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Learning Media Game Me Educational Android on Mathematics Class II Elementary School

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Abstract

Education is a conscious and planned effort to create a learning atmosphere and learning process so that students actively develop their potential to have religious spiritual strength, self-control, personality, intelligence, noble character, and skills. Research and development methods or in English Research and Development are research methods used to produce certain products, and test the effectiveness of these products. Create and develop as well as determine the feasibility of educational game media as learning media that are suitable for use by educators and students. After being tested, it will receive a response to criticism and suggestions for evaluating the AAP educational game media product. The conclusion of this research, the AAP educational game is a learning media to support and assist the learning process

Keywords
AAP education; games; androids; learners

I. Introduction

Definition of education contained in the National Education System Law No. 20 of 2003 that education is a conscious, planned effort to create a learning atmosphere and learning process so that students actively develop their potential to have religious spiritual strength, self-control, personality, intelligence, noble character, and skills needed by himself, society, nation and state. In a simple and general sense, education is a human effort to grow and develop innate potentials both physically and spiritually in accordance with the values and norms that exist in society. (Yayan Alpian, M.Pd., Sri Wulan Anggraeni, M.Pd., Unika Wiharti., 2019). Development is a systematic and continuous effort made to realize something that is aspired. Development is a change towards improvement. Changes towards improvement require the mobilization of all human resources and reason to realize what is aspired. In addition, development is also very dependent on the availability of natural resource wealth. The availability of natural resources is one of the keys to economic growth in an area. (Shah, M. et al. 2020)

Learning media is a tool that can assist the teaching and learning process so that the meaning of the message conveyed becomes clearer and educational or learning objectives can be achieved effectively and efficiently. Learning media serves as a source of student learning to obtain messages and information from the teacher so that learning materials can be further improved and form student knowledge. (Teni Nurrita, 2018)

Based on preliminary research conducted by researchers at SDN Batu Ampar 06 Pagi using the interview method to class II teachers, in the learning process there are several problems in the ongoing learning. The problems found in the learning process are:

1. Mathematics learning tends to be monotonous because it focuses on educators.
2. Students do not like Mathematics because there are some materials that are difficult to understand, including fractions.
3. Students are less active in learning activities and are less daring to ask things they do not know.

Educators find it a little difficult to teach Mathematics, especially in fractions. In addition, the lack of use of learning media is also a reason that makes it difficult for educators to carry out learning.

Referring to the problems that have been mentioned, learning media is needed to help learning Mathematics. The media that you want to use must be innovative and creative so that students can focus on the material being taught. Game-based learning media is one of the learning media that can help the learning process because at elementary school (SD) age, they love to play games, especially the games on cell phones.

That way, the researcher wants to provide a solution so that the existing problems can be solved by developing a game, namely I am a Fraction (AAP). With the game AAP expected to help the learning process.

Game is a word in English which means game. A game is something that can be played with certain rules so that there are winners and losers, usually in a non-serious context or for the purpose of refreshing. (Zikri, 2019)

applications can be used repeatedly, anytime, and anywhere without having to wait for learning. Because it can be played repeatedly, anytime, and anywhere, it can add to the knowledge of students in learning mathematics, knowing fractions.

AAP is a game that contains material about fractions. Because the second graders of elementary school are just starting to learn about fractions, the game introduces students to what fractions are. Then the menu section will explain in a simple way what fractions are and examples of fractions themselves. After that, there will be several objects or food that are divided into several parts, then students will answer the object or food including what fractions.

The point of the researcher making the game is that he wants to innovate to make learning media that is modern and in accordance with the learning standards of students. In addition, currently students are also using cellphones for learning due to the Covid-19 and that is one of the reasons why researchers want to develop this media. Researchers really hope that the game can support learning activities in schools.

Based on the results of the above discussion, the researcher is interested in conducting development research entitled "Development of Learning Media My Educational Game Based Fraction Android in Mathematics Subject Class II Elementary School"

II. Research Method

In this study, researchers used a Research and Development (R&D) method approach. R&D is a research method used to produce a particular product and test the effectiveness of that method. (Ikhbal & Musril, 2020)

Development or Research and Development (R&D) is a process of developing educational equipment which is carried out through a series of research using various methods in a cycle that goes through various stages. According to Smile and Reesnes, R&D is a process of developing educational equipment which is carried out through a series of research using various methods in a cycle that passes through various stages. Research and Development (R&D) is a research method used to produce certain products, and test the effectiveness of these products. Based on the definitions above, it can be explained that development research is research that is used to produce certain products, and to perfect a product that is in accordance with the references and criteria of the product made so as to produce a new product through various stages and validation or testing. (Mogana, 2017)

III. Result and Discussion

3.1 Media Development Results

This development research resulted in the game Aku Is A Fraction (AAP) *Android* which went through several stages in its manufacture. The validation of the game was carried out by media experts, material experts, and education experts. The target of the trial of the game is the second-grade students of SDN Batu Ampar 06 Pagi whose address is at Jl. Batu Jamrut Rt.012 Rw.02, Batu Ampar, Kramat Jati District, East Jakarta City, DKI Jakarta Province, 13520.

The research was carried out directly because the *Covid*-had improved so that students were allowed to study at school on condition that they had to comply with existing health protocols. The developed media is intended for grade II students who are just starting to learn the material about fractions. In this development, the researcher uses the *ADDIE* with the following stages:

3.2 Analysis stageAnalysis

a. Needs and characteristics

In the research process, researchers need data about the mathematics learning process such as student interest in learning, the media used, and difficulties in learning. Based on the results of interviews that the researchers conducted with the second-grade homeroom teacher at SDN Batu Ampar 06 Pagi, it was found that students had difficulty in fractional material. This is because students are learning fractions for the first time. Then the homeroom teacher also said that students were more interested in participating in learning when using learning media. Thus, the researcher concludes that homeroom teachers and students need an innovative and creative learning medium so that the learning process is not boring and easy to understand.

b. Material Analysis

After analyzing students' needs, several important things that students must pay attention to are Core Competencies (KI), Basic Competencies (KD), and Learning Objectives in the Mathematics subject matter of fractions. Reference sources for the preparation of materials and questions in *game* are fractions from the student book Theme 7 Togetherness (integrated thematic book 2013 curriculum, Jakarta: ministry of education and culture 2017) class II. The following is a table of basic competencies (KD), indicators, and learning objectives for Mathematics.

Table 1. KD, Indicators, and Learning Objectives

Basic Competence (KD)	Indicators	Learning Objectives
3.7 Explaining fractions $\frac{1}{2}$, $\frac{1}{3}$, and $\frac{1}{4}$ using concrete objects in everyday life	3.7.1 Determine the fractions $\frac{1}{2}$, $\frac{1}{3}$, and $\frac{1}{4}$ using concrete objects in everyday life correctly. 3.7.2 Explaining	1. Through the game I Am a Fraction, students are able to determine fractions using objects that exist in everyday life.

4.7 Presenting fractions $\frac{1}{2}$, $\frac{1}{3}$, and $\frac{1}{4}$ which corresponds to part of the whole of a concrete object in everyday life.	fractions $\frac{1}{2}$, $\frac{1}{3}$, and $\frac{1}{4}$ using concrete objects in everyday life.	2. Through the game I Am a Fraction, students are able to explain fractions using objects that exist in everyday life.

c. Analysis of media creation tools and materials

Media *game* AAP educational *software* and *hardware* adequate *Software* and *hardware* used are:

Software used:

a. Canva
b. *Unity Hub version 3.1.2*

Hardware used:

a. Laptop Processor core i7
b. *System Operating Windows 10*

b. DesignPhase

Learning media products *game* AAP educational learning media design *game* AAP educationalThis learning media is designed in accordance with the competency standards that must be achieved by class II students in fractional material. In the process of making learning media, the thing that must be done is to collect manufacturing materials which are carried out in the following ways:

a. Making *Storyboards*
b. Making material and question scripts
c. Making concept designs *game* I am a Fraction (AAP)
d. Entering material into the *game*
e. Giving *scripts*
f. Making *builds .apk*

3.3 Development Phase The educational AAP

The media *game* was developed based on the renewal of ideas that researchers have. media *game* is not yet in *the playstore*, but this learning media is included in the *game* media because this learning media contains learning materials.

The following are the steps for making *games* AAP educational

1) Determine the appropriate subjects and materials to be used in learning media.
2) Create a concept design using Canva.

Figure 2. *Game*

3) Creating *2D projects* in *Unity Hub*.

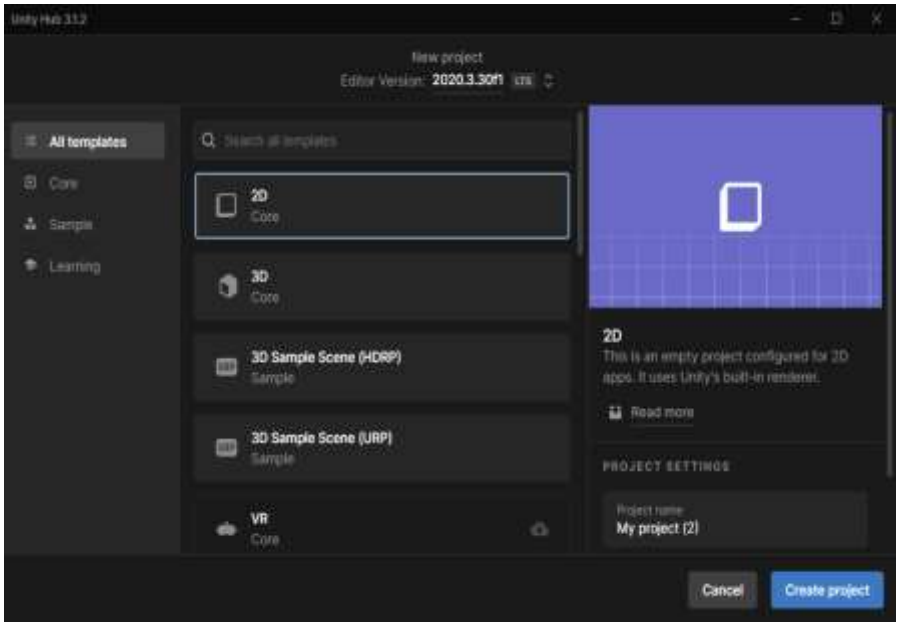

Figure 3. *Creating project*

4) Preparing an image object to use from a Canva design.

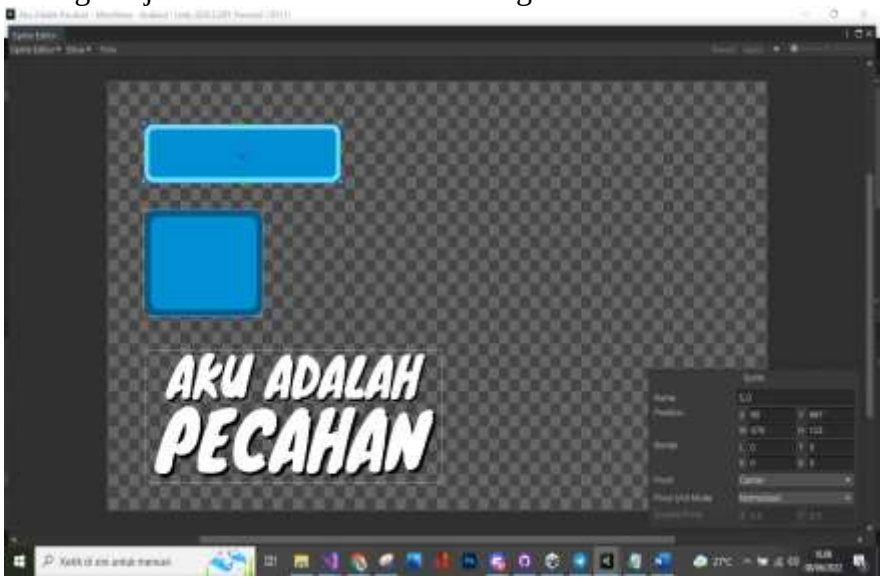

Figure 4. *Preparing the UI (User Interface) object*

5) for *the* main menu

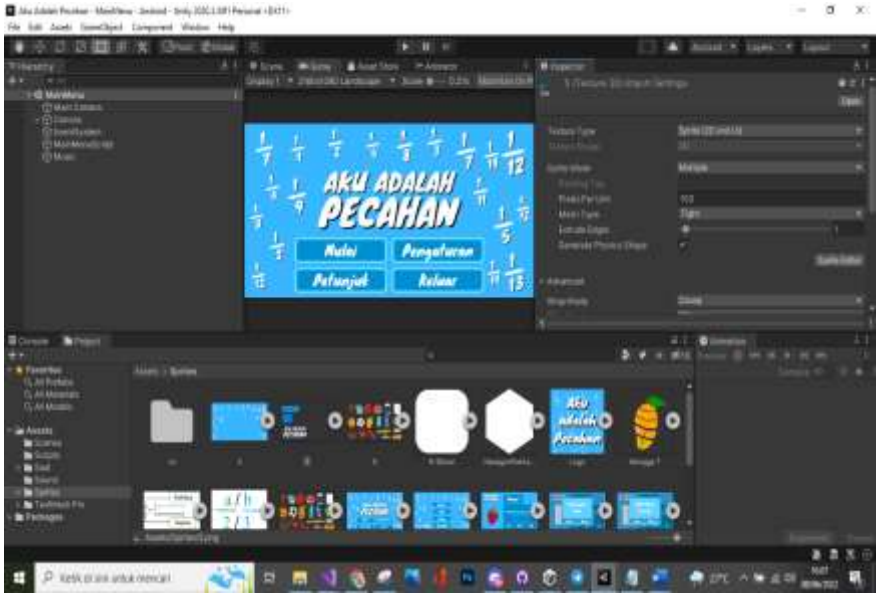

Figure 5. *UI*

6) *Scripting* navigation *Main Manuscript* to give *functions* buttons *UI* main menu

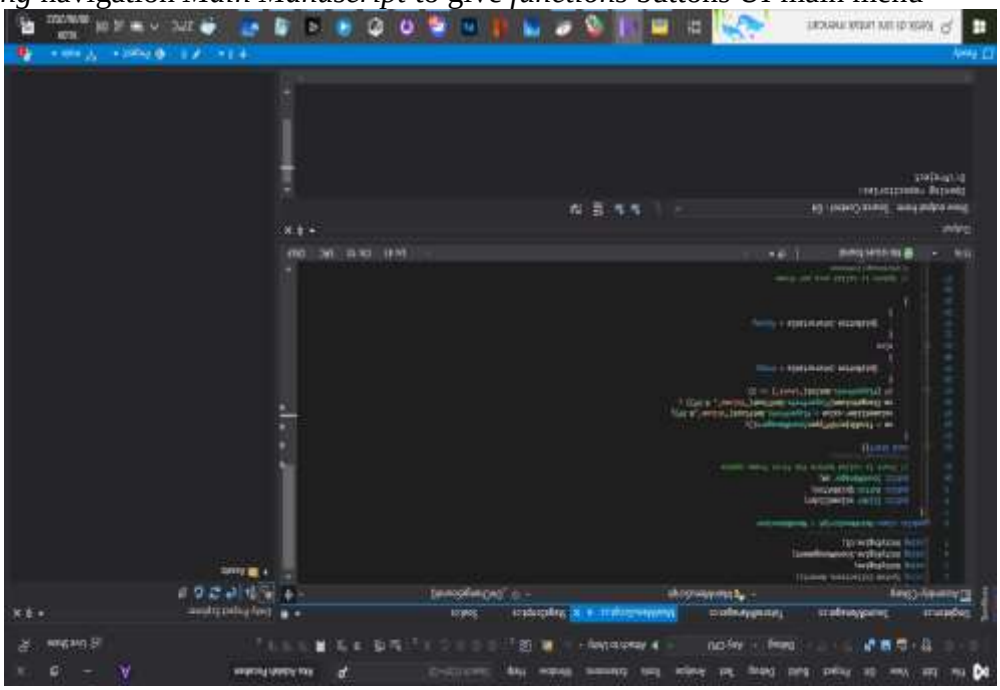

Figure 6. *scripting Navigation*

7) Adding settings to adjust *the volume* of the sound.

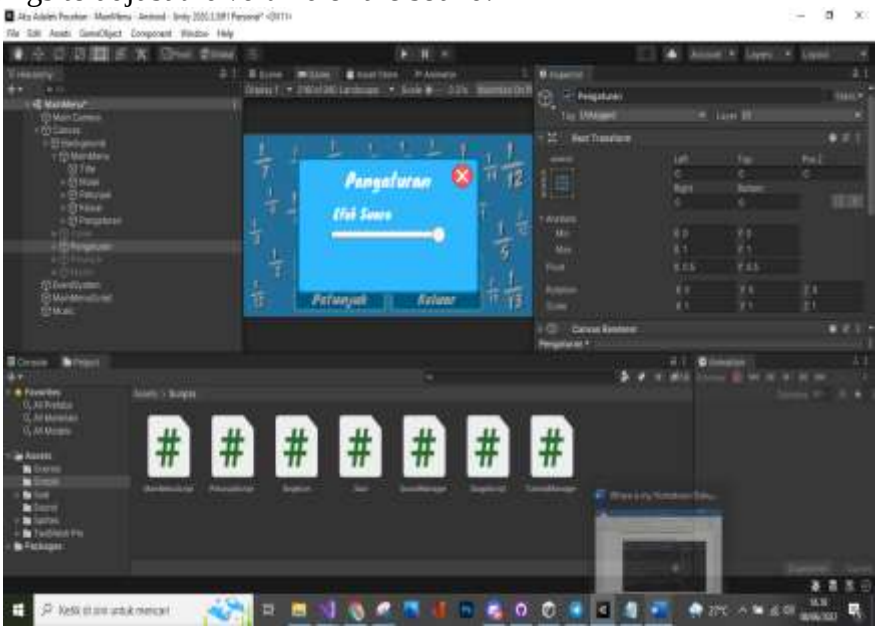

Figure 7. *Adding settings*

8) Creating *a soundmanager script* to set *function* what sound

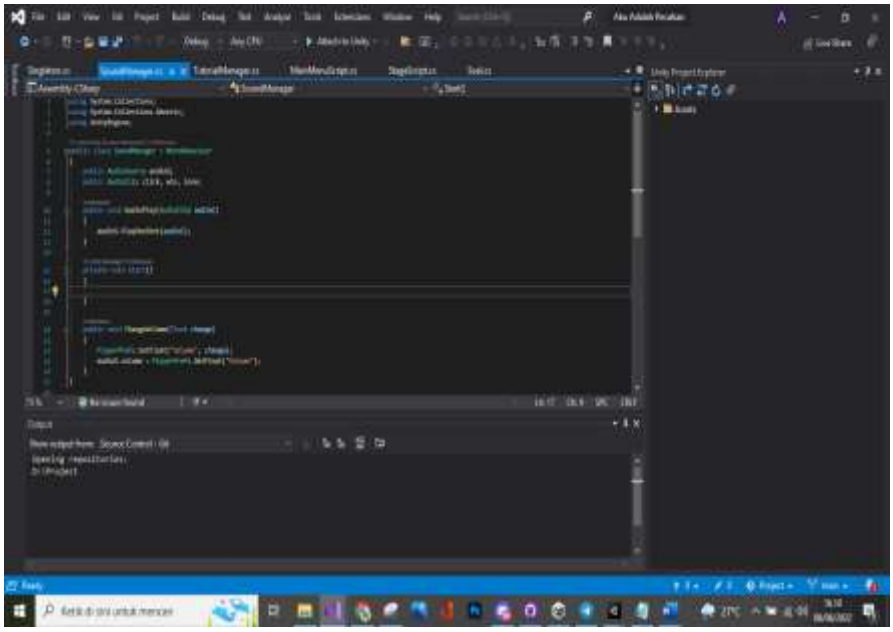

Figure 8. *Soundmanager script*

9) Compiling material pages.

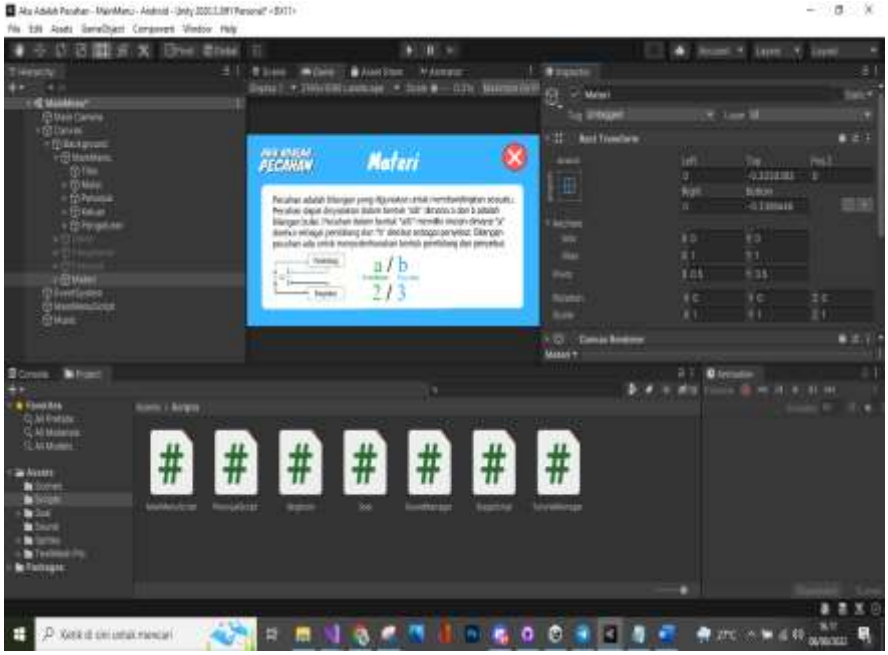

Figure 9. *Material*

10) page Compiling the *game* page and *level selection*.

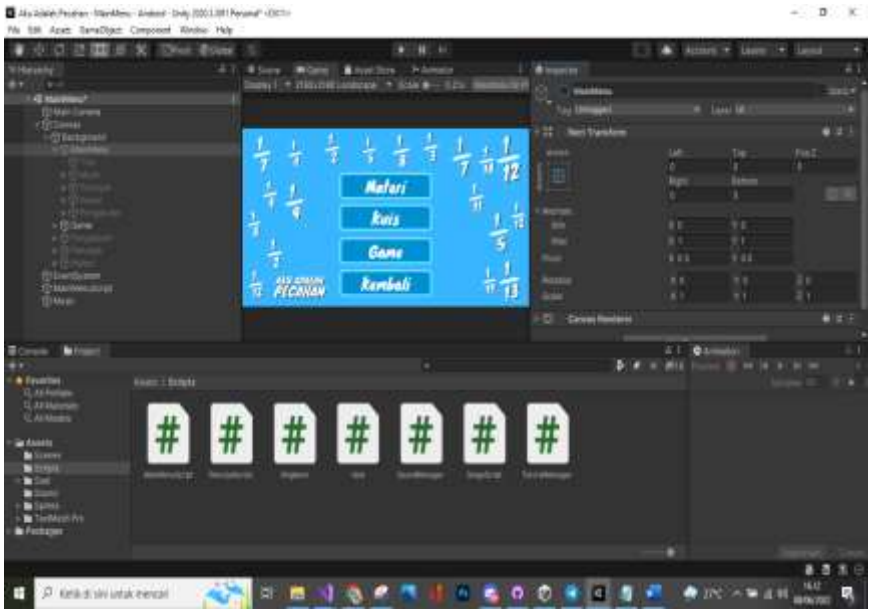

Figure 10. *Game menu page and level*

11) page Compose a guide page.

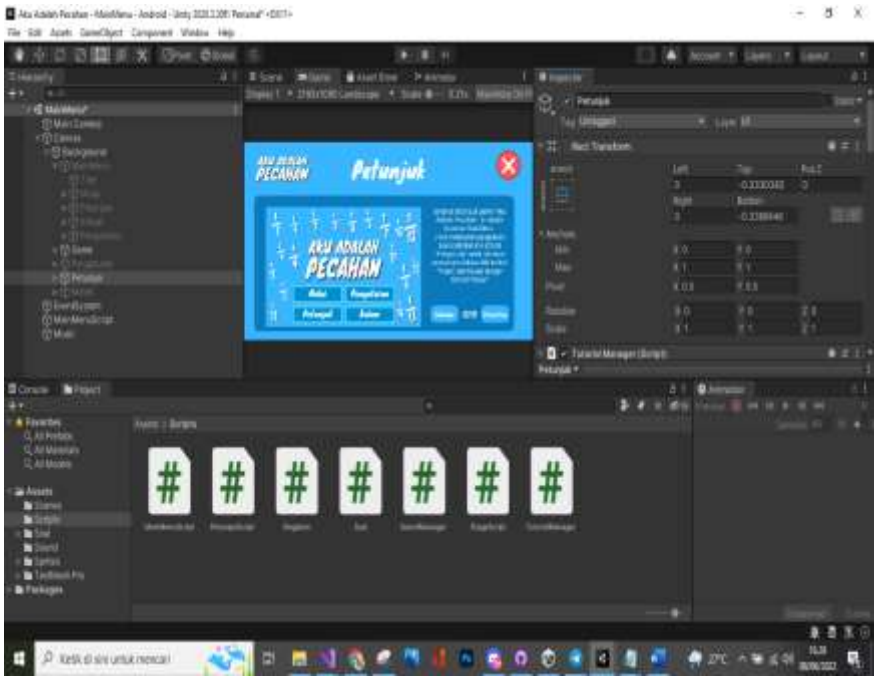

Figure 11. *Instructions page*

12) Create *a tutorial manager script* to set up the instructions page.

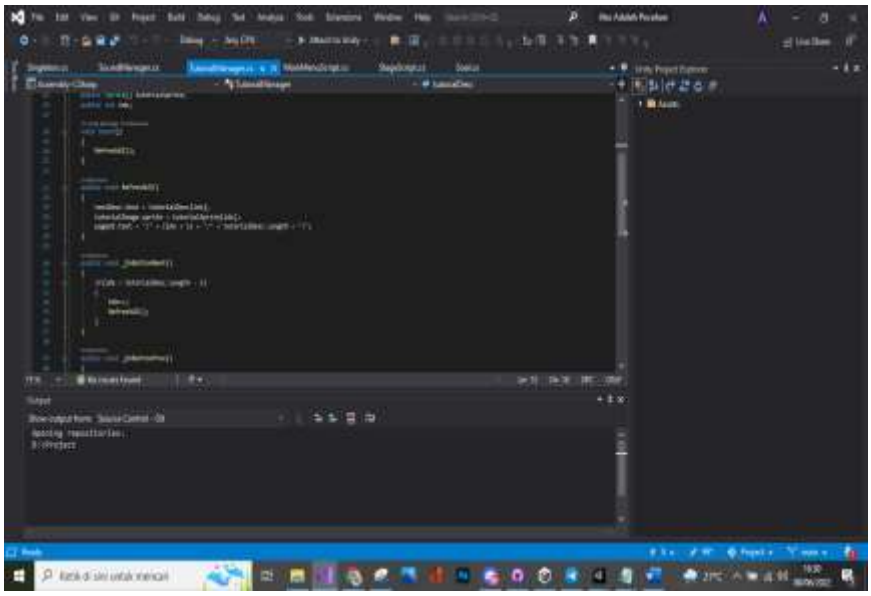

Figure 12. *Tutorialmanager script*

13) Compiling *UI (User Interface)* quiz page *game*.

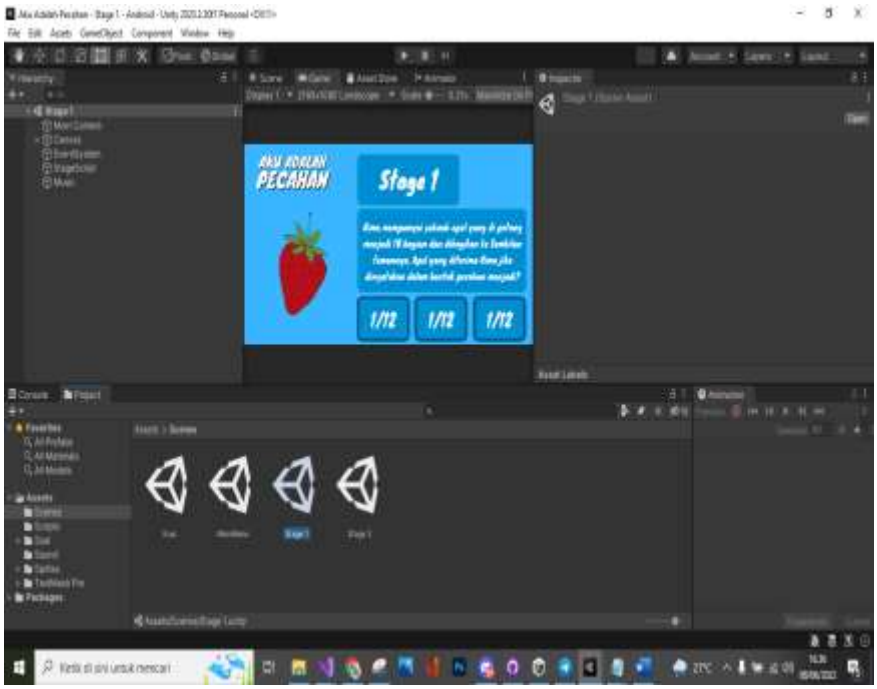

Figure 13. *Constructing UI quiz page game*

14) panel *win background* to notify players of winning or losing.

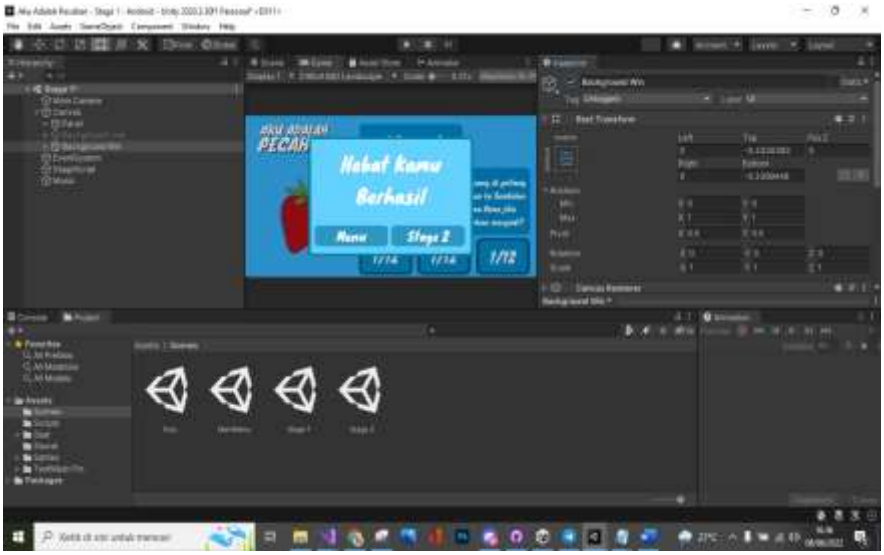

Figure 14. *Panel background win*

15) Create a script for making questions to be displayed.

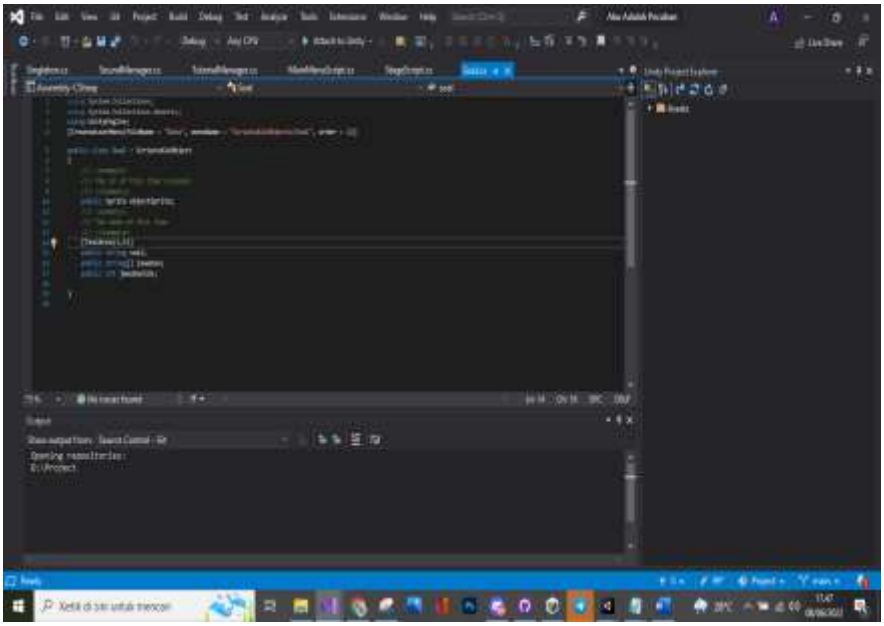

Figure 15. *script stagescript*

16) Creating *scripts* to regulate the course of the game, such as the correctness of an answer and winning or losing a game.

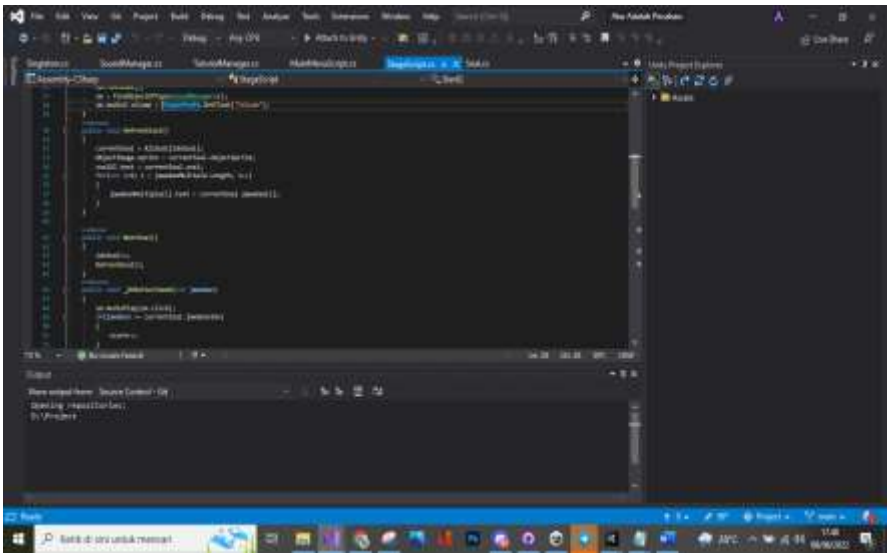

Figure 16. *Stage Script script*

17) Set *game settings* such as the screen that is always *landscape* menu *file* > *build settings* > *player settings*.

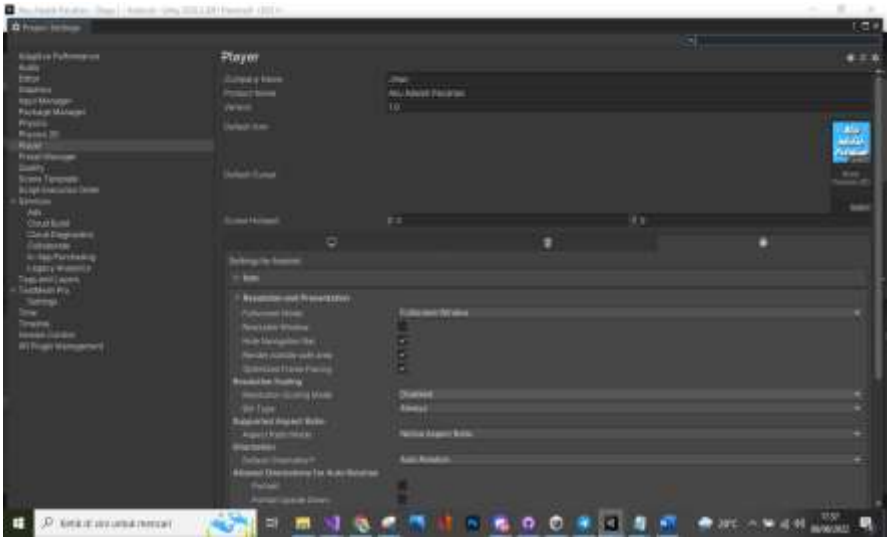

Figure 17. Games settings screen

18) Create *Build.apk*.

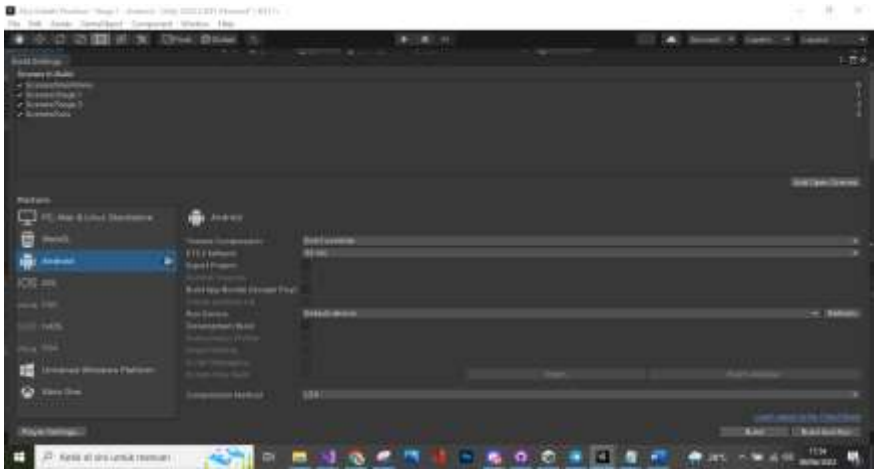

Figure 18*. Creating a build.apk*

1. **Phase*Implementation*The**
   Product design that has been validated by experts and has been revised can then be used in small group trials and large group trials for second grade students at SDN Batu Ampar 06 Pagi. Because the *COVID-19* has ended and has entered the *new normal* , the research is carried out face-to-face in schools. The small group trial involved 5 grade II B students and the large group trial involved 20 grade II B students at SDN Batu Ampar 06 Pagi.
2. **Phase The*Evaluation*implementation**
   This product is equipped with student response questionnaires, *pre-test* questions and *post-test*. With this implementation, the effectiveness of the learning process activities using the *game* AAP educationalAs well as suggestions and input from experts used by researchers to improve the shortcomings that exist in the *game* media so that the *game* can be used properly on a wider range.

3.3 Media Feasibility

At the media feasibility stage, researchers validated and revised designs and product trials. The following is the research data.

a. Validation

A media *game* for the mathematics class II elementary school subjects was carried out by 3 validators who were experts in their fields. These experts are Mr. Khavisa Pranata, M. Pd as media expert validator, Ms. Ima Mulyawati M. Pd as material expert, and Ms. Dwi Hanawati S. Pd as education expert. This validation was carried out to determine the feasibility *game* before being tested on students.

Validation itself is an activity to assess a learning media product that has previously been developed according to needs. At this validation stage, validators and respondents are given direct questionnaires and send the *game* AAP educational *WhatsApp*. The following is the validation data from media experts, material experts, and education experts:

b. The Media Expert Validation

The media validation *game* was carried out by Mr. Khavisa Pranata, M.Pd to determine the feasibility of the media. The following are the results of the validation data.

Table 2. Results of Media Expert Validation

No	Items of Assessment	Score Validation
1	Attractiveness of the color and background display in *the game*.	4
2	Menu layout suitability.	4
3	Appropriateness of the scale of the image presented.	3
4	Music compatibility in *the game*.	3
5	Attractive *design*.	5
6	The writing on the buttons is legible.	5
7	Font size suitability.	5
8	Font compatibility.	5
9	Applications are easy to install and *uninstall* from your device/*mobile*.	4
10	Applications can be run on all types of *android*.	5
11	Applications can be served for all resolutions.	5
12	Easy touch function.	5
13	Buttons are easy to use.	5
Total		58
Total maximum score		65
Average percentage		89.23%
qualification		Very good

$$P = \frac{58}{65} \times 100\% = 89.23\%$$

Based on table 4.2, the score is 58 from the maximum score of 65, and the average percentage is 89, 23% with “Excellent” qualification. The conclusion by media experts regarding the *game* is "Appropriate to use without revision".

c. Material Expert Validation Material

The media *game* was carried out by Mrs. Ima Mulyawati, M.Pd to determine the feasibility of the material contained in the *game* AAP educationalThe following are the results of the validation data.

Table 3. Results of Material Expert Validation

No.	Item Assessment	Score Validation
1	Reality of the material presented.	3
2	Clarity in the delivery of material.	4
3	Completeness of the material presented.	4
4	The material presented is in accordance with the level of development of students.	5

5	The use of Indonesian in the material makes it easy to understand.	5
6	The suitability of learning materials with the curriculum.	5
7	The material presented supports the achievement of basic competencies.	5
8	The ability of the media in helping students increase knowledge.	3
9	Giving quizzes to hone students' abilities.	4
10	The suitability of the evaluation with the existing material.	5
Total		43
Total maximum score		50
Average percentage		86%
qualification		Very Good

$$P = \frac{43}{50} \times 100\% = 86\%$$

Based on table 4.3, it is obtained a score of 43 from a maximum score of 50, and an average percentage of 86% with the qualification "Very Well". The conclusion by the material expert regarding the material contained in the *game* AAP educationalThe input given by Ibu Ima is that it can be used with some improvements.

d. Validation of education experts

Media validation by education experts on the *game* was carried out by Mrs. Dwi Hanawati, S.Pd. The following are the results of the validation data.

Table 4. Results of Validation of Education Experts

No.	Item Assessment	Score Validation
1	The material is in accordance with the needs of students.	5
2	The material is in accordance with the basic indicators and competencies.	5
3	Learning objectives according to basic competencies.	5
4	The material presented can be easily understood by students.	5
5	The material is coherent in its presentation.	5
6	the media *game* is a fraction that motivates students to study harder.	5
7	a media *game* is a fraction that gives students convenience in learning.	5
8	*the game fractions* can provide a new learning experience for students.	5

9	Clarity in the instructions for using the game is a fraction.	5
10	The accuracy of the selection of the ratio of the images served on the *game*.	4
11	Innovation and creativity in learning media.	5
Total		54
Total maximum score		55
Average percentage		98.18%
qualification		Very good

$$P = \frac{54}{55} \times 100\% = 98.18\%$$

Based on table 4.4, the score 54 from the maximum score is 55, and the average percentage is 98, 18% with "Excellent" qualification. The conclusion by education experts regarding the *game* AAP educational

After knowing all the validation results of the game by the validators, it can be calculated the overall average percentage obtained. The following are tables and graphs that present the summary results of the data.

Table 5. Average Overall Value Validator

Validator	Score obtained	Maximum score	Average percentage
Validator Media Expert	58	65	89.23%
Material Expert Validator	43	50	86%
Education Expert Validator	54	55	98.18%
Total			91.13%

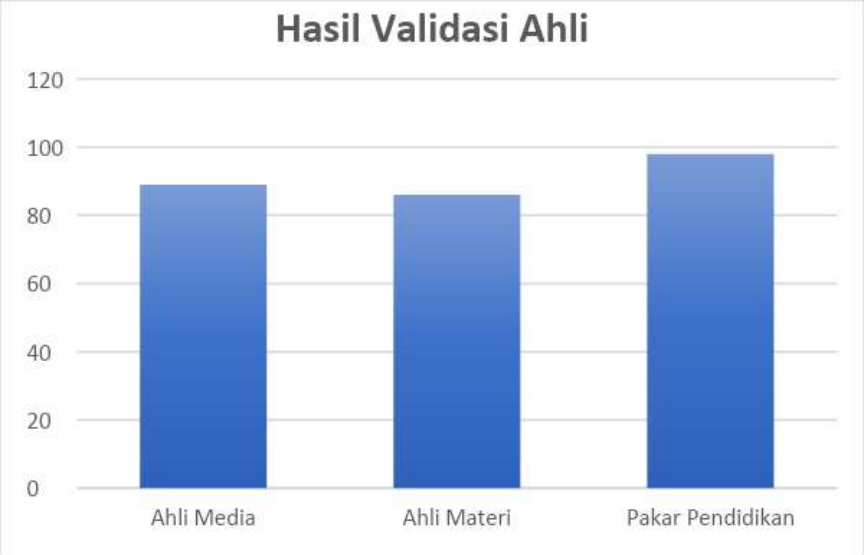

Figure 1. *Validation of the Feasibility of Learning Media*

Based on the diagram above, it can be concluded that the *game* -based AAP educational *Android is feasible* to be tested in schools.

e. Revision

After validation by media experts, material experts, and education experts, there were several criticisms and suggestions given by each validator. These criticisms and suggestions are intended to improve the *game* AAP educationalThe following are criticisms and suggestions from each validator:

a. Media Expert

According to Mr. Khavisa Pranata, M.Pd, the objects in the *game* cannot be the same color as the *background games* and added music to make it more fun when used. Researchers received suggestions from media experts and made revisions. The following is the display of the game before and after the revision.

Figure 19. *Before the game was revised*

Figure 20. *After the game was revised*

Before it was revised, the color on the *cellphone was the same* as the *background*, namely blue. After being revised, the color on the *cellphone* changes to gray.

b. Material Expert

According to Mrs. Ima Mulyawati, M.Pd at the beginning and the end of the sentence in the material is not needed. The material is added with the sentence "b cannot be equal to 0" and is given as an example. Do not forget that every question in *the game* must be rewarded. Researchers receive suggestions and criticisms from material experts and make revisions. The following is the display of the game before and after the revision.

Figure 21. *Before the game was revised*

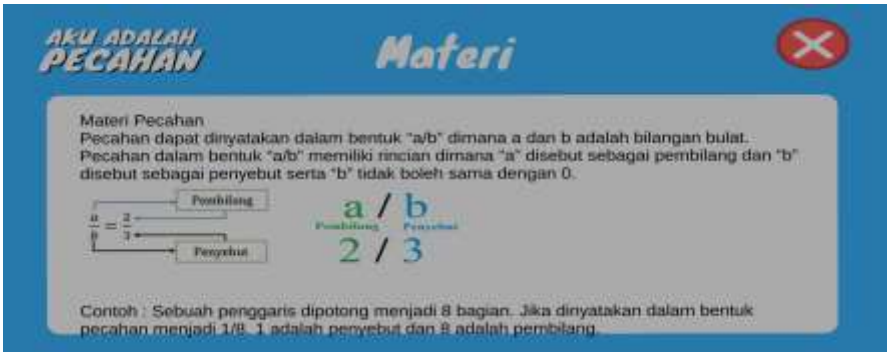

Figure 22. *After the game was revised*

Before it was revised there were some unnecessary sentences and a lack of examples and materials. After being revised there are examples and materials that should exist.

c. Educational Experts

According to Ms. Dwi Hanawati S.Pd regarding the *game* AAP educational *game* is good, the material described is in accordance with basic competencies and has fulfilled class II learning, and the *game* is very helpful for students in understanding fractions.

3.4 The Effectiveness

a. Implementation Phase

At this stage the researcher explains the results of the data obtained from media products that have been tested in schools through small trial activities and large trials.

a. Small Group Trial Small

A media *game* on Mathematics class II SD was conducted by 5 students in class II B SDN Batu Ampar 06 Pagi. The trial was carried out to determine the feasibility of a game that the researchers developed on a small scale before being used on a larger scale.

This trial was carried out directly by providing *games* via *WhatsApp* and providing student questionnaires directly to determine student responses to AAP educational game media. The small group trial was held on June 17, 2022.

Table 6. Results of the Small Trial

No	Participant Name	Number Question										Number
		1	2	3	4	5	6	7	8	9	10	
1	Habibie	5	4	5	5	5	4	4	5	4	5	**46**
2	Alsa	5	5	4	5	5	5	5	4	5	5	**48**

3	Adwha	5	4	4	3	5	5	5	5	5	5	**46**
4	Kenzie	5	5	5	5	5	5	5	5	5	5	**50**
5	Ratu	5	5	5	5	5	5	5	5	4	5	**48**
Score obtained		**25**	**23**	**23**	**23**	**24**	**24**	**24**	**24**	**23**	**25**	**238**
Maximum score		**25**	**25**	**25**	**25**	**25**	**25**	**25**	**25**	**100**	**100**	**250**
%		**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	
Percentage (%		**92**	**)**	**92**	**92**	**96**	**96**	**96**	**96**	**92**	**100**	
Average percentage (%)		**95.2%**										
Qualification		**Very Good**										

Based on the table above, the small group trial obtained a score of 238 from the maximum score of 250. The average percentage obtained after the small group trial is 95.2% with "Excellent" qualification. With a good response from small group trials and no responses leading to improvement, the researcher can continue large group trials.

b. Large Group Trial

After conducting small group trials, the next step is to test the media with large groups. The large group trial was conducted by 20 students of class II B SDN Batu Ampar 06 Pagi. The trial was carried out to determine the feasibility of a game that the researchers developed on a large scale.

Like small group trials, large group trials are carried out directly by providing AAP educational game applications via *WhatsApp* and giving student questionnaires directly to find out student responses to AAP educational game media. The large group trial was carried out on June 20, 2022.

Table 7. Results of the Large Trial

No	Participant Name	Number Question										Number
		1	2	3	4	5	6	7	8	9	10	
1	Bianco	5	5	5	5	5	5	5	5	5	5	**50**
2	My	4	5	5	5	5	5	5	5	5	3	**49**
5	Danish	5	4	4	5	5	5	4	5	5	4	**47**
5	Bagas	5	5	5	4	5	5	5	5	5	5	**49**
4	Vino	4	4	5	5	5	son	4	4	4	5	**44**
6	Ghifari	4	5	5	5	5	5	5	5	4	5	**48**
7	Dinar	4	4	5	5	5	5	5	5	5	5	**48**
8	Arsyad	5	4	5	3	5	3	5	5	5	5	**45**
9	Rendy	4	5	5	5	4	4	4	4	5	5	**45**
10	Aldi	5	4	5	5	5	4	4	5	4	5	**46**
11	Gladis	5	5	5	5	5	5	5	5	5	4	**49**
12	Aprilia	5	4	5	5	5	5	5	5	4	5	**48**
13	Razka	5	4	5	5	5	5	5	5	5	5	**49**
14	Marisa	5	5	5	5	5	5	5	4	5	5	**49**
15	Jihan	5	5	5	5	5	5	5	5	5	5	**50**
16	Yessi	5	5	5	5	5	5	5	5	5	5	**50**
17	Keinan	4	5	5	5	5	5	5	5	4	5	**48**
18	Zaky	5	4	5	5	5	5	4	5	5	5	**48**

19	Fhatiya	5	5	5	5	5	5	5	5	5	5	**50**
20	Gwen	5	5	5	5	5	5	5	5	5	_	**50**
Score obtained		**94**	**92**	**99**	**96**	**99**	**96**	**95**	**97**	**95**	**99**	**962**
Maximum score		**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**1000**
100%		**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	
Press percentage (%)		**94**	**92**	**99**	**96**	**99**	**96**	**95**	**97**	**95**	**99**	
Average percentage (%)		**96.2%**										
qualification		**Very good**										

Based on the table above, the large group trial obtained a score of 962 from the maximum score of 1000. The average percentage obtained after the small group trial was 96.2% with the qualification "Very Good".

After conducting small group trials and large group trials with the number of respondents in small group trials of 5 people and large group trials of 20 people, the feasibility of the game as a whole is as follows.

Table 8. Average results of small & large group trials

Trial	Scores Obtained	Maximum Score	Average Percentage
Small Group	238	250	95.2%
Large Group	962	1000	96.2%
Total Overall Percentage	1200	1250	95.7%

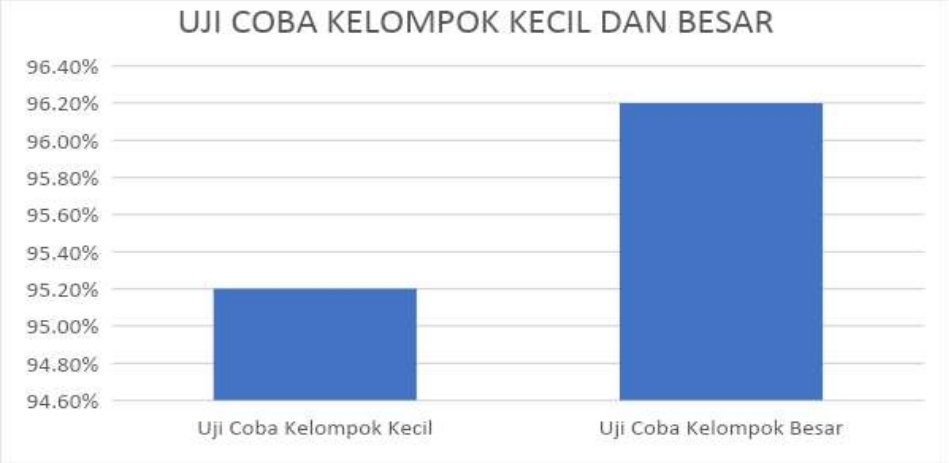

Figure 23. *Small and Large Test Result Data*

Based on the existing table, the overall average percentage of small group trials and large group trials is 95.7% with the qualification "Very Good". And it can be concluded that the *game* -based AAP *Android* for Mathematics class II elementary school is declared suitable for use in helping the learning process that is innovative and creative.

3.5 Research Results

a. Media Development

In this media development, researchers used the R&D (*Research and Development*) model by adapting the *ADDIE*. This development goes through 5 stages starting from the *analysis, design, development, implementation,* and *evaluation*. In the first stage, the researcher analyzed the problems experienced by teachers and students in learning Mathematics, especially on fractions, then the researchers also conducted interviews with the second-grade homeroom teacher regarding the learning process. The second stage, the researcher makes a media design that will be developed including the display that will be in the media.

In the third stage, researchers carried out development, after the design of *game* AAP educationalIn the fourth stage or implementation stage, the media that has been developed and has passed validation by experts can go directly to the process of small group trials and large group trials for class II students. And the last stage is the evaluation stage where the media that has been tested will receive a response to criticism and suggestions for evaluating *game* AAP educational

b. Supporting and Inhibiting Factors

When conducting the research process there must be supporting and inhibiting factors. Below are the supporting and inhibiting factors that researchers feel:

1) Supporting Factors
   a) Experts during the validation process always respond well and quickly. And always provide positive input so that researchers are enthusiastic about doing this research.
   b) Students who are very enthusiastic and happy when given *games* to help the learning process.
   c) The school really allows researchers to conduct research, especially the principal, the vice principal, the homeroom teacher, and the teachers and staff who are very receptive and willing to provide a place and time for research.
   d) Parents of students who also allow their children to bring *cellphones* and *install* applications *game* AAP educational
2) Inhibiting Factors
   a) There are some students who cannot bring *cellphones* because their parents bring them to work.
   b) When making media, there are several obstacles from researchers and people who teach making this media.

d. Strengths and Weaknesses of Game Is Fraction

Like any learning media in general, *game* also has advantages and disadvantages, including:

1) Advantages of *game* AAP educational
   a) It looks attractive.
   b) screen display *Full HD game*.
   c) Can be played without using internet data because *the game* is *offline*.
   d) In addition to educating, *games* AAP educational
   e) *Games* are practical because they can be used during the learning process or not.
2) Disadvantages of *game* AAP educational
   a) Can only be *installed* on *Android mobile phones*.

IV. Conclusion

Development of the Android-based educational game I Are Fractions (AAP) in Mathematics class II for fractions has been completed. From the research data obtained, the following conclusions can be drawn:

1. The development of AAP educational game media using the R&D (Research and Development) research method by adapting the ADDIE development model through 5 stages. The results obtained from this development are an Android-based AAP educational game media application for the Mathematics subject matter of grade II elementary school fractions. The advantage of the AAP educational game media is that this game can be linked to fractions learning materials for grade II elementary school children. Then the AAP educational game so far has not been developed so that it can be said that the development that the researchers are doing is innovative in nature.
2. The AAP educational game media created and developed by researchers is considered feasible to be used in the learning and teaching process, this is based on the results of expert assessments. The results obtained from media experts were 89.23% with the predicate "Very Eligible". And the results obtained by material experts are 86% with the predicate "Very Eligible". And the results obtained by education experts were 98.18% with the predicate "Very Eligible". Furthermore, the results of the small group trial obtained 95.2% with the "Very Eligible" qualification and the large group trial results obtained 96.2% with the "Very Eligible" qualification.

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