The Development of Monopoly Game as Media for Science Learning at Elementary School

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Article Info	Abstract
	The purpose of this study was to examine the validity of the development of the game of Monopoly on hydrospheric science learning in grade V Elementary School. Research and Development (R&D) research is used in this type of research. The Four-D model describes the research and development process, consisting of four stages: defining, designing, developing, and distributing. The study took place in Pekanbaru in the 2020/2021 academic year with four fifth grade private elementary school students. The Four-D model in this development research is only up to the development stage. The purpose of this research is to develop a product and validate by the validator then test individually. We were collecting data using a Likert scale instrument. Physical aspects, usage aspects, image aspects, colour aspects, writing aspects, and functional aspects obtained an average score of 97.78%, categorized as very valid in the assessment carried out by media expert validators. The assessment results carried out by the material expert validator consisted of the content/material aspect, and the learning aspect resulted in an average score of 90%, which indicated both were very valid. The average individual test evaluation results were 97.78%, categorized as very good. Monopoly game media was declared valid for grade V Elementary School science learning based on data analysis by media experts, material experts, and individual trials.
	Abstrak
	Tujuan dari penelitian ini adalah untuk melihat validitas pengembangan permainan monopoli terhadap pembelajaran IPA materi hidrosfer di kelas V Sekolah Dasar. Penelitian Research and Development (R&D) digunakan dalam jenis penelitian ini. Model Empat-D digunakan untuk menggambarkan proses penelitian dan pengembangan yang terdiri dari empat tahap: mendefinisikan, merancang, mengembangkan, dan mendistribusikan. Penelitian berlangsung di Pekanbaru pada tahun ajaran 2020/2021 dengan 4 orang siswa kelas V SD Swasta. Model *Four-D* dalam penelitian pengembangan ini hanya sampai tahap mengembangkan, karena tujuan penelitian ini adalah untuk mengembangkan suatu produk dan di validasi oleh validator kemudian diuji secara individual. Pengumpulan data menggunakan instrumen skala *Likert*. Aspek fisik, aspek pemakaian, aspek gambar, aspek warna, aspek tulisan, dan aspek fungsi memperoleh rata-rata nilai sebesar 97,78% dikategorikan sangat valid dalam penilaian yang dilakukan oleh validator ahli media. Hasil penilaian yang dilakukan oleh validator ahli materi terdiri atas aspek isi/materi dan aspek pembelajaran menghasilkan rata-rata nilai sebesar 90% yang menunjukkan keduanya sangat valid. Hasil evaluasi tes individu rata-rata sebesar 97,78% dikategorikan sangat baik. Media permainan monopoli dinyatakan valid untuk digunakan dalam pembelajaran IPA kelas V Sekolah Dasar berdasarkan hasil analisis data ahli media, ahli materi, dan uji coba individu.

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INTRODUCTION

Sciences Learning which is often referred to by the term science education is one of the subjects in elementary school. Science is a human effort in understanding the universe through an observation that is right on target by using procedures and explained by reasoning to get a conclusion (Susanto, 2013). In the implementation of Science learning, there are required learning devices that support, including teaching materials, modules, student worksheets, and one of them is the learning media. The word media comes from the Latin "medius" which means intermediary or introduction (Arsyad, 2011). Media is related to intermediaries who channel messages and information from sources received by the recipient of statements in the learning process (Mahnun, 2012). Learning is an activity to carry out the curriculum of an educational institution to influence students to achieve the educational goals that have been set (Zaman, 2010). Learning is all efforts made by educators so that there is a learning process in learners. The role of learning can provide, demonstrate, guide, and motivate students to interact with various learning resources. Learning resources are intentionally designed for learning purposes and their learning resources (Falahudin, 2014). Learning media is an intermediary or introduction to messages delivered by teachers to students to facilitate the absorption of learning materials taught (Siti, Wakhyudin dan Saputra 2017). Learning media is a tool used as an intermediary to convey messages in a learning activity. The message conveyed contains the subject matter. The media can get the message more easily to students to be understood and understood to achieve learning goals.

Based on interviews conducted with teachers at an Elementary School, information was obtained that Science learning rarely uses media. The Science learning process is more likely to use lecture methods, although there are sometimes discussions and presentations. Today, Science learning activities carried out by students tend only to be oriented by memorizing concepts, principles, laws, theories, and they are not accustomed to critical thinking. With teachers who only use the lecture method, students become more complicated in receiving the material. Elementary school students need concrete understanding so that students can understand the IPA learning materials they learn. Science learning is carried out by paying attention to the cognitive development of students. Cognitive development is divided into sensory, preoperative, concreteand formal stages (Shadiq&Musatajab, 2011). Specifically, elementary school students are at the preoperative stage until the beginning of the proper operational stage, which shows that thinking students are more likely to be tangible things. Therefore, it is necessary to make changes in Science learning by using a medium.

As a result of the preceding description, the remedy that may be employed to overcome the problem is developing a proper, engaging, and effective learning environment. According to the qualities and demands of students, the media-generated must be a compelling medium to engage and educate. To accomplish this part of napping, it is necessary to employ the principle of learning while playing. Students are learning by their own experiences while they play, which is a good thing. In education, according to Falahudin (2014), media has several advantages, including the ability to standardize subject matter delivery, the ability to make the learning process clearer and more interesting, the ability to make the learning process more interactive, efficient in time and energy, improving the quality of learning outcomes, the ability to conduct the learning process anywhere and at any time, and the ability to foster a positive attitude in learners toward the material and learning process. Media can assist in transforming the role of learners in a positive and productive direction, media can help make abstract subject matter more concrete, media can also assist in overcoming the constraints of space and time constraints, and media can assist in overcoming the limitations of the human senses, among other things.

Learning media is used as a tool to make it easier for students to understand the material learned and develop students' level of thinking. One way is to use learning media in the form of games that are used as learning. Based on (Nur, 2013), A game is an activity tied to the rules to achieve a specific goal that is to get pleasure at the time of doing the exercise. One type of game

that can be used as a lesson is monopoly games. Monopoly is a world-renowned board game that aims to master all plots above the game board through purchasing, rent, and exchanging purchasing, renting, and exchanging properties in a simplified economic system (Islamiyah, 2017). Husna (Suprapto, 2013) says that Monopoly is a world-famous board and group game. The goal is to master all plots through renting, selling, and buying. The process of renting, selling and buying with economic principles made simpler. Monopoly media is a medium that is used by playing so that it can make student learning situations more fun, not boring, and make it easier for students to answer questions. Monopoly was chosen because it includes a game that is relatively popular with children and easy to play. This game can make students feel like they are playing, but students are learning. The learning media in the form of games will make it easier for students to be more into the knowledge that teachers will give.

The use of media based on educational games is also often used. The educational game is a medium used to provide teaching, increase the knowledge of its users through unique media, and attract (Sa'ad, 2020). One of the learning media that can improve student learning outcomes is educational games, which are specifically designed to teach people about a particular subject, expand concepts, and help students learn skills in playing (Budiman, Hasudungan dan Khoiri 2017). According to (Pebria, 2019) there are several benefits of educational games, namely as educational tools that are educational, increase the child's potential, language skills, think and associate with the environment, strengthen and display the limbs of the child, develop personality, and train the child's creativity, then channel children's activities to positive things. The design of good educational games has criteria, namely the value of harmony, can be used, accuracy, suitability, relevance, objectivity, and feedback (Novaliendry, 2013).

Some of the previous research supports this. Monopoly games have previously been developed as a medium of learning, namely in research (Siti, Wakhyudin dan Saputra, 2017) which makes monopoly games a medium Science of learning on energy materials called Monergi media (Monopoli Energi). His research showed that energy monopoly games are used as a learning medium that can improve student learning outcomes and deserve to be developed as a learning medium. The creation of monopoly game media is tailored to the needs and characteristics of students, has the same goal as monopoly games usually are master. However, the meaning is to master the science contained in the media. With this monopoly game media, students can play while learning. A medium used in this game makes the atmosphere more fun, not boring, and easy to accept material or answer questions.

Based on the description, the development of educational game-based learning media, this researcher is essential to improve the quality of science learning in elementary schools. This research was conducted to determine the validity of monopoly game media against the learning of hydrosphere material in grade V elementary school.

METHOD

This research was conducted at a Private Elementary School in Pekanbaru with four class V. This study was from October 2020 to January 2021. This type of research is R&D (Research and Development). Researchers developed monopoly game media using the Four-D (Define, Design, Develop, and Disseminate) development model. This development procedure is carried out until the Develop stage because it will be in an individual trial to four students until developing the product and validated by the validator (media expert and material expert). There is an FGD (Focus Group Discussion) discussion with several teachers about the suitability of monopoly game media with hydrosphere material.

This type of research data is quantitative data, i.e. data on scores from assessments by validators (media experts and material experts) and students. The data sources in this study are expert media validators and material expert validators according to the results of the validity of the

developed media and the effects of students' assessments of monopoly gaming media to see student responses.

A research instrument is a tool that researchers use to collect data in a study (Sugiyono 2019). The instrument used in the study was a validation questionnaire used to obtain assessments and inputs about products designed by researchers so that they were viable for use in learning. The research instruments used are validation sheets (media experts and material experts) and student assessment sheets to determine the student's responses. The validation aspect of monopoly game media is made on a Likert scale with a score of 1-5. This Likert scale provides breadth to validators in assessing learning media developed by researchers. The rating category that the validator will give is indicated in table 1.

Table 1. Rating Category by Validator

Assessment Score	Category
5	Very Good
4	Good
3	Enough
2	Less Good
1	Bad

(Source: adapted from Sugiyono, 2019)

The assessment category that the student will give is indicated in table 2.

Table 2. Assessment Category by Students

Assessment Score	Category
5	Very Good
4	Good
3	Enough
2	Less Good
1	Bad

(Source: adapted from Sugiyono, 2019)

This study used two data analysis techniques, namely validator analysis and student assessment analysis. The average percentage category of monopoly game media rating scores is categorized as follows:

Table 3. Average Interval of Monopoly Game Media Validation Score

Average interval score (%)	Category
84-100	Strongly Valid
68-83	Valid
52-67	Enough
36-51	Invalid
20-35	Strongly Invalid

(Source: adapted from Sugiyono, 2019)

In order to make decisions on the validation of eligibility measuring tools, the following criteria should be considered.

Table 4. Percentage of Eligibility Criteria for Validity of Monopoly Game Media

Average interval score (%)	Category
84-100	Very Worthy
68-83	Worthy
52-67	Enough
36-51	Unworthy
20-35	Very Unworthy

(Source: adapted from Sugiyono, 2019)

The percentage categories on the student assessment sheet are as follows:

Table 5. Student Questionnaire Percentage Criteria

Average interval score (%)	Category
84-100	Very Good
68-83	Good
52-67	Enough
36-51	Less Good
20-35	Bad

(Source: adapted from Sugiyono, 2019)

FINDINGS AND DISCUSSIONS

Defining Stage

At the definition stage, researchers divide the stages into three steps, namely:

a. Curriculum Analysis

Law No. 2 of 1989 on the National Education System in Article 1 point 9 mentioned that the curriculum is a set of plans and arrangements regarding the content and subject matter and used as a guideline for implementing teaching and learning activities. The curriculum used today in elementary school is curriculum 2013. The theme book that is appropriate to hydrosphere material in Science learning is contained in Theme 8 "*Lingkungan Sahabat Kita*" at class V Subtheme 1 "*Manusia dan Lingkungan*", Subtheme 2 "*Perubahan Lingkungan*", Subtheme 3 "*Usaha Pelestarian Lingkungan*".

Figure 1. Cover of Teacher's Book and Student's book

b. Student Analysis

This analysis was done to get information about the characteristics of students in class V. According to Piaget (Marinda, 2020) At the age (7-11/12 years), elementary school children are in the stage of concrete operational thinking. Students' cognitive development is divided into four stages: sensory, preoperative, substantial operations, and formal procedures. Specifically, elementary students are at the end of the preoperative to an early proper operational stage, indicating that aspects of students' thinking tend to be concrete. Children at that age still see the world around them holistically or thoroughly. Elementary students enjoy fun learning. Therefore, with this monopoly game media, students are expected to enjoy science learning more easily and can easily receive the materials contained in monopoly game media.

c. Material Analysis

Analysis of materials is done by identifying teacher books and student books on hydrosphere materials. Based on the curriculum set in classroom V learning materials, hydrosphere materials are integrated into Theme 8 "*Lingkungan Sahabat Kita*" Adjusted based on Core Competency and Basic Competency (3.8 analyzes the water cycle and its impact on events on earth as well as the survival of living things. The hydrosphere material contained in this study is about the water cycle, the role of the water cycle, the stages of the water cycle, the impact of the water cycle, the type of water, the influence of water quality, how to save water, the benefits of

water, the condition of clean water, mineral water companies, water resources, maintaining water sustainability (Saptorini & Nurlaili, 2017).

Planning Stage

The stage design (design) aims to present the presentation of a medium that will be used. The design of monopoly game media is carried out based on the material that has been established.

a. Early Product Design

The process of generating monopoly game media will begin with the decomposition of the information into the learning content of the game. The theme of 8 "Our Friend's Environment" contains the hydrosphere material in Science learning. This material is divided into several sub-topics that are studied in this material. These sub-topics are as follows: the water cycle; the role of the water cycle; the stages of the water cycle; the impact of the water cycle; the types of water; the influence of water quality; how to save water; water benefits; clean water requirements; mineral water companies; water resources; and maintaining water sustainability. Then, in the media of monopoly games, sub-material is put into the kind of card in the form of material, questions, explanations, and answers on the cards, all of which are placed on the cards. For the cards themselves, there are four types: step cards in the form of forwarding and backward instructions, problem cards in the form of questions that discuss the sub matter contained in hydrosphere material, explanatory cards in the form of answers and explanations of questions on the problem card, and available information cards in the form of information about the "water cycle."

After the type of card is prepared, researchers design a monopoly game board that refers to monopoly games by changing the activities contained in monopoly games, usually into monopoly game activities, to explain hydrosphere material. In the monopoly game board sketch, there are four prominent corners: the start box to start the game, the free box to pause and free from questions, the ice-breaking box to do ice-breaking activities together, and the prison box as punishment cannot continue the game for a while until one of the players passes through the start box. The box that fills every corner of the monopoly game board describes the water-nuanced "hydrosphere" material. The icon contained from each box is about the famous waters in Indonesia (rivers, seas, beaches, and lakes) contained in each complex, bonuses, and general information cards that have material about the water cycle.

Once the game board is ready, the researchers design the cards used in the monopoly game media consisting of four types of cards. The following are sketches of the type of cards, namely:

a) Step cards are instruction cards forward and backwards from box one to the next. This step card consists of forwarding 1 step, forward 2 steps, forward 3 steps, forward 4 steps, forward 5 steps, forward 6 steps, backwards 1 step, backward 2 steps, backward 3 steps, backward 4 steps, backward 5 steps, and backward 6 steps.

b) The problem card is a card that contains questions that discuss the sub matter contained in the hydrosphere material. This problem card consists of several complex codes, each complex code has different questions and has a different number of scores.

c) An explanatory card is a card that contains answers and explanations of questions contained in the problem card. This explanatory card has the same complex code and number of scores as the problem card.

d) A general information card, i.e. a card containing material about the "water cycle". This general information card has the title of the material, the corresponding image of the material and the explanation.

Once the card type is ready, researchers design pawns as players' markers on monopoly game media. These pawns are nuanced in water, and to distinguish player markers from each other, researchers will give different colours from shoes and hands to the water icon.

After the researcher designs the pawn, then the researcher designs the scoreboard. This scoreboard is used to record the score the player gets. Once the scoreboard is ready, then the researchers design a guidebook cover. A5 paper-sized guidebook cover. The cover of this guidebook

comes with the book's title, "Come on, Learn While Playing Monopoly Hydrosphere". After the researchers sketched, the researcher added colours and drawings to complement the monopoly game design, the images were used according to the characteristics of students in elementary school. The design of the completeness of monopoly game media is as follows:
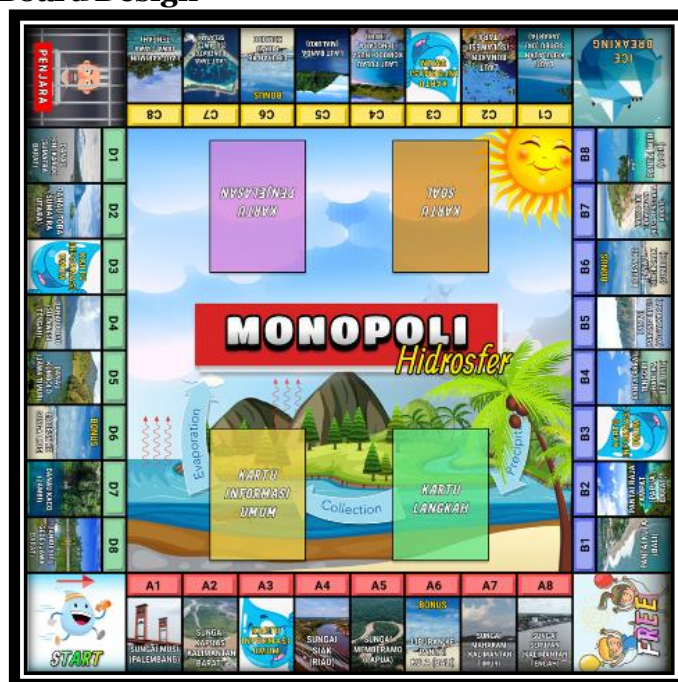
b.   Monopoly Game Board Design

Figure 2. Monopoly Game Board

A water-themed Monopoly game board design with a plot where players can place a green step card, a yellow general information card, a red problem card, and a purple explanation card, as well as small plots of 32 plots in the form of a complex consisting of complex A (A1-A8) in red located under the design of the board, complex B (B1-B8) in purple located to the right of the board design, yellow C (C1-C8) located on top. It is printed on 60 × 60-centimetre banner material to create the design of the game board shown here. Rather than being shaped like a square, Monopoly game boards are composed of wood material that measures 60 x 60 cm and is folded to become more rectangular. This game board is supplied with an iron board hook and handle for convenient transportation.

c.   Design of 4 Types of Cards

Figure 3. Type of Cards

There are four types of cards in this game: 24 step cards, 24 problem cards, 24 explanatory cards, and 12 general information cards. These four cards are printed using paper material laminated back front with a size of 8.5 x 5.5 cm.

1) First Step

On the step, the card has a front design and rear design consisting of forwarding 1 step, forward 2 steps, forward 3 steps, forward 4 steps, forward 5 steps, forward 6 steps, backwards 1 step, backward 2 steps, backward 3 steps, backward 4 steps, backward 5 steps, and backward 6 steps.

2) Problem Card

The question card has a front design and rear design consisting of complex A in red (A1, A2, A4, A5, A7, A8), complex B in purple (B1, B2, B4, B5, B7, B8), complex C yellow (C1, C2, C4, C5, C7, C8), and complex D in green (D1, D2, D4, D5, D7, D8) which is equipped with questions and score values consisting of 5, 10, 15, and 20. The background image design on this question card is about the waters (rivers, seas, beaches, and lakes) famous in Indonesia.

3) Explanation Card

The explanation card has a front design and rear design consisting of a red complex (A1, A2, A4, A5, A7, A8), a purple complex (B1, B2, B4, B5, B7, B8), a yellow complex (C1, C2, C4, C5, C7,

C8), and a green complex (D1, D2, D4, D5, D7, D8) which is equipped with an explanation of the question card, answers, and score scores consisting of 5,10,15, and 20. The background image design on this explanation card is about the waters (rivers, seas, beaches, and lakes) famous in Indonesia.

4) General Information Card

In the general information, the card has a front design and rear design consisting of information about the influence of water quality, water cycle, water cycle role, how to save water, water cycle stages, water cycle impacts, mineral water companies, water types, water benefits, water resources, clean water requirements, and maintaining water sustainability. The design of this information card comes with an image and an explanation of the information submitted based on its title.

d. Pawn Design

Figure 4. Pawn Design

Pawn is designed in the form of water shapes that have different colours on shoes and hands. This colour is adjusted to the complex colour consisting of red, purple, green, and yellow. In the form of player markers, pawns are made of acrylic material that amounts to 4 instruments consisting of red, purple, green, and yellow with 6 x 3 cm.

e. Scoreboard Design

Figure 5. Scoreboard Design

The scoreboard design is red, purple, green, and yellow, which comes with a pawn image and nuanced water on the title of the scoreboard. On the scoreboard, some names and classes that students must fill. The scoreboard is a board to record the score obtained by the player. This scoreboard is made of acrylic material that amounts to 4 panels consisting of red, purple, green, and yellow with a size of 15 x 10 cm and is equipped with two acrylic markers that are red to record the reduction of the score and blue to record the addition of the score.

f. Guidebook Design

Figure 6. Guidebook Design

The cover design on the guidebook titled "Come on, Learn While Playing Hydrosphere Monopoly" comes with material about the hydrosphere. Guidebooks in the form of books containing game rules, completeness of monopoly game media, and materials. This guidebook is printed with A5 paper size.

Development Step

Validation results of media experts and material experts to assess the feasibility of the product developed.

Table 6. Media Expert Validation Data

No	Assessment Aspect	Average Percentage of Each Aspect	Validation Category
1	Physics	90 %	Strongly Valid
2	Use	100 %	Strongly Valid
3	Picture	100 %	Strongly Valid
4	Colour	100 %	Strongly Valid
5	Writing	100 %	Strongly Valid
6	Function	100 %	Strongly Valid
Average Score		97,78 %	Strongly Valid

Results from table 6. Showing the results of expert media validation data on monopolistic media, there are several aspects: physical, usage, images, colours, writing, and functions (Saputra 2020). In the physical aspect, the percentage of the score is 90%, with a very valid category. The physical aspect tells that media development uses safe and suitable material for elementary school students. In the usage aspect, get a percentage score of 100% with a very valid category. The usage aspect tells that media development is very practical and makes it easier for elementary school students to use media.

The aspect of the image obtained a percentage score of 100% with a very valid category. This aspect tells that the development of the media follows the characteristics of the student, the material, and the purpose of learning. In the colour aspect, the percentage score is 100%, with a very good category. Based on this data, the development of media on this aspect of colour has been an interest in colour, colour composition, and colour composition that corresponds to the image in the media. In the writing aspect, the score percentage is 100%, with a very good category. The writing aspect has been clear and appropriate for the media used by elementary school students. In the aspect of the function obtained a percentage score of 100% with a very valid category. The element of function can improve the understanding of concepts and help teachers in the learning process in elementary school.

From table 6, The average product validity score by media experts on "Monopoly Gaming Media as IPA Learning Media in Grade V Elementary School" as a whole is 97.78%, with a very valid category. Based on the table of eligibility criteria, the developed monopoly gaming medium has a score of 97.78%, with very decent validity. From the results of assessments conducted by expert media validators, the media is declared worthy of being used as a learning medium in elementary schools.

Table 7. Material Expert Validation Data

No	Assessment Aspect	Average Percentage of Each Aspect	Validation Category
1	Learning	86,67 %	Strongly Valid
2	Materials	92 %	Strongly Valid
Average Score		90%	Strongly Valid

Results from table 7 data. As a result of the material validation in the monopoly game media above, several assessment indicators were assessed by material expert validators consisting of two aspects, namely aspects of learning and aspects of content/material (Irwan, 2017). The learning aspect obtained a percentage score of 86.67%, with a very valid category. This data provides information that the learning objectives and basic competencies achieve the development of material in the media.

A percentage score of 92% is obtained with a very valid category in terms of content or material. This data provides information that the development of material in the media has truth, conformity, completeness, clarity, and determination on the material used based on IPA learning in Class V elementary school. From table 7, the average product validity score by material experts on "Monopoly Gaming Media as science learning media in Grade V Elementary School" as a whole is 90%, with a very valid category.

Based on the table of eligibility criteria, the material contained in the developed monopoly game media has a score of 90% with very decent validity. From the assessment results conducted by the material expert validator, the "Monopoly Game Media as IPA Learning Media in Class V Elementary School" is feasible to use as a learning medium in Elementary School. The product trial conducted in this study is an individual trial (One to One Trial) by four students in class V elementary school. Group students play a monopoly game. They fill out a questionnaire of student assessment sheets consisting of three aspects: aspects of media engineering, visual communication, and learning (Sartikaningrum, 2013). Before filling out the student assessment questionnaire, students play a monopoly game media to see the student's reaction after playing the monopoly game media. So it can be known whether the development of monopoly game media can be used as a medium of IPA learning in elementary schools.

The following presented the results of the student assessment to assess the feasibility of the product developed.

Table 8. Questionnaire Average Score for Student Assessment of Monopoly Gaming Media

No.	Assessment Aspect	Average Percentage	Criteria
1	Media Engineering	97,50%	Very Good
2	Visual Communication	93%	Very Good
3	Learning	96,67%	Very Good
	Average Score	95,72%	Very Good

From the calculation results in Table 8, data on the feasibility of individual trial results on four students on monopoly game media, several aspects consist of several indicators contained on the student response sheet. The results of table 8 calculations showed that the engineering aspect of media got an average score of 97.50% with excellent categories. Based on Table 8, analyses showed that parts of visual communication get an average score of 93% with amazing categories. In the calculation of Table 8, the learning aspect gets an average score of 96.67% with excellent types.

Based on the data from students' assessment of hydrosphere monopoly game media as a whole, each aspect gets an average score of 95.72% with excellent categories. It can be concluded that Monalisa game media can help students receive IPA learning materials, especially in hydrosphere materials in Class V elementary school.

The results of this study are the same as those with Ulfaeni, Wakhyudin, & Saputra (2017) that Monopoly game media is used as a learning medium that can improve student learning outcomes and deserves to be developed as a learning medium. This monopoly game usually buys and sells land, but the media of these players must answer questions and read the material on the cards. This monopoly game medium contains hydrosphere material. As for the advantages and disadvantages of media that have been developed, the advantages are that this media is very fun and entertaining for students, facilitates students in mastering and understanding the material, and allows active participation from students to learn in science learning, the disadvantage is that it cannot be played individually, to play it requires a flat table/place/floor, and the cost needed is quite large.

It is also the same with Suciati et al. said that monopoly game media is one of the game media that give rise to interesting learning activities and help the learning atmosphere be fun, lively, and relaxed. In this monopoly game, media is expected to have the ability to involve students in active teaching and learning activities to solve existing problems and compete to be winners in the game to improve student learning outcomes (Suciati et al., 2015).

CONCLUSIONS

Based on the research and discussion findings, the validation results from media experts reveal an assessment of monopoly gaming media, including physical usage, images, colours, writing, and functions. The validation results from media experts reveal an assessment of monopoly gaming media, including physical usage, images, colours, writing, and functions. First and foremost, the physical aspect receives an average rating of 90 per cent. Second, the aspect of utilization receives an average score of 100 per cent on the scale. Third, the image's aspect ratio is an average of 100 per cent, which is excellent. The fourth feature, which is colour, receives an average score of 100 per cent. Fifth, the writing portion of the test received an average score of 100 per cent. Finally, the aspect of the function receives a perfect 100 per cent rating on average. With a percentage of 97.78 per cent on media expert ratings and very good categories, average eligibility can be found. Learning and content/material are both considered in the assessment of Monopoly game material, according to the validation results from material specialists. First and foremost, the learning component received an average score of 86.67 per cent. Another area that received an average score of 92 per cent was the content/material aspect. It is definitely doable to get an average eligibility rate of 90 per cent on expert material assessment with categories. The findings of individual product trials of four students revealed an evaluation of monopoly game media that included various characteristics, including media engineering, visual communication, and learning, and was divided into three categories. The first facet, media engineering, received an average score of 97.50 per cent on the scale. Second, the feature of visual communication received an average score of 93 per cent on the scale. The third factor, learning, had an average score of 96.67 per cent on the scale. Based on the data results, the student response results received a percentage score of 95.72 per cent, with good categories receiving the highest score. According to the data analysis findings from validators and student answers, the monopoly game produced is legitimate for use as a learning medium for science in primary schools. Many recommendations were made to other researchers by researchers. It is anticipated that more research will be conducted through the development of monopoly games into learning with various materials other than hydrosphere materials, the trialling of products on a bigger scale, and the accessibility of this study to persons located anywhere in the world.

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