



THE DEVELOPMENT OF SCRABBLE GAME-BASED LEARNING MEDIA USING JAVANESE SCRIPT: JABLE BOARD

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Abstract

Indonesia is the largest archipelagic country that has a variety of regional languages, one of which is Javanese, which is widely used as a means of communication and has a characteristic script. Even though the government has introduced Javanese script through learning Javanese in schools, students' interest and curiosity are still relatively low, and the learning media used are also limited. The purpose of this research is to preserve and popularize the Javanese script through the Jable Board and to make the Jable Board a supporting medium for learning Javanese script so that it is easier for the younger generation to understand and like. The method used is the research and development method (Research and Development or R&D) using the 4-D (four D) research model. The first data was taken from surveys and questionnaires given to several students while learning the Javanese script and outside of school to find out research problems. Furthermore, the second data was obtained when the product was made, and two data were obtained: qualitative data in the form of sound response, button accuracy, and battery life, and quantitative data in the form of questionnaires to teachers regarding the product. From the questionnaire, it was found that the Jable Board is a learning medium that can assist teachers in teaching Javanese script in class. The implication of this research is that students understand and like Javanese script, and their grades and writing skills get better.

Keywords: game-based learning media; javanese script; scrabble

Abstrak

Indonesia merupakan negara kepulauan terbesar yang memiliki beragam bahasa daerah, salah satunya adalah bahasa Jawa yang banyak digunakan sebagai alat komunikasi dan memiliki aksara yang menjadi ciri khas. Meski pemerintah telah mengenalkan aksara Jawa melalui pembelajaran bahasa Jawa di sekolah, minat dan rasa ingin tahu siswa masih tergolong rendah, apalagi media pembelajaran yang digunakan juga terbatas. Tujuan dari penelitian ini adalah untuk melestarikan dan mempopulerkan aksara Jawa melalui Jable Board serta menjadikan Jable Board sebagai media pendukung dalam pembelajaran aksara Jawa sehingga lebih mudah dipahami dan disukai oleh generasi muda. Metode yang digunakan adalah metode penelitian dan pengembangan (*Research and Development atau R&D*) dengan menggunakan model penelitian 4-D (*four D*). Data pertama diambil dari survei dan kuesioner terhadap beberapa siswa pada saat pembelajaran aksara Jawa maupun di luar pembelajaran tersebut untuk mengetahui permasalahan penelitian. Selanjutnya, data kedua diperoleh pada saat produk telah dibuat dan diperoleh dua data, yakni data kualitatif berupa respon suara, akurasi tombol, dan daya tahan baterai, serta data kuantitatif berupa kuesioner terhadap guru terkait produk. Dari kuesioner terhadap guru, didapatkan bahwa Jable Board merupakan media pembelajaran yang dapat membantu guru dalam mengajar aksara Jawa di kelas. Implikasi dari penelitian ini adalah siswa memahami dan menyukai aksara Jawa, serta nilai dan kemampuan menulis aksara menjadi lebih baik.

Kata kunci: aksara jawa; game-based learning media; scrabble

INTRODUCTION

Indonesia is the largest archipelagic country in the world, stretching from Sabang to Merauke. It is stated in the book *Gazeter Republik Indonesia* (2021) that there are 17,000 islands owned by Indonesia. However, the most inhabited island is the island of Java, which is also home to the national capital of Indonesia. On the other hand, Indonesia's location in a cross-position causes Indonesia to have diversity which is the hallmark of the Indonesian nation (Kemendikbud, 2019). This diversity does not only consist of one or two types, but there are various types, such as the diversity of religions, tribes, ethnicities, flora, fauna, culture, and so on. Among this diversity, the diversity that is most widely seen and owned by Indonesia is the diversity of its culture (Iskandar, 2017).

According to Koentjaraningrat (1991), culture is defined as the entire system of human ideas, actions, and works obtained through learning so that they become human property in the context of community life. He also stated that culture is divided into 7 elements, namely language, knowledge system, social organization system, equipment system, livelihood system, religion system, and arts. Therefore, it is not surprising that Indonesia is ranked second after Papua New Guinea as the country with the most languages in the world (Eberhard et al., 2022).

Language is a system in the form of arbitrary sound symbols used by a social group to work together, communicate, and identify themselves (Chaer, 2014). The diversity of languages owned by Indonesian people is

influenced by the regional languages owned by each region. Based on language data and language maps in Indonesia by Kementerian Pendidikan dan Kebudayaan (Kemendikbud), the number of regional languages in Indonesia that have been identified and ratified by 2019 is 718, provided that dialects and subdialects are not counted (Kemendikbud, 2022).

Among the many existing regional languages, Javanese is the regional language most widely used as the language of daily communication for Indonesian people (Lewis et al., 2015). Like Mandarin, Japanese, Korean, and other languages, Javanese is a language that has script. However, the number of Javanese speakers is not proportional to the number of Javanese script users. The use of Javanese script among Indonesia's younger generation is starting to fade due to a lack of interest and curiosity (Insani et al., 2022). In addition, the lack of implementation of the Javanese script in daily life is also one of these factors. Given the importance of the application of the Javanese script in everyday life, the government did not remain silent while the existence of the Javanese script began to fade. Therefore, the government is trying to introduce Javanese script from an early age by making Javanese learning a compulsory subject in which Javanese script material is integrated into it (Fakhruddin et al., 2019). However, this government policy can be said to be less than optimal because the time for learning Javanese at school is only 1 to 2 hours a week (Fakhruddin et al., 2019).

Not only that, learning media used by teachers to teach students are still limited, so the

efforts and objectives of learning have not been fulfilled. In fact, learning media are an important component in achieving the success of an optimal learning activity. As stated by Nopriyanti (2015), learning media is very important in learning because it contains elements of information and learning messages. Learning media also function to channel information effectively and efficiently in learning activities (Istiqlal, 2017). What's more, not all students have the same learning style, some have visual, auditory, or kinaesthetic learning styles. If in every learning process the teacher provides the same learning media, students will also easily feel bored and tired, especially if the learning material requires a high level of understanding (Utama, 2020) and (Hamid, et al., 2020). The use of learning media in learning activities must also be appropriate in order to stimulate students to give positive responses related to the material presented, to be a source of learning to improve the quality of learning (Putra, et al., 2017), to help students understand the material presented easily (Safitri, et al., 2013), to attract students' attention and interest, and to generate students' motivation in learning (Hamalik, 1989).

Technology, which continues to develop rapidly from time to time, in fact has a major impact on various fields of human life, both in the economic, political, social, cultural, informational, and educational fields (Shalikhah, et al., 2017). Currently, advances in technology, especially information and communication technology in the field of education, have influenced the development of learning media at various levels of education. With the

development of this learning media, the quality of education can improve (Adlin, 2019).

Playing games has become part of everyday society. Gradually, gaming culture is becoming a way of life for many in the younger generation. Games are not only played by teenagers, even many adults play them in their spare time (Henry in Karuniah, 2017:33). Games are in great demand because children experience more during play than when they are in class. Players can interact and make decisions, considering various conditions. In addition to challenging elements, the game also provides more problems according to the level (Henry in Karuniah, 2017:33).

Referring to the statement above, a learning media can be developed innovatively so that learning activities become fun and learning objectives are achieved. One form of developing learning media is game-based learning media or what is called game-based learning. Game-based learning is a game that is deliberately made with the aim of education and can be used as a learning media because it is considered more interesting than general learning (Dewi & Listiowarni, 2019). This is also supported by the statement that the integration of games into learning can increase students' interest in understanding the material (Luhsasi and Permatasari, 2020) and is also effectively used as independent training (Sidarta & Yuniarta, 2019).

Researchers have conducted a lot of research to develop game-based learning media, especially in Javanese script material. For example, research conducted by five UGM students in 2012, Desiana (2014), Wandari

(2018), Hernanda (2018), and Cidar (2019). However, until now, there have been no significant results shown from this research on knowledge and interest in Javanese script among the younger generation. This became the researcher's evaluation in developing the Jable Board and it was found that the product specifications resulting from this research still had weaknesses, namely that they were less attractive, still simple, and the characters available were incomplete because it is still limited to the target user, complicated, and tended to be rote. Therefore, researchers developed a more attractive Jable Board by utilizing current technological updates, such as the barcode scanner to sound feature.

The purpose of this research is to preserve and popularize the Javanese script through the Jable Board and to make the Jable Board a supporting medium for learning Javanese script so that it is easier for the younger generation to understand and like.

METHODS

The type of research used in this research is research and development (R&D), where the result is a board game called Jable Board using Javanese script. The development design in this study uses the 4-D (four D) development model belonging to Thiagarajan et al. (1974). Judging from the development model, 4-D is an instructional development process that is divided into four stages, namely:

Define

The purpose of this stage is to define and determine development needs in order to determine the extent of development that needs to be done. There are five steps to take when defining.

First, the front-end analysis is a study of the basic problems encountered and the development background. In this case, learning media for learning Javanese is a basic problem that requires development. Early-end analysis of learning media is done by analysing the learning media used when learning Javanese, especially in Javanese script material.

Second, learner analysis is a study of the characteristics of students who become objects in the development of Javanese script learning media. In this case, the study of student characteristics was carried out by observing several students and completing a questionnaire.

Third, task analysis is the identification and assessment of the main skills and abilities needed by students in learning. In this case, researchers need to analyse what is needed so that the skills and abilities of these students can meet the minimum standards that have been set.

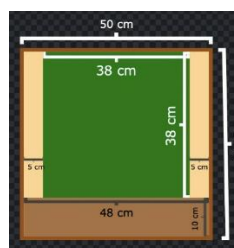


Figure 1. Design the shape and size of the Jable Board



Figure 2. Jable Board game sticker design

The design of the Jable Board game board is made of mahogany wood with strong durability and is accompanied by fine wood grain. The Jable Board game has an area of 50 cm x 50 cm and a height of 8 cm. The Jable Board game board has a hinge that is used to split the game board in half so that the empty space on the board is used as a Jable Board pawn container. Pawn Jable Board is made of mahogany wood with a width of 2,5 cm x 2,5 cm and a height of 0,5 cm. On the Jable Board pawn, there is a Javanese script vocabulary sticker that is equipped with an innovation in the form of a barcode. The scanner on the board can be used to scan the barcode on the block and change into sound through the intermediary speaker. On the display of the Jable Board game board, as shown in Figure 2, there is a sticker feature for the Jable Board game field, which is depicted on a green field with an area of 38 cm x 38 cm, with right and left spaces as wide as 5 cm. The space in the dark brown field will be used as a scanner and a speaker. The Jable Board game has a certain accumulation of scores, so the goal of this Jable Board game is to get the highest score by arranging certain Javanese script vocabulary on each block into a sentence.

Fourth, concept analysis is the identification of the main design to be taught. In this case, the design is in the form of the concept of compiling Javanese script into a word.

Fifth, specifying instructional objectives is the step of converting task analysis and

concept analysis into a summary, which will later be integrated into the learning tools to be used. In this case, the summary of task analysis and concept analysis will be integrated into the form of a Javanese script scrabble board game, namely Jable Board.

Design

The purpose in this stage is to design the basic form of learning materials. Therefore, the end result of this stage is the design of the learning media that you want to develop, namely in the form of a scrabble game that uses Javanese script. In designing, there are four steps that need to be taken.

First, constructing criterion-referenced tests is a step to connect the defining stage and the design stage, where the steps for formulating instructional objectives are converted into a learning media framework.

Second, media selection is the selection of appropriate media for learning materials. The process of selecting this media is based on the results at the defining stage, such as student analysis, task analysis, and concept analysis, so that the use of learning materials can be maximized. In this case, the media used in the development of learning media is a board game made of mahogany.

Third, format selection is the formulation of the design and design of instructional media in accordance with the Javanese script material. In this case, the design is in the form of a storyboard containing a sketch of the Jable Board product display.

Fourth, the initial design is the overall design of the learning device prior to validation and testing. In this case, the initial design in question is the overall design of learning media related to the various components or parts that make up this learning media before validation and trials are carried out. Learning media will be produced in the form of a scrabble board game using Javanese script, namely Jable Board.

Develop

The purpose in this stage is to produce development products in the form of learning tools before they become the final product so that researchers can receive feedback from both experts and respondents. To receive feedback during this stage of development, researchers need to take two steps.

First, expert appraisal is a way to get advice regarding the materials and learning media used. In this case, the validation carried out consists of three aspects: media format, media content, and language.

Second, developmental testing is a way to get responses, reactions, and comments from students in order to obtain effective and consistent learning tools. In this case, the trial conducted was a readability test. The assessment carried out in this test includes aspects of student interest and ease in understanding, using, studying, and playing the Jable Board.

Disseminate

The purpose of this stage is to promote the product that has been developed so that it can be accepted by individuals, groups, and society. In this study, the dissemination stage was needed so that the learning media in the form of Jable Board game could be accepted by students. In dissemination, there are three steps that must be done.

First, validation testing is obtained from user experience or field trials. So, to obtain empirical validation, researchers need to collect data regarding the abilities of the experimental and control groups, then the experimental group carries out the learning process using this media, and finally the researcher carries out measurements of the experimental group.

Second, packaging is the act of researchers to package products by making wooden Jable Boards to be integrated into the packaging as well as a playing field. All content, such as blocks or flyers on Jable Board, is designed to be packaged and can fit on wooden boards.

Third, diffusion and adoption are the actions of researchers to disseminate learning media products in the form of Jable Boards so that they can be used by the community, especially students.

RESULT AND DISCUSSION

Jable Board game is the result of the development of Javanese language learning media based on Javanese script material which has special specifications including innovative scrabble games using barcode scanner and sound features.

So, this board game can help students understand the use of script and the arrangement of words using the Javanese script. The research product in the form of a Jable Board is presented in the form of a scrabble board game with a playing field display feature that is played by arranging words in Javanese script using blocks made of wood with an area of 2,5 x 2,5 cm. Each block can display the sound of the pronunciation for each script of the Javanese script by scanning the barcode display available on the block, so that a sound will be output through the loudspeaker on the game board that contains information on the pronunciation of the Javanese script on the block. The following is a figure attachment of the development results in the form of a Jable Board game board:

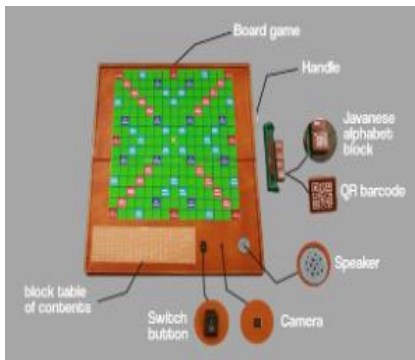


Figure 3. The front of the Jable Board



Figure 4. The back of the Jable Board

The researchers used four types of tests to assess the performance quality of the barcode scanner's voice feature, namely voice response after turning on the switch button, voice response after scanning the barcode, button accuracy, and battery life.

Table 3. The results of the barcode scanner to sound feature test

Res ult	Voice response (after turning on the switch button)	Voice response (after barcode scanning)	Button accuracy	Battery life
1	400 ms	500 ms	1/1 (100%)	90 minutes
2	400 ms	500 ms	1/1 (100%)	88 minutes
3	400 ms	500 ms	1/1 (100%)	84 minutes
4	400 ms	500 ms	1/1 (100%)	90 minutes
5	400 ms	500 ms	1/1 (100%)	92 minutes

The sound response value is obtained by calculating the length of time the sound appears after the switch button is pressed and after the barcode is scanned. This was done five times, and then an average of the results was obtained. After

averaging, the sound response after turning on the switch button from the Jable Board is 400 ms, while the voice response after scanning the barcode from the Jable Board is 500 ms.

The button accuracy value is obtained by pressing the switch button five times to test whether the button is working or not. The results obtained are then averaged. The Jable Board gets an average of 100%, so the buttons work very well.

The results of battery life are obtained by testing the length of time the battery is continuously turned on until the battery runs out. This was done five times, and then an average of the results was obtained. These results were obtained from the Jable Board's battery life of 88.8 minutes.

The following is data from a survey validating Javanese script material on Jable Board game board products on the suitability and accuracy of using Javanese script based on the Google Form questionnaire platform:

Table 4. Table of results of material validation assessment

No.	Assessment Indicators	Assessment Score Minimum (1) – Maximum (5)
1.	The accuracy of writing Javanese script on the media	(5)
2.	Sandangan on the Javanese script	(5)
3.	Spelling accuracy in the explanation of the material in the pamphlet	(4.25)
4.	The accuracy of Javanese script sentence structure	(4)
5.	Understanding messages and information	(5)
Total		23.25

Based on the table data above, the results of the analysis of material validation questionnaire data on the Jable Board learning media conducted by Javanese language teachers at SMA Negeri 3 Sidoarjo show that the material

validation of the Jable Board game board is considered very good with an average score of 93% (very good).

The following is the data from the media feasibility validation survey data for Jable Board products against the suitability of learning media standards based on the Google Form questionnaire platform:

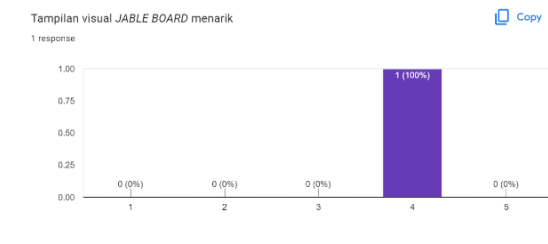


Figure 5. Jable Board visual appearance rating chart

The diagram in Figure 5 is an assessment indicator used to assess the visual appearance of the Jable Board based on the overall attractiveness of the product appearance, including the principles of balance and appropriate proportions.

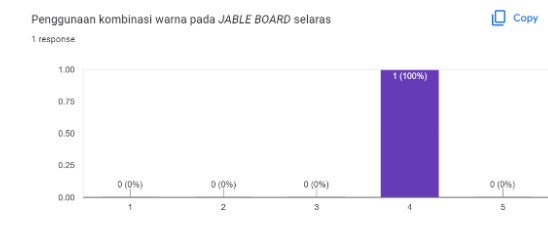


Figure 6. Jable Board view contrast rating chart

The diagram in Figure 6 is an assessment indicator that is used to assess the visual appearance of the Jable Board based on the

elements of conformity and balance of contrast in the overall use of product colours.

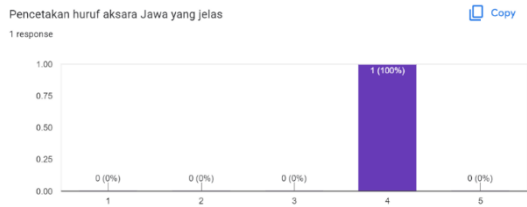


Figure 7. Chart for assessing the clarity of the visual appearance of the Javanese script

The diagram in Figure 7 is an assessment indicator used to assess the visual appearance of the Jable Board based on the suitability and clarity of the Javanese script on the block as a whole.



Figure 8. Jable Board feature completeness assessment chart

The diagram in Figure 8 is an assessment indicator that is used to assess the completeness of the features presented on the Jable Board as a whole based on clear feature functionality aspects.

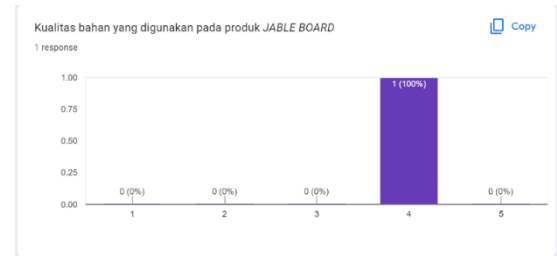


Figure 9. Jable Board material quality test assessment chart

The diagram in Figure 9 is an assessment indicator that is used to assess the visual appearance of the Jable Board based on the quality aspects of the product material used, including aspects of the strength and durability of the product material used.

The results of the questionnaire data analysis on the feasibility review of Jable Board game media conducted by supervising teachers showed that the quality of the media used in Jable Board board game products was considered very good, with an average score of 84% (very good).

The Jable Board game is the result of developing an existing board game, namely scrabble. The Scrabble game consists of blocks of script and a board area that has been specially designed for games and serves to hone and stimulate brain development. The goal of this game is to arrange the blocks into a meaningful word. In Mubasyira and Widiyarto's (2017) research, it was stated that scrabble media had a significant effect on students. Based on the data written in the research, scrabble media can improve students' ability to write, understand the material, and hone their vocabulary knowledge. In Scrabble, the script used is Latin script, but in Jable Board, the script used is Javanese script.

The scrabble game that uses Javanese script has been developed since 2012 through research conducted by five students from UGM named Ajisaka. This Ajisaka game is targeted at teachers of the Javanese language. This product has the following specifications:

1. products are produced in 3 packages, namely Mas Aji, Mas Saka, and Mas Eko. The difference between each of these packages lies in the game board used;
2. mas Aji's package is similar to a market chess board;
3. the Mas Saka package is made like an ordinary thin board but is still made of wood and is equipped with a storage box for blocks;
4. the Mas Eko package is made of paper;
5. there are 240 blocks, which are coloured in various colours.

In the same year, Desiana (2014) developed the Javanese script scrabble as a media for learning Javanese script. This product has the following specifications:

1. learning media products in the form of packaged educational game tools in the form of a playing board and character cards;
2. the product specifications produced are a scrabble design in Javanese script;
3. small script cards written in Javanese script
 - a. Basic Javanese script (legena).
 - b. Javanese script with sandhangan.
 - c. Pasangan script.
 - d. Javanese numerals.
4. small character cards are designed with colorful backgrounds to attract students' attention;

5. the hanacaraka scrabble media (boxes, playing boards, and character cards) are made of semi-wood (MDF) with a thickness of 0.3mm;
6. character cards are attached to a square box made of semi-wood (MDF) with a size of 2.5 x 2.5 cm;
7. character cards on scrabble hanacaraka media are two-dimensional. On the front and back of the card are Javanese characters;
8. the product is packaged in one box and consists of 300 character cards, game boards, and material books;
9. the box is designed with a colourful concept and is combined with typical Yogyakarta batik, namely kawung batik, as well as Javanese script that are made creatively and colourfully.

In research conducted by Wandari (2018), he developed the Pararaja learning media (Javanese script Scrabble Board), which also adopted Scrabble games. Pararaja has the following specifications:

- a. Content
 1. The material contained in this media is basic Javanese script/legena material for third grade elementary school students.
 2. This media is used to achieve competence in reading simple sentences written in Javanese script.
 3. There are two games, namely random puzzle and Javanese script scrabble.
- b. Construct

1. PARARAJA is a two-dimensional learning media that is packaged in the form of a playing board.
2. The resulting product is a scrabble designed in Javanese script.
3. This media is in the form of a square box made of semi-wood material and measuring 50x50 cm.
4. This media is equipped with small script pieces or cards with the Javanese script legena written on them that will later be affixed to the scrabble board.
5. This media is designed to be as attractive as possible with bright and attractive colours adapted to the character of third-grade elementary school students.
4. The blocks of Javanese script are made with a size of 4 cm x 4 cm x 1 cm, are made of wood, coated with thin zinc, and then given stickers with Javanese script script along with Latin script and sandhang, with a nice design to attract students' attention. The total number of blocks produced is 200.
5. The media is equipped with a game manual. The guidebook contains procedures and regulations for using the Javanese script scrabble media using the Javanese language. The book consists of a cover, table of contents, author's biodata, media expert, material expert, opening, media use guide, and rules of the game, which are then printed on A5-sized paper.

In the same year, Hernanda (2018) also developed a Javanese script scrabble learning media which has the following specifications:

a. Content

1. The material used in this media is Javanese script material for grade IV elementary school students.
2. The Javanese script material used is the main Javanese script and its garb.

b. Construct

1. Three-dimensional media made of wood, magnets, stickers with attractive colour displays, and blocks filled with Javanese script.
2. The media is packed in a box.
3. A 70 x 70 cm game board shaped like a chessboard but with 15 x 15 squares on a magnetic coated board with a thickness of 0.6 cm for attaching blocks.

In 2019, the development of learning media using scrabble games using Javanese script was also carried out by Cidar (2019). He developed learning media with product specifications as follows:

1. the product being developed is in the form of a Javanese script scrabble with a size of 32 x 48 cm;
2. learning media products in the form of educational game tools packaged in the form of playing boards and Javanese script cards;
3. the Javanese script scrabble media is made of rectangular cardboard, while the Javanese script cards are made of cardboard covered with paper with a different colour for each swara. There is a box for board game

- containers, character cards, and a guidebook for using Javanese script scrabble media;
4. the script cards on the Javanese script scrabble media are two-dimensional. Javanese script is only found on the front side of the card;
 5. the small script cards are written in Javanese script
 - a. Basic Javanese script (legena).
 - b. Javanese script with sandhangan.
 - c. javanese script cards are designed with colourful backgrounds to attract students' interest and attention and make it easier for students to distinguish cards with different swara sandhangan.

Based on several previous studies that developed learning media using the Javanese script scrabble media, the research results were obtained in the form of data on the effect of using the media on the ability to read and write Javanese script as proposed by Ariyanti (2014). He collected the results of research data from pre-cycle, cycle I, and cycle II, which found that the use of these media in learning Javanese script could improve students' abilities at each meeting. From the results of classical completeness in the pre-cycle, only 10% of the students or 2 students, scored above the KKM. In cycle I, classical completeness increased to 50% or as many as 10 students who scored above the KKM, and in cycle II, classical completeness increased to 90% or as many as 18 students who scored above the KKM.

However, researchers found a weakness that caused no significant results to be seen among the younger generation. This can be seen

from the majority of product targets for elementary school students, where the characters taught are less complete than for junior and senior high school students, such as research conducted by Desiana (2014), Wandari (2018), Hernanda (2018), and Cidar (2019). The materials used are still limited, namely paper or cardboard, as evidenced by research conducted by UGM and Cidar students (2019). The characters printed on the blocks or cards are not given Latin letters containing the pronunciation, so users have to look in guidebooks or the internet, except for Hernanda's research (2018). Javanese script other than the basic script is symbolized by color, which causes users to only know the function and not the image, such as in research by Cidar (2019), which symbolizes swara script by color. The product is designed with a colorful concept that makes it look like a game for children. Therefore, researchers use these weaknesses as strengths to develop a Jable Board which can be a game as well as a learning medium not only for elementary school students, but also for the public.

At present, technological advances, especially in the field of science and technology, have supported the development of learning media by utilizing technology that is growing all the time. Jable Board is a genuine form of developing learning media that makes use of technological advances. The differences between Jable Board products and previous research products are as follows:

a. Content

The material used is Javanese script material for senior high school students.

b. Construct

1. on the Jable Board, there is technological integration that can be seen in the barcode scanner feature and also the feature of converting barcodes into audio, which has not been found in other products. This audio explains the pronunciation and function of the characters on a block, so that users will have no trouble understanding the characters and searching the meaning that take a long time;
2. the Jable Board consists of a game board shaped like a chessboard that has an area of 50 cm x 50 cm and a height of 8 cm. The Jable Board game board has a hinge that is used to split the game board in half so that the empty space on the board is used as a Jable Board block container.;
3. there are 600 pieces of blocks containing the main Javanese script, basic script, swara, sandhangan, and pasangan, which is a common script that is often used in everyday life. These blocks made of mahogany wood with a width of 2,5 cm x 2,5 cm and a height of 0,5 cm;
4. there is a guidebook containing the procedures for use and game rules;
5. there is a sticker feature for the Jable Board game field, which is depicted on a green field with an area of 38 cm x 38 cm, with right and left spaces as wide as 5 cm. The space in the dark brown field

will be used as a scanner and a speaker.

The Jable Board game has a certain accumulation of scores, so the goal of this Jable Board game is to get the highest score by arranging certain Javanese script vocabulary on each block into a sentence.

6. the Javanese script material used in this product is not only to fulfil the KD of elementary students, but also the KD of junior and senior high school students.
7. students, teachers, and the general public can use it to learn Javanese script because because this is a game whose level of difficulty depends on each player, besides that the characters provided are not only focused on the level of education;
8. this product does not have packaging because the product can be carried directly using the handle that has been made on the side of the board. Not only that, this product has a long shelf life, but it must still be stored in a dry place; The product can be seen in the picture below:



Picture 1. Jable Board media

9. the Jable Board is made with 100% Mahogany wood because has long durability, strong but lightweight, economical, and not easy to experience shrinkage.
10. It is attached with vinyl stickers for the playing fields, characters, barcodes, and tables of the contents of the blocks which has the advantage of being durable and waterproof.
11. The colour displayed by this product is not too colourful, so it is still suitable for use by all groups.

CONCLUSION

Jable Board is the result of developing learning media in the form of a scrabble game using Javanese script to increase students' interest, understanding, ability, and curiosity. The advantage of this Jable Board game is the development of a barcode scanner and speaker which is presented to students to help facilitate understanding, use, and word arrangement from Javanese script. Thus, a visualization appearance is obtained that is more attractive, easy to understand, and combined with explanations of material information supported through audio sources as a result of the application of engineering technology in the education sector. Based on the results of the material validation carried out by the Javanese language teacher at SMA Negeri 3 Sidoarjo, a percentage of 93% was obtained, which means very good. While the results of the media feasibility validation carried out by the supervising teacher showed a

percentage of 84%, which is very good. Therefore, it can be concluded that the Jable Board is worthy of being a learning media for Javanese material, especially the Javanese script.

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