Development of Interactive Game-Based Learning Media Assisted by Classpoint to Enhance Student Learning Motivation

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ABSTRACT.

As a result of the needs analysis, students stated that they had difficulty understanding physics learning and needed encouragement for students to make it easier for them to understand learning. This study aims to determine the feasibility of developing media, know student responses to the development of media, and know student motivation after using interactive game-based learning media assisted by the Classpoint application. This research uses the Research and Development (R&D) method using the 4D model. The sample used was twenty-six students, and the teacher was one person. Research data were obtained through expert validation sheets, student response questionnaires, and student motivation pretest-posttest, which were analyzed qualitative and quantitative. The overall learning media validation results show a score of eighty-six point two, which is included in the very feasible category, student response is eighty-one percent, which shows a good category, and there is an increase in motivation of twelve point five percent which is classified as moderate motivation with N-Gain results of zero point four. for as the research subjects are tenth grade students of Public Senior High School 08 Bengkulu City.

INTRODUCTION

The world of education is a world that is a priority in human life (Risdianto, 2019). Education in human life is essential because, without education, it is improbable that a human group will survive and develop in line with its aspirations to continue progressing (Risdianto, 2019). Physics learning is still one of the lessons that students consider difficult. This causes problems that must be solved together by the government, teachers, and society. Understanding the concepts and learning outcomes of physics, especially at the high school level, is still very low, the contributing factor is that the educational design that is displayed still does not follow the nature of learning and teaching physics, so there is no interest in starting to learn physics (Sahlan et al., 2021). In Indonesia, education continues to be characterized by the belief that knowledge is something to be memorized, with classroom learning primarily centered around the teacher as the primary provider of knowledge (Syukri et al., 2022).

One form of media development of teaching materials to make it more interesting is by doing gamification. According to LearnTech, gamification is the process of using game elements in non-game conditions to reinforce positive learning behavior. The use of gamification in learning is expected to increase the motivation of students to access and participate in learning actively, but
Motivation is essential to increase learning; increasing motivation to learn will make it easier for you to start learning something new. Interest in learning will also have a big influence on motivation. Student learning motivation consists of 6 indicators, namely: 1) Having a strong drive and determination to achieve success, 2) Receiving support and acknowledging personal learning needs, 3) Holding aspirations and envisioning future goals, 4) Feeling recognized and valued in the learning process, 5) Engaging in stimulating and captivating learning activities, and 6) Being immersed in an environment conducive to learning (Medriati et al., 2020). Highly motivated students consistently strive to improve and aspire to be perceived as successful within their academic community. Conversely, students lacking motivation tend to exhibit a lack of seriousness in their approach to learning (Rumhadi, 2017). The ARCS (Attention, Relevance, Confidence, Satisfaction) model, developed by Keller and Kopp for the first time in 1987 as an answer to the question of how to design learning that can affect achievement motivation and learning outcomes.

The results of the needs analysis distributed to 100 students at Senior High School no 8 Bengkulu City found that 72% of students stated that they had difficulty in understanding physics learning. It turns out that there is a need for encouragement for students to make it easier for them to understand learning, especially as many as 69% of respondents stated that they already have an interest in learning Physics.

Previous research by Hasbi et al. (2020) stated that the attractiveness of learning will continue to grow along with the model or form of gamification. Other research by Wardana & Sagoro (2019) on the implementation of gamification assisted by Kahoot media to increase learning activities, learning motivation, and learning outcomes shows that the implementation of the Kahoot Media Assisted Gamification learning model can improve student learning motivation.

The difference between previous research and the research under study is in the research title, time and place of research, and learning materials. The learning media developed utilizes third-party applications in the form of the Claspoint app, which is an application used to create interactive games in learning. So that this application can be added to the Microsoft PowerPoint application as an additional tool that can make presentations into games. Besides that in previous studies the game content was taken from game sites available on the internet while in this study, the game content used was made manually according to the connection you want to learn through the Classpoint application.

The focus of the problems discussed in this study is to determine the feasibility of developing interactive game-based digital learning media assisted by Classpoint to increase student learning motivation in measurement. Knowing student responses to the media development of interactive game-based digital learning media assisted by Classpoint to increase student learning motivation in measurement, and knowing students' motivation after using interactive game-based learning media assisted by Classpoint.

**RESEARCH METHODS**

**Research Approach**
The research used the research and development method (*Research and Development*) or (R&D). Research and development is one of the methods used to research by producing new products, which are then studied for their effectiveness (Sugiyono, 2013). In this study, we are using the 4D model. The 4D research model consists of Define, Design, Development, and Disseminate. The 4D research model, this time, is applied to produce products in the form of interactive game-based digital teaching materials that utilize the Classpoint application on measurement material. The research design uses n-gain to determine students' motivation after using interactive game-based learning media assisted by the Classpoint application on measurement material. Several experts carried out validation tests to determine the feasibility of learning media, and student response questionnaires were distributed regarding interactive game-based learning media assisted by the Classpoint application on measurement material.
Research Participants
In this study, the population used was physics teachers and Senior High School students, no 8 Bengkulu City. In contrast, the samples were physics teachers of Senior High School no 8 Bengkulu City and class X students at Senior High School no 8 Bengkulu City. The number of samples used was one class of twenty-six students, and the teacher used one person and used the Purposive or Judgment Sampling technique.

Research Instruments
The instruments used in this study to collect data consist of several instruments. An overview of the instruments used in the study can be seen in Table 1 below.

<table>
<thead>
<tr>
<th>No.</th>
<th>Stages</th>
<th>Target Data</th>
<th>Instrument</th>
<th>Data Analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Define</td>
<td>At this stage, conduct observations and interviews</td>
<td>Observation sheet and interview sheet</td>
<td>Descriptive</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The need for interactive game-based teaching materials</td>
<td>Needs Questionnaire</td>
<td>Qualitative and Quantitative</td>
</tr>
<tr>
<td>2.</td>
<td>Design</td>
<td>Game template design</td>
<td></td>
<td>Descriptive</td>
</tr>
<tr>
<td>3.</td>
<td>Development</td>
<td>Product feasibility analysis of interactive game-based teaching materials</td>
<td>Expert Validation</td>
<td>Qualitative and Quantitative</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Expert Validation</td>
<td>Expert Validation Sheet</td>
<td>Qualitative and Quantitative</td>
</tr>
<tr>
<td>4.</td>
<td>Disseminate</td>
<td>Learners</td>
<td>Response Questionnaire Sheet</td>
<td>Qualitative and Quantitative</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Learners</td>
<td>Pretest and Postest Sheets</td>
<td>Quantitative</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Learners and Teachers</td>
<td>Dissemination to learners through learning</td>
<td>Qualitative and Quantitative</td>
</tr>
</tbody>
</table>

Data Collection
Data collection is done to find out whether the media developed is feasible or not feasible to use. Data is collected by distributing validation sheets submitted to material and media experts. So that criticism and suggestions can be known and used for improvements before the media is implemented. With the size of the validator's assessment consisting of value 1 is very bad, value 2 is not good, value 3 is good, and nilai 4 is very good. The validators are two Bengkulu University Physics Education Lecturers and a physics teacher from Senior High School no 8 Bengkulu City.

In addition, a questionnaire was distributed to students to find out their response to the media developed. The distribution of questionnaires with a weight of 4 on the Likert scale while the criteria are value 1 strongly disagree, value 2 disagree, value 3 agree and value 4 strongly agree. A pretest and posttest were used to find out how the students were motivated after using interactive game-based learning media assisted by Classpoint.
Data Analysis
The data analysis used consists of analyzing the feasibility of media through validation sheets, analyzing students' responses to learning media, and analyzing students' motivation after using interactive game-based learning media assisted by Classpoint. Qualitative validation questionnaire analysis was conducted to determine the feasibility of interactive game-based learning media. The formula for calculating the average score of the assessment aspects that have been collected from the expert validation sheet is as follows equation 1.

$$ \bar{x} = \frac{\sum x_i}{n} $$

To determine the percentage value of expert validation using equation 2.

$$ \text{Validate (V)} = \frac{\text{Total scores}}{\text{Total ideal score maximum score}} \times 100\% $$

From the results of the known validity, the percentage can be matched with the criteria in Table 2.

<table>
<thead>
<tr>
<th>Percentage (%)</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>0% - 25%</td>
<td>Very Unfit</td>
</tr>
<tr>
<td>26% - 50%</td>
<td>Not Feasible</td>
</tr>
<tr>
<td>51% - 75%</td>
<td>Worth</td>
</tr>
<tr>
<td>76% - 100%</td>
<td>Very Feasible</td>
</tr>
</tbody>
</table>

(Siahaan et al., 2019)

The next analysis is the analysis of students' responses. The response analysis was carried out qualitatively to determine the student’s response to using interactive game-based learning media assisted by the Classpoint application. For the percentage of the response can be known through the following equation 3.

$$ \text{Percentage number of respondents} = \frac{\text{Total scores}}{\text{Total Ideal score maximum score}} \times 100\% $$

With response criteria as shown in Table 3.

<table>
<thead>
<tr>
<th>Percentage</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>85% ≤ RS</td>
<td>Very good</td>
</tr>
<tr>
<td>70% ≤ RS &lt; 85%</td>
<td>Good</td>
</tr>
<tr>
<td>50% ≤ RS &lt; 70%</td>
<td>Less Good</td>
</tr>
</tbody>
</table>

Description: RS = Student Response (Mardianto et al., 2022)

The method of scoring the learning motivation questionnaire is based on a Likert scale with 4 answer options. The answer options can be seen in Table 4.
Moreover, student motivation is assessed by administering pretests and posttests. Subsequently, the researcher analyzes the obtained scores. The analysis employs the gain normality test to evaluate the effectiveness of the treatment provided. The formula used to compute the normality gain, as outlined by Meltzer (Jarlis et al., 2023), is represented in Equation 4:

\[
N - Gain = \frac{s_{post} - s_{pre}}{s_{ideal} - s_{pre}}
\]

The criteria for the effectiveness of the interpretation of gain normality, according to Meltzer can be seen in Table 5.

<table>
<thead>
<tr>
<th>Gain normality value</th>
<th>Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>0,70 ≤ n &lt; 1,00</td>
<td>High</td>
</tr>
<tr>
<td>0,30 ≤ n &lt; 0,70</td>
<td>Medium</td>
</tr>
<tr>
<td>0,00 ≤ n &lt; 0,30</td>
<td>Low</td>
</tr>
</tbody>
</table>

(Oktavia et al., 2019).

RESULTS AND DISCUSSION

Results
Based on the research that has been done, several results are obtained, among others:

1. Define
The define stage is conducted to identify the needs analysis. In product development, developers must reference development requirements and analyze and gather information regarding the extent of development required (Sugiyono, 2014). Based on the results of interviews conducted with physics teachers at Senior High School No 8 Bengkulu City, it was found that in the physics learning process, teachers still do not use interactive teaching materials. Teachers only focus on providing subject matter to students using printed media. In addition, in learning, the teacher still uses the lecture method, which makes the focus of learning still focused on the teacher. Interviews with several students also showed that when in class, teachers often use package books and student worksheet in learning activities. Based on the results of interviews with several students, they stated that they were less interested in learning physics because learning physics seemed difficult to understand. Another problem that was identified was that not all students had books. Based on the demands of the independent curriculum, which emphasizes the active participation of students in the learning process, it is necessary to motivate students to play a more active role in understanding the learning material. Teaching materials are developed following the curriculum by considering the needs of students.

Based on data obtained through the distribution of a needs analysis questionnaire, which 100 student respondents distributed, it shows that students agree that the source of teaching materials that are often used is a package book, besides as many as 85.75% of students stated that they strongly agree with the existence of other learning media that can help them in learning. By knowing that, as many as 72% of students stated that they had difficulty understanding physics learning. This identifies that it turns out that there needs to be encouragement for students to make it easier for them to understand learning, especially since as many as 69% of respondents stated that they already have an interest in learning Physics. Students also strongly agree with the existence of other teaching materials as an alternative to currently available teaching materials, the development of digital teaching
materials using virtual games that can build student motivation. This is based on the response of 85.75% of students, with a category strongly agreeing that it is necessary to develop teaching materials presented in virtual games based on a response of 79.5% with a category strongly agreeing.

2. **Design**
The media developed consisted of 56 PowerPoint slides that were packaged in the form of an interactive game with the help of the Classpoint application. In general, the section consists of three parts. Among others are the learning section, the material section, the game section, and the quiz section. The learning section contains materials for Important Numbers and Scientific Notation and Physics 10th grade Senior High School. The game section consists of four types of games: Guess the picture game, true or false game, fill in the blanks games, and word search games. The quiz section is in the form of multiple choice questions, with each question having a different score weight. Each question or game has points that are earned if you answer the question correctly. The points will automatically accumulate so that the participant with the most points becomes the winner. The appearance of the interactive game assisted by Classpoint is shown in Figure 1.

3. **Expert Validation Results**
The results of the data obtained from the validators are shown in Table 6.

<table>
<thead>
<tr>
<th>Aspects</th>
<th>Score obtained</th>
<th>Maximum Score</th>
<th>Percentage %</th>
<th>Percentage %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contents</td>
<td>79</td>
<td>96</td>
<td>82.30</td>
<td></td>
</tr>
<tr>
<td>Presentation</td>
<td>32</td>
<td>36</td>
<td>88.90</td>
<td></td>
</tr>
<tr>
<td>Language</td>
<td>68</td>
<td>72</td>
<td>94.44</td>
<td>89.26</td>
</tr>
<tr>
<td>Media</td>
<td>123</td>
<td>132</td>
<td>93.18</td>
<td></td>
</tr>
<tr>
<td>Learning</td>
<td>63</td>
<td>72</td>
<td>87.5</td>
<td></td>
</tr>
</tbody>
</table>

The results of the media validation assessment by the validator showed a feasibility percentage with an average of 89.26% with a percentage of the content aspect of 82.30%, a presentation aspect of 88.90%, a language aspect of 94.44%, a media aspect of 93.18% and a learning motivation aspect of 87.5%.
4. Results of students' response to digital media
Based on the data obtained from 26 respondents, students' responses to interactive game-based learning media assisted by the Classpoint application were obtained as shown in Table 7.

<table>
<thead>
<tr>
<th>Percentage</th>
<th>Category</th>
<th>Percentage %</th>
</tr>
</thead>
<tbody>
<tr>
<td>85% ≤ RS</td>
<td>Very good</td>
<td></td>
</tr>
<tr>
<td>70% ≤ RS &lt; 85%</td>
<td>Good</td>
<td>81</td>
</tr>
<tr>
<td>50% ≤ RS &lt; 70%</td>
<td>Less Good</td>
<td></td>
</tr>
<tr>
<td>RS &lt; 50%</td>
<td>Not good</td>
<td></td>
</tr>
</tbody>
</table>

Student response to the learning media showed a score of 81% which identified the media as good to use.

5. Student Motivation Using Interactive Game-Based Learning Media Assisted by Classpoint
After giving the pretest and posttest questionnaires to 26 respondents, the results are shown in Table 8.

<table>
<thead>
<tr>
<th>Pretest</th>
<th>Posttest</th>
<th>Maximum Score</th>
<th>N-gain Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>63,03</td>
<td>78,7</td>
<td>100</td>
<td>0,42</td>
</tr>
</tbody>
</table>

The results of the Gain Normality test obtained an average score of 0.42 in the moderate motivation category. Furthermore, if motivation is reviewed from the ARCS (Attention, Relevance, Confidence, Satisfaction) model, there is an increase as shown in Figure 2.

![Figure 2](image_url)

Figure 2. Improvement of interactive game-based learning media with conventional learning media

Based on this figure, it is known that there is an increase in student learning motivation in the ARCS model after using interactive game-based learning media assisted by Classpoint.
Discussion

1. Feasibility of Developing Interactive Game-Based Learning Media

Games on the media are made by utilizing the features in the Classpoint application. The guess the picture game utilizes the draggable objects feature, allowing learners or teachers to slide small cards on the screen to guess the picture behind it. Like the Guess the Picture game, the True or False game also utilizes the draggable objects feature as a supporting feature of this game, but the difference is seen in the access that can shift only the teacher. The Multiple Choice feature selects correct and incorrect answers in the true or false game. Fill in the blanks game utilizes the fill in the blanks feature. This feature directs learners to fill in the missing sentences on the game slide. For Word search games, using the slide drawing feature with this feature learners arrange random words so that they become cohesive words that match the measurement material. The purpose of adding these features is to attract students' attention so that they can enjoy the learning process and be more motivated.

Consistent with this, as noted by Wao et al. (2022), gamification involves incorporating elements from games or video games into learning activities to motivate students and enhance their enjoyment and engagement in the learning process. Additionally, Kastawi et al. (2021) assert that learning materials should enhance the quality of teaching and learning. Consequently, the more captivating the learning materials educators employ, the greater the student's motivation to learn.

Based on the data obtained through validators, it can be seen that validators validate the media by paying attention to several aspects, such as content and presentation. Language, media, and learning motivation. Based on the validation conducted by three validators, it is known that the content aspect has a percentage of 82.30%, the presentation aspect has a percentage of 88.90%, the language aspect is 94.44%, the media aspect is 93.18%, and the learning motivation aspect is 87.5%. According to Siahaan et al. (2019), learning media is feasible to apply and use when the average percentage is ≥ 51%. Based on this, it can be seen that the interactive game-based learning media assisted by the Classpoint application has a very feasible category with an average percentage of 89.26%.

2. Student Response to The Media Development of Interactive Game-Based Digital Learning Media Assisted By Classpoint

To find out the response of students to interactive game-based learning media assisted by classpoint applications, a response questionnaire was given. The response questionnaire was given after conducting lesson activities. Teaching and learning activities in this study were conducted twice a meeting. Interactions carried out by students in the form of activities while learning are connected through class features in the classpoint application. Previously, students were first entered into the Iclasspoint class to facilitate activities in the game. Activities in learning focus on when the host or teacher activates features to interact. In this learning, we use the word could feature to find out the majority of students' opinions in certain cases in learning.

Every game that learners answer correctly, the answers will collectively become points. These points are used to increase the level of the game. So, learners who can answer and interact well will have high points. High points will also make the level higher. Participants who manage to become the highest score are active participants and come out as winners in the game. With this game system, the motivation of students is also increasing. Because they compete to be the highest score winner and get an award at the end of the lesson. This is in line with the indicators of extrinsic motivation, according to (Kastawi et al., 2021), indicators of extrinsic motivation are always trying to compete in work, prioritizing work performance, trying to meet life needs and work needs, enjoying getting praise, enjoying getting awards, and working in the hope of getting attention from friends. Based on this, the system of media design at the end in the form of getting winners and awards is an effort to increase students' extrinsic learning motivation.

Validation of this learning media has several suggestions for improvement by validators including adding learning videos on slides, adding CP and TP on slides, and separating the True or false game section on each slide. Previously, these components had not been added to the learning media. The differences can be seen in Figure 3.
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Improvement Suggestions

Videos are added directly to the slides

Added CP and TP on the slide

True or false game separated per slide

After Improvement

Learning videos were added to the powerpoint slides

Added CP and TP on powerpoint slides

True or False game displayed on a slideshow

Figure 3. Media before repair and after repair

The figure shows the difference between the learning media that has been improved following the suggestions from the validator. In the first picture, the previous media already had a learning video but the video was accessed through a link instead of directly. Meanwhile, after the improvement, the video was added directly to the PowerPoint presentation. The second picture is an additional slide after the validator's suggestion, namely adding learning outcomes and learning objectives to the presentation slide. As well as separating the true or false game on a separate slide. Improvements to the media are made in order to optimize the media so that it can be a learning tool for students in the learning process, especially in increasing students' interest in learning. Kastawi et al. (2021) emphasizes that learning media should enhance the quality of teaching and learning. Consequently, the more captivating the learning media employed by instructors, the greater the level of motivation among students to engage in learning activities.

The data obtained from the student response sheet received a percentage value with an average of 81%. According to Mardianto et al. (2022) The category of media that is very good to use is with a percentage score above 85%, a good category with a percentage between 70% to 84%, less good with a percentage between 50% to 69%, and a category that is not good at a percentage of less than 50%, with this, it can be seen that the students' response to the media is very good.

3. Student Motivation Using Interactive Game-Based Learning Media Assisted by Classpoint

To determine student motivation, the Gain Normality test was conducted. Before conducting the Normality test, students were asked questions related to learning motivation through pretest and posttest questionnaires. Based on the results obtained through the questionnaire, the average pretest
percentage was 63.03%. Besides that, for the average posttest, the percentage was 78.7%, with a maximum score of 100 so the average N-gain score was 0.42.

Based on the criteria for the effectiveness of the interpretation of the normality of the gain according to Basile et al. (2019) states that 0.70 ≤ n ≤ 1.00 with high criteria, 0.50 ≤ n < 0.70 medium criteria and 0.00≤ n < 0.30 low criteria. So for the N-gain of student learning motivation towards the provision of interactive game-based learning media assisted by the Classpoint application with the N-gain obtained of 0.42. These results show that the provision of interactive game-based learning media has an influence on student learning motivation. Students' desire to learn arises because of the features of the interactive game that are assisted by the Classpoint application. This is in line with Rahmayani & Subekti (2022) stating that the use of games in the learning process encourages students' attention to focus on teaching and learning activities. In addition, according to Santosa & Yulianti (2020) with the addition of gamification, students will feel enthusiastic about learning because students do not only learn auditori or listen to the teacher's explanation, but also participate actively in learning, this will affect the psychology of students and spur students' enthusiasm for learning, therefore the role of learning media is needed to encourage students' learning motivation.

Keller's ARCS Motivation Model assesses student motivation in four key elements: Attention, Relevance, Confidence, and Satisfaction (Nissa et al., 2021). For learning motivation in the ARCS (Attention, Relevance, Confidence Satisfacation) aspect, it was found that the increase for the Attention aspect has a difference of 15.40%, increasing from a percentage of 67.30% to 82.70%. The Relevance aspect has an increase of 14.46%, increasing from 66.34% to 80.80%. The Confidence aspect increased by 11.57% from 69.23% to 80.80%. And the satisfaction aspect increased by 8.65%, from 70.20% to 78.85%.

The increase in student learning motivation in the ARCS model is because the learning media design uses elements in the ARCS model. The previous learning media only focuses on delivering material and examples so that it is classified as monotonous, while this interactive game-based learning media uses elements contained in the game in the learning design. Learning activities using this learning media also display images, illustrations, and material that is briefly used to attract students' attention. This is in line with (Hasbi et al., 2020) which states that learning activities in the Attention aspect; among others: (a) attracting students' attention by using illustrations in the form of images, (b) providing brief subject matter so that it is easy to understand, and (c) delivering learning material is not convoluted.

The relevance aspect of interactive game-based learning media is equipped with concrete examples related to everyday life, linking examples with activities that students often face in everyday life so that indirectly students can get their own understanding of certain materials or phenomena as they have felt. This learning is in line with what is conveyed by (Jamil, 2019) that the motivational aspect of relevance makes learners feel that the learning activities they participate in have value, are useful and useful for their lives. Learners will be encouraged to learn something if what will be learned has relevance to their lives, and has a clear purpose. So that the media can increase the motivation of students after going through interactive game-based media. Confidence in learning activities using interactive game-based learning media assisted by Classpoint learning design utilizes the features contained in the Classpoint application which is designed in the form of a game. With this game-shaped design, it will increase the confidence of students because in practice the learning process using interactive game-based media assisted by the Classpoint application, students are required to answer questions contained in the game correctly and quickly to get points, for example in the quiz section of this media. So that with these conditions will increase the confidence of students.

The satisfaction aspect is learning that is able to display satisfaction by students and reciprocity in the form of giving praise for completing the game in the learning process this is done by making participants feel successful in achieving a goal of collecting as many points as possible from completing the game that has been given so that it will produce satisfaction for students, and students will be motivated to continue trying to achieve similar goals, students will be motivated to continue trying to achieve satisfaction for other learning.
The data that has been collected can be seen that the provision of interactive game-based learning media assisted by Classpoint has an influence on student motivation, namely increasing student motivation from low motivation to moderate motivation. In each aspect of the ARCS model, there is an increase in motivation with an average of 12.52%. The escalation in motivation aligns with the viewpoint of Sukarno & Salamah (2019), who asserts that the ARCS learning model constitutes a problem-solving method for shaping motivation-related aspects and the learning environment to promote and sustain student motivation in learning. Findings from the research data analysis, as evidenced by testing the initial hypothesis, demonstrate that overall, the ARCS learning model outperforms the conventional learning model. The provision of interactive game-based learning media assisted by the Classpoint application can be used for alternative learning media, especially to increase student motivation. Paying attention to the ARCS aspects (Attention, relevance, confidence, satisfaction) of learning media can increase student motivation in each aspect so that students have an interest in learning, especially in physics learning in high school.

The last stage carried out is the disseminate stage. At this stage, the dissemination of products that have been made is carried out. In this case, interactive game-based learning media products assisted by Classpoint are disseminated to SMA 8 Bengkulu City teachers and students can access them online. As per Hariyanto et al. (2022), the dissemination stage comprises three key activities: validation testing, packaging, and diffusion and adoption. During the validation testing phase, in educational material development, dissemination involves socializing the teaching materials through distribution to teachers and students. This distribution aims to elicit responses and feedback regarding the developed teaching materials. If the response from the intended users of the teaching materials is positive, subsequent steps involve mass printing and marketing efforts to ensure wider adoption of the teaching materials. In the dissemination stage in this study, it is not the actual research objective. This is for the direct dissemination stage, where interactive game-based learning media, assisted by Classpoint, will be disseminated to Senior High School No 8 Bengkulu City physics subject teachers.

CONCLUSION
Based on the validation test by the validator, it can be seen that the interactive game-based learning media assisted by the Classpoint application has a very feasible category to be used, especially in 10th grade physics subject Measurement material. The results of student responses to interactive game-based learning media show a good category to use. The use of interactive game-based learning media assisted by Classpoint application increases student motivation with moderate category.

This research's weakness is that the sample is small, so the media use results are less effective. Apart from that, dissemination was only carried out in one school so the results are not yet known if the media is used in other schools and other classes. The results are not yet known if learning media is applied to certain learning models.

For further research, it is hoped that samples can be disseminated to find out more concretely the effectiveness of using interactive game-based learning media to increase student motivation and the use of interactive game-based learning media assisted by the Classpoint application in certain learning models.

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