, which creates an active learning atmosphere so that interest in learning increases. Implementing the PBL model in learning will foster students' interest in learning because learning is felt to be close to students' daily lives.

One material that is suitable to be applied using the PBL model is balance and rotational dynamics. This is because this material has many things related to daily life, so learning becomes more meaningful (Novia et al., 2021). With the PBL model which presents problems which aim to stimulate or provide stimulation for students to learn so that it is hoped that learning will be more memorable and can find a solution to a problem (Yusa et al., 2023). This is supported by the results of an interview with one of the physics teachers at SMAN Kota Bengkulu who said that the material on balance and rotational dynamics is material that is quite difficult to accept because most students do not understand the relationship between the material that will be presented and the previous material taught. Like a similar statement by Gita et al. (2022) that students experience difficulties in understanding and solving balance and rotation dynamics problems. This is proven by the results of students' initial ability tests being in the low category.

Based on the results of observations and interviews with class X, XI and XII physics teachers in SMAN 3 Bengkulu City, a problem was found, namely that in the learning process many students did not pay attention to what was said by the subject teacher or only a few students paid attention during the teaching and learning process. Students are also less active in asking questions about concepts they do not yet understand. Students tend to do other activities besides paying attention to the teacher's teaching, so learning tends to be teacher-centered. However, teachers have tried to teach student-centeredly, but have not shown the expected results. Apart from that, in the learning process the only teaching materials used are textbooks borrowed from the school library and LKS. The learning media that are often used are Powerpoint and interactive videos so that students' interest in learning about the material being taught decreases and students are not enthusiastic during learning activities. The results of teacher interviews regarding students' opinions regarding physics lessons are that students still think physics is difficult, so this causes learning outcomes and interest in studying physics to be low, so new strategies are needed. This is also the same as the results of teacher interviews in research conducted by Istiqomah et al. (2023) stated that students' curiosity, motivation and interest in learning were still lacking, because students still considered learning physics to be difficult and seemed boring, which
gave rise to a feeling of laziness in finding solutions to problems that had to be solved.

Based on the results of an analysis of student needs at 3 SMAN Kota Bengkulu, it was found that students felt bored during physics lessons, because the teaching materials used were less interesting with the score obtained being 78.37%. So students need the desired learning resources that have a new and attractive appearance with a score of 81.49% and can be accessed at any time via cellphone with a score of 82.69%. Students also need learning resources that can encourage them to be involved in problem solving activities related to daily life with a score of 81.73% and can collaborate in groups.

Based on several of the problems above, an alternative solution is needed in the learning process to overcome these problems. One way to overcome the low level of student interest is that the learning that is held should utilize technology to create and apply teaching materials. The use of teaching materials should not only look at the teacher's activities, but also include students being more active when learning. The addition of audio-visual content to teaching materials makes them more interesting for students. Creating content like that requires a lot of skill and experience in creating interesting learning media. One of the tools that can be an alternative is Canva (Alfian et al., 2022). Canva is a tool for graphic design that can bridge users so that they can easily design various types of creative designs online, one of which is creating electronic modules with motion animation features to make the module more interesting and adding video links that can be applied to the module making the Canva application a the right choice to make the module more interactive. The Canva application can also make it easier for students to understand lessons, because it can display text, video, animation, audio, images, graphics, etc. according to the desired display and allows students to focus on lessons because it looks interesting and by using the Canva application, Educators can create more interesting e-modules to increase students’ interest in learning (Pardede et al., 2022).

This research is supported by research entitled "Development of a PBL-Based Learning Module on Thermochemical Material for Class XI SMA Negeri 2 Pontianak" that this research shows that the criteria are very suitable for use with a percentage of 92.55% (Yona et al., 2022). This research is also supported by research entitled "Development of a Problem-Based Temperature and Heat Learning Module for High Schools in an Effort to Increase Student Interest in Learning" with results showing that learning with this problem-based module can significantly increase student interest in learning (Hadiya et al., 2015). It is also supported by the results of the needs analysis that students strongly agree with the development of the PBL e-module on balance and rotation dynamics. This is obtained from the percentage obtained at 81.04%. According to the Likert scale interpretation table for data with a percentage of 76% - 100%, it is categorized as strongly agree.

From the explanation above, the author will conduct research which aims to test the feasibility of the Problem Based Learning e-module...
learning media assisted by Canva on balance and rotation dynamics to foster students’ interest in learning.

METHODS

The development of electronic modules in this research uses research and development (R&D) with the ADDIE type developed by Dick and Carry which stands for Analysis, Design, Development, Implementation, Evaluation. The ADDIE model is a model commonly used in teaching development, various forms of product development that can also be used such as learning methods, models, learning strategies, teaching materials and media (Wulandari et al., 2023). The development model has 5 development stages as shown in Figure 1.

![ADDIE Model](image)

(Nurlaila et al., 2022)

Figure 1. ADDIE levels according to Dick and Carry

This research was conducted at three state high schools, namely SMA N 1 Bengkulu City, SMA N 6 Bengkulu City and SMA N 7 Bengkulu City. This research was conducted in August-October in the odd semester of the 2022/2023 academic year in Bengkulu City. At the Analysis stage, namely analyzing the needs, situations and conditions of students, teachers and learning resources according to student characteristics in the learning process by conducting initial stage research and collecting data for use in the e-module development process. The product of this research and development is a PBL-based physics module based on class XI physics topics, basic competencies 3.1 and 4.1. Population is a generalization area consisting of objects/subjects that have certain qualities and characteristics determined by researchers to be studied after which they can make conclusions according to Sugiyono (in Fajri et al., 2022). The population taken in this research were physics teachers who taught in class XI Science and class XI Science students at 3 Bengkulu City State High Schools with a total of 5 physics teachers and 104 students. Meanwhile, the sample is part of the total population to be studied and can be considered to describe the population (Dewi, 2021). In taking samples, researchers used a sampling technique, namely purposive sampling, because this technique is used when determining samples based on certain considerations. Data collection techniques in this research used observation data, interviews and questionnaire data. The instruments used in this research used observation sheets, interview sheets, needs analysis questionnaire sheets for electronic module learning media. The data analysis technique in this research uses a measurement scale, namely the Likert scale. The Likert scale used is in
the form of four responses according to Sugiyono (in Liana et al., 2019) shown in Table 1.

Table 1. Likert scale calculation

<table>
<thead>
<tr>
<th>Alternative Answers</th>
<th>Score</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly Agree (SS)</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Agree (S)</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Disagree (TS)</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Strongly Disagree (STS)</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

In this research, to find out how many respondents strongly agree, agree, disagree and strongly disagree with the management of questionnaire data by creating data intervals and making graphs of the results. Then, to calculate the percentage, the data obtained is processed using the calculation formula carried out by Oktavia et al. (2022) which is shown in equation 1.

\[ P = \frac{\sum \text{score}}{\text{Maximum Score}} \times 100\% \] (1)

After calculating the percentage using the formula above, the next step is to match the calculation results with the score interpretation according to (Sari et al., 2020) shown in Table 2.

Table 2. Needs analysis questionnaire assessment criteria

<table>
<thead>
<tr>
<th>Percentage (%)</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>0%-25%</td>
<td>Strongly disagree</td>
</tr>
<tr>
<td>26%-50%</td>
<td>Disagree</td>
</tr>
<tr>
<td>51%-75%</td>
<td>Agree</td>
</tr>
<tr>
<td>76%-100%</td>
<td>Strongly agree</td>
</tr>
</tbody>
</table>

At the design stage, prepare whatever is needed in making electronic teaching materials in the form of electronic modules (e-modules), namely determining what sub-materials will be included and determining an application that will be used in compiling the complete product. The application that will be used at this design stage is the Canva application. The Canva application is a free and paid online application that can be used to create learning media with several available templates. Utilizing the Canva application can create e-module learning media with an attractive design (Irkhamni et al., 2021).

At the development stage, realizing the product design of an e-module that has been created. At this stage, expert validation tests and product perception tests are carried out. Product expert validation was completed by 2 physics lecturers at the University of Bengkulu and 3 physics teachers at 3 SMA N Bengkulu City as a basis for improving the e-module media being developed. The data obtained was analyzed using quantitative data analysis. Quantitative data was obtained from the results of a questionnaire which consisted of several aspects, namely the suitability of the content, presentation of material, language, media, PBL and interest in learning.

Next, after obtaining the percentage score for each statement using formula (1), the feasibility percentage is obtained which is then presented into the eligibility category based on Table 3.

Table 3. Criteria for e-module eligibility results

<table>
<thead>
<tr>
<th>Percentage (%)</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>0%-25%</td>
<td>Totally not worth it</td>
</tr>
<tr>
<td>26%-50%</td>
<td>Not worth it</td>
</tr>
<tr>
<td>51%-75%</td>
<td>Worth it</td>
</tr>
<tr>
<td>76%-100%</td>
<td>Totally worth it</td>
</tr>
</tbody>
</table>
Based on the e-module eligibility criteria table, the e-module can be said to be eligible if the presentation of the qualifications obtained is ≥ 51% of all aspects (Marcelina et al., 2022).

The next stage is implementation which will be tested on class XI students at 3 senior high schools in the city of Bengkulu. Based on the percentage of the student perception questionnaire which has 3 aspects, namely appearance, presentation of material and benefits, the percentage score for each question is obtained using the equation formula (1), so the results obtained can be categorized using Table 4.

Table 4. Student perception criteria

<table>
<thead>
<tr>
<th>Percentage</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>0%-25%</td>
<td>Very not good</td>
</tr>
<tr>
<td>26%-50%</td>
<td>Not good</td>
</tr>
<tr>
<td>51%-75%</td>
<td>Good</td>
</tr>
<tr>
<td>76%-100%</td>
<td>Very good</td>
</tr>
</tbody>
</table>

Based on the criteria table, the percentage of e-module perception can be said to be good if the e-module results obtain a percentage of ≥ 51% with good criteria (Marcelina et al., 2022).

The final stage is Evaluation. At this stage, the e-module that has been implemented for students receives feedback in the form of comments and suggestions from both students and physics teachers. Next, it is revised again until it becomes a viable and better product.

RESULTS AND DISCUSSION

Analysis Stage

The analysis phase was carried out at the beginning of the research with the aim of collecting information data through observation, interviews and needs questionnaires given to students and teachers at 3 SMAN Kota Bengkulu. The results obtained are: 1) During the learning process, the teaching materials that are often used are printed books and worksheets, while for non-printed teachers often use PowerPoint and interactive videos, 2) The learning system is still teacher-centered and does not attract students' attention, thus making students difficulty understanding the material, and 3) students and teachers need learning media that can attract students' interest in learning with or without teacher guidance and can be accessed anywhere and anytime via smartphone very easily.

The results of the analysis of student needs obtained from 3 SMA N Bengkulu City were 81.04% of the maximum percentage, namely 100%. Based on table 2, the assessment criteria for the needs analysis questionnaire for data with a percentage of 76%-100% are categorized as strongly agreeing with the development of PBL e-modules on balance and rotation dynamics material and the results of teacher interviews also stated that they strongly agree with the development of PBL e-modules in material on balance and rotational dynamics.

This is in line with research conducted by Malina et al. (2021) regarding the analysis of the need for physics e-modules as PBL-based teaching materials at MA Muslimat NU, the results showed 95.5% of students were curious and tried to learn using electronic modules (e-modules). Therefore, it can be concluded that the three SMAN schools in Bengkulu City strongly agree with the development of PBL e-modules on balance and
Bone Komala Senja, Rosane Medriati & Desi Hanisa Putri
Development of a Problem Based Learning E-Module with the Assistance of Canva on the Matery of Balance and Rotational Dynamics to Grow Students’ Interest in Learning.
Development Stage

The next activity after completing the design stage is development which aims to determine the feasibility of the product developed in physics learning through expert validation and student perceptions. The validation results of several aspects of the assessment, namely appropriateness of content, presentation of material, language, media, PBL and interest in learning, which were validated by 5 validators (V) can be seen in Table 5.

<table>
<thead>
<tr>
<th>Aspects of Evaluation</th>
<th>Percentage of Each Aspect</th>
<th>Average</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Content eligibility</td>
<td>75% 81.25% 100% 93.75% 93.75% 88.75%</td>
<td>88.75%</td>
<td>Very worth it</td>
</tr>
<tr>
<td>Presentation of Material</td>
<td>100% 75% 87.50% 100% 100% 92.50%</td>
<td>92.50%</td>
<td>Very worth it</td>
</tr>
<tr>
<td>Language</td>
<td>91.67% 75% 83.33% 100% 91.67% 88.33%</td>
<td>88.33%</td>
<td>Very worth it</td>
</tr>
<tr>
<td>Media</td>
<td>87.50% 91.67% 87.50% 91.67% 100% 91.67%</td>
<td>91.67%</td>
<td>Very worth it</td>
</tr>
<tr>
<td>PBL</td>
<td>75% 75% 75% 100% 100% 85%</td>
<td>85%</td>
<td>Very worth it</td>
</tr>
<tr>
<td>Interest to learn</td>
<td>75% 75% 75% 100% 100% 85%</td>
<td>85%</td>
<td>Very worth it</td>
</tr>
</tbody>
</table>

Overall average 88.54% Very worth it

Based on Table 5, the results of the e-module feasibility test in the content feasibility aspect are 88.75% because the module content is in accordance with KI and KD, in accordance with the characteristics of students, and the accuracy and up-to-dateness of the material is appropriate so that the material presented is in accordance with the concepts and examples in everyday life. The presentation of the material was 92.50% due to complete presentation support such as instructions for use, concept maps, summary glossaries and assessments. Presentation of complete learning starting from problems, practical activities, to evaluation so that students are invited to actively participate independently.

Linguistics was 88.33% because the language used was easy to understand, the material presented systematically included examples of
questions, exercises and answer keys as well as correct use of Indonesian spelling. This indicator corresponds to (Panggabean & Sembiring, 2022) Good teaching materials are appropriate teaching materials, appropriate to learning outcomes, materials that are appropriate, complete, systematic, and use language that is easy to understand. The media assessment aspect was 91.67% because the module presentation contained clear learning objectives, provided supporting examples and illustrations and there were games appropriate to the material. The suitability of graphics with the language and images used is balanced. An attractive and balanced layout, the use of proportional and consistent colors and the attractiveness of the cover such as title, text, images and illustrations illustrate the content/material in the module.

The media assessment aspect aims to determine the attractiveness of the e-module in terms of visual, audio and video (Syahiddah et al., 2021). The PBL aspect is 85% because it is in accordance with the steps/syntax of Problem Based Learning, such as the orientation of students to problems, there is motivation to involve students in solving problems, the stages of organizing students, the materials needed by students to solve problems are available, the stage of guiding the investigation includes simple practical activities that help students solve problems, the stage of developing and presenting the results of the work, observation data tables and data processing instructions are available, the stage of analyzing and evaluating problem solving encourages students to draw conclusions from the activities that have been carried out.

The interest in learning is 85% because the criteria for indicators of interest in learning are in the module, such as being able to build a sense of enjoyment, increase involvement, interest and attention of students. So an average of 88.54% was obtained, which when compared with Table 5. The results of the e-module feasibility test obtained very feasible criteria.

These results are relevant to the research "Development of a Dynamic Fluid Material E-Module Assisted by Flip Pdf Professional to Train Critical Thinking Abilities of High School Students" shows that this research is very suitable for use and results were obtained 84.80% in the content aspect, 86.11% in the presentation aspect , 81.94% in the language aspect, and 88.88% in the media aspect (Siburian et al., 2022). This research is also relevant to the research entitled "Development of Physics Learning E-Modules Based on Problem Based Learning (PBL) on Business and Energy Material for Class content, appropriateness of presentation, language assessment and Problem Based Learning assessment obtained an average score of 87% in the very appropriate category (Wakiah et al., 2019).

**Implementation Stage**

At the implementation stage, field research was carried out for students' perceptions of the e-module product being developed. The student results can be seen in Table 6.

From the results of the student perception test, it was obtained that the average student perception of the Problem Based Learning e-module that
had been developed obtained an overall average perception of 81.81% and was in the very good category.

Table 6. Result of students’ perception

<table>
<thead>
<tr>
<th>Aspect</th>
<th>Percentage</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>83.13%</td>
<td>Very good</td>
</tr>
<tr>
<td>Presentation of Material</td>
<td>81.71%</td>
<td>Very good</td>
</tr>
<tr>
<td>Benefit</td>
<td>80.60%</td>
<td>Very good</td>
</tr>
<tr>
<td>Overall average</td>
<td>81.81%</td>
<td>Very good</td>
</tr>
</tbody>
</table>

These results showed that students' interest in explaining e-module material with the display aspect was 83.13% because it was equipped with images, animations and learning videos so it was easy to understand. The results of this research are in line with research conducted based on research results from Sasmita et al. (2021) the final results of the student perception test showed that the average percentage was 88.46% which was in the very good category because students needed other learning resources besides books that were already available at school, so that students felt interested and enthusiastic about learning physics using e-modules, which was developed. The e-module is made attractive so it is hoped that with an attractive appearance it can attract students' interest in trying to operate and learn (Setyoningtyas et al., 2022). The material presentation aspect was 81.71% because it aroused students' interest in reading and the available activities had stimulated students' curiosity so that students were interested in using e-module media. The benefit aspect is 80.60% because with this e-module students can access it anywhere and anytime so it is suitable to support learning activities. This research is also relevant to research (Irkhanni et al., 2021). The results show that through interesting e-modules it can strengthen students' interest in learning during the learning process.

Evaluation Stage

The Evaluation Stage is a stage that must be improved in product development. Based on qualitative data obtained from validation questionnaires and students' perceptions of the e-module being developed, namely the use of colors that should be more contrasting with the background and can display more attractive colors and it is better if the illustrations or images contained in the e-module use good image quality. This input is the same as opinion (Renat et al., 2017) that the choice of font or color must be adjusted to the characteristics of the material being developed and the characteristics of the students. So that the modules developed do not seem monotonous and it is hoped that by using teaching materials that foster interest in learning such as electronic modules, students can change their thinking that physics is a difficult but fun subject.

Another thing that needs to be revised is adding a thumbnail to each video as initial information so that it can attract interest in watching videos that have been uploaded. As well as YouTube videos that are adapted to the PBL material and steps and in writing the material it is recommended to read from several references. Suggestions and input from validators on the expert validation sheet are used as a reference in revising the e-module product. The final assessment from each validator is that the teaching materials that have
been developed are suitable but require revision. In research conducted by Kurniawan et al. (2023) and Miskiyyah et al. (2023) the Canva application is only used to design cover pages and material pages and to create attractive e-modules in combination with additional applications such as Flip PDF Corporate Edition and Anyflip software which function to add navigation buttons and add displays such as video, links and audio. Meanwhile, in the development of this e-module, designing, editing and adding navigation buttons and then adding videos, illustrations, images, audio and links is only done in Canva where Canva has provided an attractive template and lots of features available so we just have to adjust it according to our wishes and can save time in practical learning media because the application can be reached by all groups and can be used anywhere and anytime with the output produced from this application in the form of a link that can be directly shared and accessed by students. This is what makes Canva development different from others.

CONCLUSION AND RECOMMENDATION

Based on the results and discussion of the e-module feasibility test, an average percentage of 88.54% was obtained in the very feasible category. Students’ perceptions of e-module development obtained an average percentage score of 81.81% in the very good category. So it can be concluded that the development of a Problem Based Learning e-module assisted by Canva on balance and rotation dynamics to foster students’ interest in learning is very feasible. Suggestions for further research include using the Canva application as teaching material with different material for research and e-module development.

REFERENCES


Jurnal Pendidikan Matematika dan IPA
Vol. 15, No. 1 (2024) h. 1-16


Bone Komala Senja, Rosane Medriati & Desi Hanisa Putri
Development of a Problem Based Learning E-Module with the Assistance of Canva on the Matery of Balance and Rotational Dynamics to Grow Students’ Interest in Learning.


Development of a Problem Based Learning E-Module with the Assistance of Canva on the Matery of Balance and Rotational Dynamics to Grow Students’ Interest in Learning.


