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Computer Based Recitation Program Development With Feed Back in Newton's Law Topic

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Abstract: This research was conducted to develop a recitation program on Newton's law and test its practicality. This type of research is Research and Development (R&D) with a Four-D (4D) model with stages, namely Define, Design, Develop, and Disseminate. The research subjects were 38 third-semester physics students at the State University of Malang. The data collection technique was carried out using a media validity test questionnaire and a content validity test given to 2 validator lecturers, as well as a practicality test questionnaire and a questionnaire on the perception of the use of each item given to students. The resulting data is the percentage of validity test assessments, practicality tests, and student perception questionnaires, as well as suggestions were given by lecturers and students regarding the recitation program. This research resulted in a recitation program in which there were 38 questions accompanied by feedback. The results of the content validity test obtained a value of 95.7%, while the results of the media validity test obtained a value of 93.75%, so it is included in the very valid category. Then, the results of the practicality questionnaire showed that students agreed that the recitation program made it easier to understand Newton's law concepts, helped strengthen their understanding of Newton's law concepts, and this program was of interest to them. Meanwhile, based on the student perception test results regarding the item items' use, an average of 96.6% was obtained, which means that the questions, feedback, and discussion videos in the recitation program were very easy to understand.

INTRODUCTION

Good mastery of concepts by students is one of the goals that must be achieved in a physics learning activity (Arista & Kuswanto, 2018; Sasmita et al., 2020; Sutopo et al., 2016; Yaumi et al., 2019). Good mastery of concepts will help students solve a problem. With good mastery of concepts, students can know the right concepts to use in solving a problem (Diyana et al., 2020; Docktor et al., 2015; Kustusch, 2016; Shishigu et al., 2018; Sutopo et al., 2016; Taqwa & Faizah, 2016; Yaumi et al., 2019). Good mastery of concepts must be owned by students to be able to solve a problem, especially on basic concepts. On the other hand, significant problem solving exercises will improve students' mastery of concepts.

Newton's laws are a matter of physics that is so important. Newton's laws cover force and motion, a topic that has various applications in everyday life (Serway & Jewett,

2014). In addition, Newton's law is the basis for various topics in physics, such as energy and momentum, oscillations and waves, atomic and nuclear physics, thermodynamics, and electromagnetics (Syuhendri et al., 2019). Given the importance of Newton's law in studying physics, students need to master the concepts and principles of Newton's law well.

The process of mastering the concept of Newton's law is as important as the basis for other physics material, but the results of the research that has been done actually show that students experience difficulties in understanding the concept of Newton's law. The research focused on mastery and understanding of concepts in Newton's law material has a long history in the development of physics learning resulting in various student difficulties in understanding Newton's laws (Atasoy et al., 2011; De Almeida et al., 2019; Erfan & Ratu, 2018; Kaniawati et al., 2019; Kartiko & Habibulloh, 2018; Kryjevskaia, 2019; Liu & Fang, 2016; Stoen et al., 2020; Wells et al., 2019). One of the difficulties faced by students is that students have difficulty understanding the relationship between force and mass when two objects interact. That is, they think that a large mass will exert a greater force on a small mass when the two interact (De Almeida et al., 2019; Syuhendri et al., 2019; Wells et al., 2019). In addition, they also have difficulty understanding that the resultant force should be in the same direction as the acceleration, but they think that the resultant force will always be in the same direction as the object's velocity (Liu & Fang, 2016).

The difficulties experienced by students in studying Newton's laws occur because they tend to have initial concepts before learning obtained from everyday life that is not scientifically appropriate (Kaniawati et al., 2019; Kartiko & Habibulloh, 2018; Minarni et al., 2017). The students' preconceptions often interfere with learning activities because students tend to believe more in the events they observe directly. Students also often experience difficulties when connecting a physics concept that has been received with new material (Gumilar, 2016; Syuhendri, 2019). In addition, the difficulties faced by these students are not because students do not have good knowledge but because this knowledge is not stored in long-term memory (Taqwa & Faizah, 2016). Thus, when encountering a problem, students have difficulty activating which abilities should be used to solve the problem at hand (Hammer, 2000).

Newton's law has a concept with a high degree of difficulty and a wide variety of problems in various contexts. In addition, the concept of Newton's law also has a close relationship with the concept of force and motion, which makes it have a broad scope (Taqwa & Faizah, 2016). Due to the wide coverage of this material, of course, it takes a long time to convey the concept of Newton's law as a whole, while the time allocation available for learning is limited. This limited lecture time causes the provision of feedback to students to be uneven. Providing feedback will take a long time, especially for large classes (Docktor & Mestre, 2014). Meanwhile, lecture time is limited, and feedback must be given thoroughly to students. Thus, effective feedback will be difficult to provide. To overcome these problems, we need a recitation program for the alternative deepening concepts outside lecture hours.

A recitation program is provided outside of lecture hours to provide study assistance to individuals with feedback (Docktor & Mestre, 2014; Yusuf Aditya, 2016). Recitation

programs can be used to assist lecturers in providing in-depth concepts outside of lectures so that they can overcome existing time constraints (Sutopo et al., 2016). The recitation program can be developed using the help of a computer program, namely Microsoft PowerPoint 2010. The choice of the Microsoft PowerPoint 2010 application is because it is a lightweight application and is widely used by students, and can be accessed with laptops, computers and smartphones. The recitation program was developed containing practice questions presented in multiple choices and supplemented with feedback (Sutopo et al., 2016; Taqwa & Faizah, 2016). The feedback provided is in the form of writing and video. It is feared that giving many conceptual questions without adequate feedback will reinforce students' misconceptions (Taqwa & Faizah, 2016). In a recitation program that contains questions and feedback, if students answer a question incorrectly, they will receive feedback in the form of an error in their work and have to repeat the question. However, when students have answered the questions correctly, they will be directed to the discussion video.

A recitation program with feedback was developed on Newton's law III material (Jayanti et al., 2016); force and motion (Sutopo et al., 2016); ability of Free Body Diagrams (Taqwa et al., 2017); dynamic fluid (Pebriana et al., 2018); fluid mechanics (Diyana et al., 2020); as well as thermodynamics (Adila et al., 2019). The results of previous research revealed that providing recitation programs can improve students' understanding of concepts (Adila et al., 2019; Jayanti et al., 2016; Pebriana et al., 2018; Sutopo et al., 2016; Taqwa et al., 2017). The success of these studies is highly dependent on the number of questions presented and the diversity of the context of the questions. If the questions are given in small numbers and in a limited context, the increase in student understanding is not optimal (Sutopo et al., 2016).

The recitation program research by Jayanti et al., (2016) on Newton's third law material shows success in increasing student understanding. However, it turns out that students still experience difficulties in understanding Newton's laws, including: 1) difficulties in the concept of interaction between objects, 2) difficulties in mastering the concept of Newton's second law, 3) difficulties in understanding the concept of the resultant force on curved planes (Taqwa & Faizah, 2016). Previously developed programs were not accompanied by video feedback, so in this development, a video will be added as feedback. The use of feedback in the form of videos is because videos can be widely accepted by students (Cann, 2007) and can include a variety of student learning methods (McCarthy, 2015; Pratiwi et al., 2016) namely audio and visual. Thus, by considering the strengths and weaknesses of the previous recitation program, the researcher will develop a recitation program based on Newton's laws and test the practicality of the recitation program.

METHOD

The research to be carried out is to use the Four-D (4D) development model developed by Thiagarajan, et al in 1974 (Thiagarajan et al., 1976). The Four-D (4D) development model was chosen in this study because it has simpler stages and is arranged in detail and systematically. There are four stages of the Four-D (4D) development model,

namely (1) Define to determine the needs of subjects in the field, (2) Design which aims to design products to be developed, (3) Develop which aims to develop products based on stages beforehand, and (4) Disseminate (Thiagarajan et al., 1976). However, in research and development, this will only be carried out until the third stage of the procedure, namely Develop (development), because this research has the aim of describing the feasibility of the recitation program being developed. Meanwhile, the fourth stage is the dissemination stage, which is the stage to test the effectiveness of the recitation program that has been developed (Thiagarajan et al., 1974). This research was conducted at the State University of Malang. The research subjects were 38 students at Malang State University class of 2021. The data collection techniques in this study were observation and surveys. Observations were made to obtain data in the form of conditions that became problems for students. The survey was conducted to collect data from product development results. The data is the basis for researchers to determine the feasibility level of the media.

The research instruments included validity test sheets, practicality test sheets, and computer-based recitation programs. The validity test sheet was given to two validator lecturers. This test consists of two types, namely media validity test and content validity test. Practicality test sheets were given to student respondents. The score of this questionnaire assessment uses a Likert scale consisting of very good, good, good enough, not good, and not good choices. While the response questionnaire sheet was given to lecturers to find out criticism and input from the media developed by researchers.

RESULT AND DISCUSSION

Recitation Program Development Process on Material Newton's Laws

There are 3 stages of developing a Newton's law recitation program, namely define, design, and develop. The process of developing a recitation program on Newton's Law material begins with the define stage which is carried out by conducting a survey by distributing questionnaires via Google form to students of the Department of Physics, State University of Malang. The pieces that are distributed contain questions that will reveal the learning resources that students usually use, the difficulties they experience, and their opinions about the practice questions accompanied by feedback. From the results of distributing this questionnaire, it was found that the learning resources commonly used by students were books, lecturer explanations, and learning videos. Through the same questionnaire, they revealed that the difficulties they faced were 1) difficulty in describing the style diagram, 2) limited time to understand the material, and 3) difficulty distinguishing each law.

The results of the literature study from previous studies also found several student difficulties related to Newton's law material, such as 1) difficulty relating the concept of Newton's law and its mathematical equations (Erfan & Ratu, 2018; Kryjevskaia, 2019); 2) difficulty understanding the relationship between force and acceleration so that one thinks that force is always in the same direction as speed (Liu & Fang, 2016; Stoen et al., 2020); 3) difficulty understanding the interaction of two objects, they think that when two objects interact, the object moves faster (De Almeida et al., 2019) or has a larger mass (Syuhendri

et al., 2019; Wells et al., 2019) will provide greater force; 4) difficulty understanding that objects that are stationary are not affected by force because objects will always be stationary (Kaniawati et al., 2019). Based on the difficulties faced by these students, it is necessary to develop a recitation program that is used as a study aid outside of class hours. This recitation program was developed using Microsoft PowerPoint 2010. This program contains conceptual questions accompanied by feedback in the form of text and video.

The second stage is design which aims to design products that will be developed according to the desired specifications and by the results of the defined stage. A recitation program is a program given to students outside of lecture hours which aims to provide study assistance to students (Docktor & Mestre, 2014; Yusuf Aditya, 2016). The contents of the recitation program developed are conceptual questions with two or more answer options accompanied by feedback on Newton's law material. The recitation program on Newton's laws was developed using the Microsoft PowerPoint 2010 application with the file format in the form of a PowerPoint Show. This application was chosen because Microsoft PowerPoint is an application commonly used in the Windows operating system and can be accessed using a computer, laptop or smartphone equipped with the internet to access video feedback. Each option is arranged based on the possibility of student thinking in working on problems based on previous research regarding the difficulties experienced by students during lectures (Liu & Fang, 2016). There are two types of feedback provided in the recitation program, namely text and video. When students choose the wrong answer option, they will get feedback in the form of text. Then, they will be redirected back to the question being answered. Meanwhile, when students choose the correct answer option, the feedback displayed is a discussion in the form of a video and is allowed to continue with the next question. In full, the flow of using the recitation program can be seen in Figure 1.

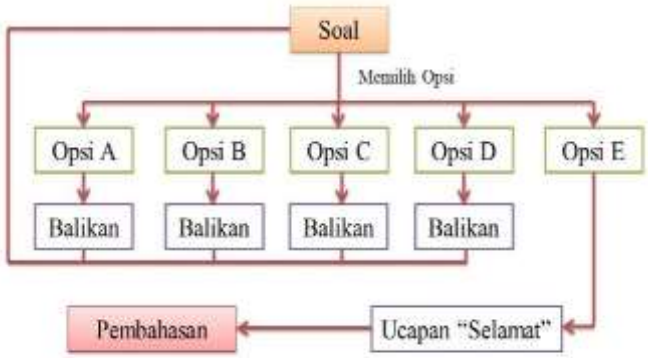

Figure 1. *The flow of using the recitation program (option E is the correct answer).*

The third development stage is the develop stage which is carried out to produce the final product of a computer-based recitation program with feedback. Examples of display questions (Figure 2), feedback on correct answer options (Figure 3), and feedback on incorrect answer options (Figure 4) are presented. The answer option icon is given a hyperlink that leads to the feedback section that has been provided. On the correct answer feedback display, there is a

question mark icon to return to the instructions page, a home icon to return to the package page, and a "next" icon to proceed to the next question.

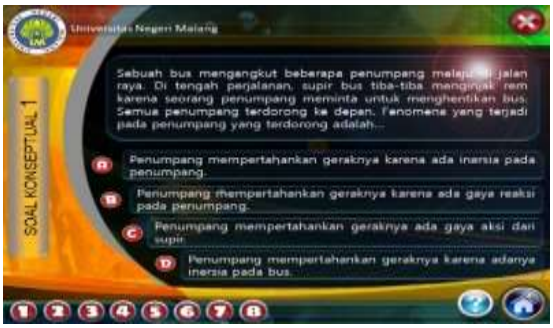

Figure 2. *Example display of Newton's law recitation program number 1.*

Figure 3. *An example of feedback display in Newton's law recitation program for the correct answer option (option A).*

Figure 4. *Example of a feedback display in Newton's law recitation program for the wrong answer option (option B).*

The recitation program is equipped with an initial display (Figure 5), instructions for use (Figure 6), an explanation of navigation (Figure 7), package options (Figure 8), and an initial appearance of the question package (Figure 9). In the initial display, given the icon "to help" to continue to the help page. Then, on the Instructions for Use page, a "navigation explanation" icon is given to continue to the navigation instructions page. Then, on the Navigation Explanation page, a "go to package" icon is given to continue to the Question Package page.

All icons are hyperlinked to change pages. In the Question Package, students can choose the question package they want to study by pressing the package provided. If you have switched to the desired package, students can work on the questions provided in the program.

Figure 5. An example of the initial display of the recitation program.

Figure 6. Display of instructions for using the receipt program.

Figure 7. *Explanation display of recitation program navigation.*

Figure 8. *Display of recitation program package options.*

Gambar 1. *Tampilan awal paket 1 program resitasi.*

The recitation program is provided in 1 file containing 4 packages. Package 1 is about Newton's first law which contains 7 questions, package 2 is about Newton's second law which contains 9 questions, package 3 is about Newton's third law which contains 7 questions, and package 4 is about force identification which contains 15 questions. So, the total questions presented are 38 questions. Merging the questions in 1 file is intended so that the program has a small file size and is light because the video feedback is placed in the Google Drive storage application.

The questions and feedback developed in the recitation program are based on the difficulties found in previous studies (De Almeida et al., 2019; Liu & Fang, 2016; Syuhendri et al., 2019; Wells et al., 2019). One example of student difficulties in Newton's law material found through literature studies is that students still have difficulty in the concept of interaction between objects; that is, when two objects interact, the object that moves faster or has a larger mass will exert a greater force (De Almeida et al., 2019; Syuhendri et al., 2019; Wells et al., 2019). Based on one of the difficulties encountered, then conceptual questions were made with feedback in the recitation program (Table 3).

Table 3. An example of one of the questions and feedback that has been developed in Newton's law recitation program based on the difficulties found.

General Purpose 3: Strengthen students' conceptual understanding on the topic of Newton's Third Law.
Specific Purpose 1: Strengthen students' conceptual understanding on the topic of Newton's Third Law through the case of two interacting balls.
Question: Two identical balls A and B have the same mass and are moving in opposite directions on a smooth surface with three times the speed of ball A. When balls A and B collide, which statement is true... a. Ball A gets a smaller force than ball B b. Ball A gets a greater force than ball B c. Balls A and B experience a force of the same magnitude

d. The information in the question is not enough
***Feedback*:** **Reverse Option A:** Watch out! You think that ball A which has a greater speed will produce a greater force and vice versa. So, that style affects the opponent's ball. **Reverse Option B:** Watch out! You think that ball A, which has a greater speed than ball B, will have more momentum. Thus, it takes a force greater than ball B to stop it. **Reverse Option C:** Happy! If you think that two interacting objects will get a force that is equal in magnitude but opposite in direction. Congratulations, your answer is correct. **Reverse Option D:** Watch out! You think that there are still other quantities to answer the questions above.
Question Discussion: This event is based on Newton's third law which reads "in every action force there will be a reaction force that has the same magnitude and opposite direction." This statement means that if two objects interact, then the force acting on them has the same magnitude but the opposite direction. So, when colliding balls A and B will get a force with the same magnitude but opposite direction.

A. Kelayakan Program Resitasi pada Materi Hukum Newton

Uji kelayakan program resitasi hukum Newton dilakukan dengan dua uji, yaitu uji validitas dan uji kepraktisan. Tahapan uji validitas bertujuan untuk melakukan validitas program resitasi berbasis komputer dengan *feedback* pada materi hukum Newton. Berdasarkan tahapan uji validitas, diperoleh hasil berupa validitas isi dan validitas media yang dijadikan dasar untuk melakukan revisi dari draf yang diajukan. Hasil dari uji validitas isi program resitasi hukum Newton oleh validator 1 (V1) dan Validator 2 (V2) diungkapkan dalam Tabel 4.

***Table 4**. The results of the content validity test by experts.*

Aspect	**Score**			
	V1	V2	Average	Averege (%)
Construct	3,83	3,89	3,86	96,5
Theory	3,82	3,92	3,87	96,7
Bahasa	3,68	3,82	3,75	93,9
Average totals (%)				95,7

In the media validity test instrument there are 3 aspects, namely construct, material, and language. The construct aspect contains: 1) the suitability of the questions designed

with specific objectives and 2) the suitability of the feedback in strengthening the concept according to the specific objectives. The material aspects contain: 1) the suitability of the questions designed with the correct physics concept and 2) the suitability of the discussion with the correct physics concept. The language aspect contains: 1) the conformity of the questions with good and correct Indonesian language rules, 2) the language in the questions can/ cannot lead to multiple interpretations, and 3) the language in the feedback can/ cannot cause multiple interpretations.

Based on the results of the assessment of the contents of the recitation program by the validator, the recitation program is included in the very valid category with a total average acquisition of 95.7%. The suggestions given by the content validator include: 1) be careful in preparing statements in questions and feedback; 2) be careful in writing down the question options because there are 3 questions that haven't written down the answer options; 3) add answer options between number 2 and 3 in package 2 question number 2; 4) remove the two directions of force between directions 5 and 1 in problem 2 number 5; 5) be careful in writing vector notations and Newton's law equations; 6) be careful in describing the point of action-reaction force capture; and 7) be careful in writing down the question information and referenced pictures. Thus, the content of Newton's law recitation program is improved by changing the statements in the problem and the feedback; add answer options in questions; delete the direction of force 2 and 4 in package 2 question number 5; change vector notation and Newton's law equations; changing the action-reaction force capture point so that it is the same; and adjust the question information and referenced images. The results of testing the media validity of Newton's law recitation program by validator 1 (V1) and validator 2 (V2) are presented in Table 5.

Table 5. *Results of media validity test assessment.*

Program Components	**Aspect**	**Score**		
		V1	V2	%
Initial Section	**A**	4	4	100
	B	4	4	100
	C	3	4	87,5
Contents Section	**D**	3	3	75
	E	3	4	87,5
	F	4	4	100
	G	4	4	100
Feedback Section	**H**	4	4	100
	Average			93,75

Aspects of the media validity test instrument for the Newton's law recitation program include: A) the choice of colors for the initial display is attractive, B) the instructions for working on the questions in the program are clear, C) the program navigation instructions are clear, D) the type and size of the writing can be read clearly, E) the selection of the audio program is good, F) the program is easy to operate, G) the navigation makes it easy to operate the program, and H) the explanation on the feedback is easy to understand.

Based on the results of the media validity test, it was found that in appearance the recitation program was included in the very valid category with an average validity of

93.75%. The suggestions provided by the validator include: 1) video feedback is made more interactive and enthusiastic so students don't get bored easily and 2) recitation programs are better made in web form so that they can be accessed via student cellphones so that they are easier to use anywhere and anytime just. Thus, the contents of the Newton's law recitation program were improved by examining the video feedback recordings.

After the draft of the recitation program has been corrected based on the results of the validity test, the next stage is the practicality test by asking students to use the product and fill out the recitation program's practicality questionnaire, as well as the student's perception questionnaire regarding the use of the recitation program for each item. Thus, it can be seen the level of practicality of the product produced. The results of the practicality assessment of the recitation program by students are shown in Table 6.

Table 6. *Product practicality test results by students.*

No	SS	S	TS	STS
1	50%	50%	0%	0%
2	42,1%	57,9%	0%	0%
3	39,5%	55,3%	5,3%	0%
4	52,6%	44,7%	2,6%	0%
5	2,6%	13,2%	32%	52,6%
6	0%	13,2%	50%	36,8%
7	28,9%	60,5%	11%	0%
8	7,9%	65,8%	23,7%	2,6%
9	0%	0%	45%	55,3%
10	0%	34,2%	53%	13,2%

The statements in the practical test questionnaire for the Newton's law recitation program include: 1) the restatement program can make it easier for me to understand Newton's law concepts, 2) this recitation program can help me strengthen my understanding of Newton's law concepts, 3) this recitation program provide feedback that can help me understand conceptual errors, 4) this recitation program helps me in correcting conceptual errors that I experience, 5) this program does not make it easier for me to understand Newton's law concepts, 6) I feel bored when using the program, 7) I I am more enthusiastic and enthusiastic about learning physics when using this recitation program, 8) this recitation program is easy to use and operate, 9) I am not interested in this recitation program, and 10) the questions in this program are too difficult for me.

The practicality test of the program yielded results, namely 100% of students agreed that the recitation program made it easier to understand, and helped strengthen understanding of Newton's law concepts. In addition, 94.7% of students agreed and 5.3% did not agree that feedback on recitation programs can help understand misconceptions. Then, 97.4% of students agreed and 2.6% did not agree that the recitation program could help correct the misconceptions they experienced. In addition, 15.8% of students agreed and 84.2% did not agree that the recitation program did not facilitate understanding of Newton's law concepts. Then, 13.2% of students agreed and 86.8% did not agree that they felt bored using the program. Then, 89.5% agreed and 10.5% disagreed that they were more enthusiastic and enthusiastic about learning physics when using this recitation program. In addition, 73.7% agree and 26.3% do not agree that this program is easy to

operate. Then, 100% of students are interested in this recitation program. Finally, 66.2% of students disagreed and 34.2% of students agreed that the questions in the recitation program were too difficult for them. The results of the student perception questionnaire regarding the use of each item in the Newton's Law recitation program are described in Table 7.

Table 7. *The results of the student perception questionnaire regarding the use of item questions.*

Question	Answer		
	Yes	**Possible**	**No**
A	94,5%	2,2%	3,3%
B	98,5%	0%	1,5%
C	96,1%	0%	3,9%
D	97,2%	0,8%	2,1%
Averege	96,6%	0,7%	2,7%

The questions presented in the student perception instrument related to the use of the recitation program for each item include: A) Can the intent of the questions be understood properly? B) Is the feedback on the wrong answer option well understood? C) Is the feedback on the correct answer option (video) well understood? and D) Can these questions and feedback strengthen your understanding? These questions must be filled in by students with the answers "Yes/ Possible / No" according to what they experienced when using the Newton's law recitation program. Based on the average student perception questionnaire results related to the use of item questions, an average of 96.6% was obtained which was in the very practical category.

Overall, the results obtained from several tests are: 1) the content validity test of the recitation program obtained a value of 95.7% which is included in the very valid category; 2) media validity test obtained a value of 93.75% which is included in the very valid category; 3) the practicality test of the program showed that all students agreed with statements number 1 and 2, most students agreed with statements number 3, 4, 7, and 8, most students disagreed with statement numbers 5, 6, and 10, and all students disagree with statement number 9; and 4) test student perceptions related to the use of item questions, obtained an average of 96.6% which is in the very easy to understand category. Thus, Newton's law recitation program is included in the very valid category.

The similarity of the results obtained from this study with previous research is the strength of the recitation program presented. Some of the advantages obtained from the questionnaire are: 1) the recitation program can strengthen their understanding of concepts (Diyana et al., 2020; Jayanti et al., 2016; Pebriana et al., 2018; Sutopo et al., 2016) which is supported by statements number 2 on the practicality questionnaire. 2) The recitation program can make it easier for students to understand the concept because it contains practice questions and feedback (Taqwa & Faizah, 2016) which is supported by statement number 1 of the recitation program practicality questionnaire. 3) The recitation program makes students interested, which is supported by statement number 9 in the practicality questionnaire.

Even though the recitation program is in a very valid category, there are still several aspects that need to be improved; namely, on some devices, the video cannot be played

immediately and must be downloaded first from Google Drive. Then, in the future, the videos will be uploaded on the YouTube channel and not on Google Drive, as in the program given to students for practical tests. Errors will be corrected before the product is disseminated in the dissemination stage. Even though the recitation program is in a very valid category, there are still a number of aspects that need to be improved, namely on some devices the video cannot be played immediately and must be downloaded first from Google Drive. Then, in the future the videos will be uploaded on the YouTube channel and not on Google Drive as in the program given to students for practical tests. Errors that arise will be corrected before the product is disseminated in the disseminate stage.

Student responses in filling out the perception questionnaire on the use of each item for examples of questions and feedback in Table 3 are described in Table 8. Students revealed that the questions, answer options, feedback or feedback, and the video discussion presented in Package 3 Number 1 questions were well understood and can reinforce their conceptual understanding.

Table 8. *Student Opinions Regarding Package 3 Problem Number 1.*

Question	Answer(%)			Reason (%)		
	Y	M	T	1	2	3
A	94,7	2,6	2,6	89,5%	5,3	5,3
B	100	0	0	94,7	5,3	0
C	94,7	0	5,3	94,7	5,3	0
D	97,4	0	2,6	97,4	2,6	0

Reasons written by students include: (A1) well understood, (A2), The language used in the questions and answer options is detailed and understandable, (A3) the questions are not easy to understand, so they have to be read several times because there are no supporting pictures. (B1) the feedback presented in the wrong answer option is well understood. (B2) Incorrect answer option returns are presented with possible ways of thinking of students, making it easier to understand. (C1) feedback on the correct answer option is well understood, because it is supported by an explanatory video. (C2) the presented video cannot be played, but a short explanation is presented in the correct option. So, it is still well understood. (D1) the questions and feedback presented can train and strengthen my understanding. (D2) questions and feedback can be understood, but in several video discussion devices it is difficult to access.

CONCLUSION

This research produced a product in the form of Newton's law recitation program, which contained 38 multiple-choice conceptual questions accompanied by feedback. The questions in this program are divided into four packages, namely package one about Newton's first law, which contains seven questions; package two about Newton's second law, which contains nine questions; package three about Newton's third law, which contains seven questions, and packages four about the identification of styles which contains 15 questions. This program was developed using Microsoft PowerPoint with the PowerPoint Show file format. The results of the content validity test of the recitation program obtained a value of 95.7% which was included

in the very good category, while the results of the media validity test obtained a value of 93.75% which was included in the very good category. Based on the media practicality questionnaire distributed to students, it was shown that students agreed that the recitation program could make it easier to understand Newton's law concepts, help strengthen their understanding of Newton's law concepts, and this program was of interest to them. Meanwhile, based on the results of the student perception test regarding the use of item items, an average of 96.6% was obtained, which means that the components of questions, feedback, and discussion videos in the recitation program were very easy for students to understand. Based on the research results, further researchers can examine the effectiveness of the recitation program that has been developed. Finally, future developers can arrange this program on the web so that the program is more efficient and easy to operate.

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