



Development of Multimedia for Illustration Drawing Lesson for Secondary School Grade in Padang City

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Abstract

This research and development aims to: (1) develop a multimedia product for learning to draw illustrations of arts and culture grade VIII Secondary Schools in Padang using Macromedia Flash 8, (2) describe the learning process using multimedia for illustration drawing lesson of arts and culture grade VIII Secondary Schools in Padang, (3) determine the feasibility of multimedia for drawing illustrations of arts and culture grade VIII Secondary Schools in Padang and (4) determine the practicality of multimedia for learning to draw illustrations of arts and culture grade VIII Secondary Schools in Padang. This study is a research and development research adapting the ADDIE development method developed by Dick and Carry. The trial subjects in this study consisted of experts, teachers and students totaling 56 students. Data were collected using participatory observation, interviews and questionnaires. Data analysis techniques used consist of initial data analysis, product feasibility and product practicality. The results of this study are: (1) multimedia learning products developed using Macromedia Flash 8 as an interactive learning media equipped with video tutorials, illustrations, and quizzes to improve understanding of illustration drawing concepts and techniques, (2) learning process using multimedia in class VIII Secondary School in Padang city can facilitate the delivery of lessons and increase students participation in learning activities, video tutorials can help students draw illustrations, (3) feasibility by material experts is 98% and media experts is 92%, in the very usable category and (4) based on trials in schools, this multimedia is very practical to use by teachers with an assessment of 88.3% and students 86%.

Keywords: *Multimedia Learning; Illustration Drawing; Macromedia Flash 8; Art Lesson*

Introduction

Education is a conscious and purposeful guidance to create a learning atmosphere and learning process so that students actively develop their potential both in terms of cognitive, affective, and psychomotor. The Essence of education is the process of developing the existence of students in social life. The definition of education put forward by Richey in Anwar (2015: 124) the term education relates to a broad function regarding the maintenance and improvement of life. Viewed from a broad aspect all experiences can be said to be education while in a narrower context.

Education is a hereditary tradition with a view of life, in practice education is identical to school, namely formal teaching in conditions and situations that are arranged systematically. Education is a process of learning to learners in order to have an experience of something that makes them a human being who is critical in thinking. Education will make humans develop their human potential so that they are able to face any changes that occur due to advances in science and technology through the learning process at school.

Media as a learning tool is important to be well presented so that it can be used to achieve effective learning objectives. According to Daryanto in Rahma (2023: 10), learning materials are arranged in an integrated and systematic manner which contains a series of planned learning experiences to help students achieve certain learning objectives. In summary according to Arsyad (2016: 3) media is a device used to convey learning messages.

In using learning media, it must be adjusted to the criteria for selecting good instructional media as stated by Sudjana (2011: 4), among others: its accuracy with teaching objectives, support for the content of teaching materials, ease of obtaining media, teacher skills in using it, the availability of time to use it, and according to the level of thinking of students. With the existence of learning media that has been adjusted to the criteria for media selection so that it can become a more innovative and creative media, it can attract the attention and interest of students in the teaching and learning process.

One of the subjects that has been regulated in the independent learning curriculum at the secondary school level is Cultural Arts. Cultural Arts learning has the aim of providing knowledge and developing students' talents. Cultural Arts learning is learning that through the process of feeling forms a harmonious personality and fosters multi-intelligence. Cultural Arts learning in general serves to develop the ability of each learner to find personal fulfillment or to become a well-rounded personality. Through Cultural Arts learning activities, learners are facilitated to expand social awareness and can be used as a way to increase knowledge.

Art, Culture and Skills Education has a role in building a harmonious personality of learners by paying attention to the needs of children's development needs in achieving multiple intelligences consisting of intrapersonal, interpersonal, spatial visual, musical, linguistic, mathematical logical intrapersonal, interpersonal, spatial visual, musical, linguistic, mathematical logical, naturalist as well as adversity intelligence, creativity intelligence, spiritual and moral intelligence, and emotional intelligence. spiritual and moral intelligence, and emotional intelligence.

The development of learning multimedia is based on the perception that learning will take place effectively and fun if supported by learning media that can motivate students to learn so that learning outcomes will be more optimal. The existence of multimedia illustration drawing lessons is one solution for additional learning media that is more interesting. After completing this learning multimedia product is expected to help teachers and students in learning activities.

Learning is an activity that involves a person in an effort to gain knowledge, skills and positive values by utilizing various sources for learning. Learning can involve two parties, namely students as learners and teachers as facilitators, the most important thing in learning activities is the *learning process*, Rohani (2019: 1). Learning is guidance provided by educators in relation to the process of transferring knowledge, skills, and experiences that are beneficial to students. Learning is a persistent change in behavior or in the capacity to behave in a given way, which is the result of practice or other forms of experience Schunk (2012: 5).

In compliance with the Merdeka Belajar Curriculum, Cultural Arts Learning is one of the subjects that must be able to develop three domains of learning, namely cognitive, affective and psychomotor. From a cognitive perspective, Cultural Arts Learning should include understanding, understanding, analysis, and evaluation. From an effective point of view, art learning must foster an attitude of interest,

appreciation, appreciation, being able to cooperate with others, and develop an artistic spirit. Art learning from a psychomotor perspective means that students must have skills, be able to create (simply) and express in the form of color, sound and movement.

Illustration drawing material is one of the materials studied in cultural arts subjects in the drawing activity unit. Yunus in Rupa, (2021: 221) "Illustration is the work of embodiment of an essay or writing which is then visualized into a particular object through drawing techniques, photography, painting, or other fine art techniques to convey the content in it". Drawing illustrations is also a place to pour ideas and imagination skills by explaining a story into visual language. Drawing for students must be given not for art activities alone, but further to sharpen observations in processing taste.

Based on observations at school, there are several problems found, namely in the teaching and learning process students generally lack understanding of illustration drawing subject matter. This is due to less varied teaching materials such as printed teaching materials and limited teacher competence in using learning media. Some illustration drawing materials are less able to be delivered, received and understood optimally by students. Teachers directly provide practice and less prioritize theoretical aspects in teaching illustration drawing material. Teachers focus more on practical aspects or just give direct instructions without giving a deep understanding of the basic principles of drawing. This causes students to not fully understand the concepts and techniques of illustration drawing.

The aims of this research focus on: 1) develop a multimedia product for learning to draw illustrations of arts and culture grade VIII Secondary Schools in Padang using Macromedia Flash 8, 2) describe the learning process using multimedia for illustration drawing lesson of arts and culture grade VIII Secondary Schools in Padang, 3) determine the feasibility of multimedia for drawing illustrations of arts and culture grade VIII Secondary Schools in Padang and 4) determine the practicality of multimedia for learning to draw illustrations of arts and culture grade VIII Secondary Schools in Padang.

Method

The research method used in this study is Research and Development (R&D). Sugiyono (2022: 9) states that research and development (*Research and Development* or R&D), is a research method used to develop or validate products used in education and learning. Development is often known as R&D, which is a research technique used to make certain products and evaluate their effectiveness Sugiyono (2022: 297). In line with that, according to Sukmadinata (2019: 56) research and development is a research approach to produce a new product or improve existing products.

This research uses an adaptation of the ADDIE model which consists of five stages of development, namely Analysis, Design, Development, Implementation and Evaluation. Illustration drawing learning multimedia products were validated by two experts, which are media experts and material experts. Small-scale product trials were tested on 29 students and large-scale trials were tested on 56 students. Data collection techniques used a list of questions for needs analysis, validation questionnaire, teacher response questionnaire and learner response questionnaire. Data analysis used qualitative descriptive data analysis techniques, product feasibility data analysis and product practicality analysis.

Result and Discussion

The authors developed multimedia learning material applying illustrations using the Macromedia Flash 8 application for grade VIII Secondary School students in Padang City by using an adaptation of the ADDIE model which has been adapted to the needs of the research. The product development stages are: analysis, design, development, implementation, and evaluation. The main purpose of developing this

learning multimedia is to determine the feasibility of products and the practicality of learning multimedia products.

Analysis

The first stage in this research is to analyze the needs which are divided into teacher needs analysis, learner needs analysis, curriculum analysis, learner characteristics analysis and learning multimedia development analysis. The school chosen to conduct this research was the first secondary school of Negeri 1 Batang Kapas. Analysis activities include observations and interviews about learning and non-learning activities in secondary schools, with the aim of obtaining information and knowing the existing reality related to learning Cultural Arts drawing units, illustration drawing material. Information obtained from observations and interviews is then used as a reference for the development of multimedia learning products for illustration drawing.

Design

The design stage of learning multimedia products begins with determining the flow of learning objectives that are tailored to the needs of fine arts learning. Then proceed with compiling the material that will be contained in the learning multimedia. After the map of material needs has been determined, then collect relevant reference sources to ensure the accuracy of the content of the material to be taught to students. The next step is to determine the concept of learning multimedia. The concept of this learning multimedia is compiled from the selection of the background color of the learning multimedia display, font selection, selection of color palettes, selection of illustration image inserts, selection of navigation button icons, and selection of backsound.

Development

The development of learning multimedia products refers to the flow of research and development that has been reviewed theoretically, collecting learning information based on the applicable curriculum and identifying research needs to produce products. The learning multimedia product development steps at the design stage begin with the preparation of the learning multimedia structure, compiling learning materials, collecting reference sources, implementing the storyboard design into a multimedia display, providing actionscript code for navigation buttons, making video tutorials, and testing the feasibility of learning multimedia products for drawing illustrations by media experts and material experts.

Implementation

This implementation stage was conducted with teachers and students at the Batang Kapas State Secondary School. During the trial, the researcher summarized the obstacles or shortcomings found during learning activities when the product was implemented. Teachers and students were given a response questionnaire in the form of several statements about the experience of using multimedia learning to draw illustrations.

Evaluation

The last stage of development is evaluation. This stage is needed to revise and improve, identify, and improve multimedia learning products for illustration drawing so that they meet the development objectives.

Product Trial Results

The illustration drawing learning multimedia that has been developed is then tested to expert validators to determine the feasibility of learning multimedia products. The trial of illustration drawing learning multimedia products was tested by expert validators consisting of a media expert and material expert. The following are the results of research starting from the development of multimedia products:

1. Develop a Multimedia Product

The development of this learning multimedia product adapts the ADDIE research approach which consists of five development stages namely Analysis, Design, Development, Implementation, and Evaluation. The development of learning multimedia products for class VIII illustration drawing at State Secondary School 1 Batang Kapas is made using an animation-based application, namely Macromedia Flash 8. The learning multimedia output produced from the Macromedia Flash 8 application is in the form of a .swf extension file that can be used on a computer or laptop that has Adobe Flash Player installed.

The first step was to conduct a needs analysis on three Cultural Arts teachers and students with a total of 30 randomly selected class VIII students. Afterwards, the researchers analyzed the curriculum used in the school. It is known that the school has been using the Merdeka Belajar Curriculum established by the Minister of Education, Culture, Research and Technology (Mendikbudristek) since mid-2023 after sufficient readiness to implement. The next stage of analysis, researchers analyze the characteristics of students. Based on school documentation sources, the age of grade VIII students ranges between 13 and 14 years. In this age range, the level of cognitive development of students is at the formal operational stage or in the adolescent phase. Learners at this age tend to think abstractly, can form and express their own opinions, use formal logical operations, are able to question the standards or rules that apply in society and appreciate ideas. The last stage of analysis is the analysis of learning multimedia development carried out by reviewing references that discuss aspects that need to be considered in the development of learning multimedia.

The learning multimedia product design stage is the stage where researchers carry out the pre-production process. The pre-production stage begins with the preparation of the flow of learning objectives, compiling learning materials, collecting relevant reference sources, determining the concept of learning multimedia which is described as; selection of learning multimedia background color, font type selection, use of color tones, illustration image design, making navigation button icons, and selection of learning multimedia background. The next pre-production stage is designing the storyboard. Storyboard is made to map the learning material, menu display, and learning steps using multimedia learning to draw illustrations. The storyboard design starts from making a grid and layout with several frames to represent each display of the learning multimedia (Figure 1). Frames contain sketches in the form of squares that will show text information or narration of learning materials and the layout of navigation buttons.

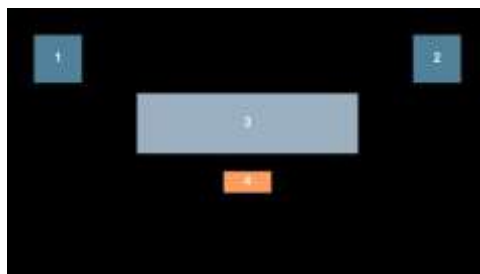


Figure 1. Story board of the Main Page Scene

The development stage is the stage of realizing learning multimedia products. After the learning multimedia concept has been compiled as a whole, proceed with compiling the learning multimedia structure. After the multimedia is organized based on scene groups and frames, then compile a learning material framework. The next step is to implement the multimedia design into a learning multimedia display, as shown in Figure 2. After the design is realized into a learning multimedia display, the next step is to process the navigation buttons. The navigation button icon component is processed by changing the icon into a symbol button, then the button is named as needed. Multimedia learning to draw illustrations is equipped with video tutorials. Video display in multimedia learning to draw illustrations consists of seven videos consisting of; 1) Video of shading technique, 2) Video of dusel technique, 3) video of pointillism technique, 4) video of wet technique, 5) Video tutorial of drawing illustrations of other subjects. The last development stage is testing the feasibility of multimedia learning products for illustration drawing by media experts and material experts.



Figure 2. Application of Multimedia Learning Main Page Design

2. Media Expert Assessment of Multimedia Learning

The feasibility quality of multimedia learning to draw illustrations is obtained from the assessment of media experts by giving a questionnaire consisting of 30 statement items. The questionnaire consists of aspects of media appearance assessment and programming assessment. The acquisition of data from the assessment of the feasibility of multimedia learning to draw illustrations by media experts gets a total score of the number of instrument items is 138 and the maximum score is 150. According to the acquisition of the score, the final percentage is 92% in very feasible criteria.

3. Material Expert Assessment of Multimedia Learning

The feasibility quality of multimedia learning to draw illustrations is obtained from the assessment of material experts by providing a statement questionnaire consisting of 21 statement items. The questionnaire consists of aspects of assessing the content of learning materials, the suitability of learning outcomes, and language feasibility. The acquisition of data from the assessment of the feasibility of multimedia learning to draw illustrations by media experts gets a total score of the number of instrument items is 103 and the maximum score is 105. Based on the acquisition of the score obtained the final percentage of 98% on very feasible criteria.

4. Learning Process Using Multimedia for Illustration Drawing Lesson

After the product has fulfilled the criteria for a feasible assessment by expert validators and revised or improved, the multimedia learning product for illustration drawing is applied in the cultural arts learning activities of the drawing unit of illustration drawing material. At the first session, students are given illustration drawing lesson material using Learning Multimedia. The second session students draw illustrations of other subjects using certain techniques. On the third session, students present or explain their illustration drawing work in front of the class.

5. Analysis of Assessment Data from Teacher Responses

The assessment of teachers as educators of multimedia learning to draw illustrations is based on two aspects of the assessment, namely, aspects of the quality of the content of the objectives and aspects of technical quality. The assessment was carried out by three teachers of cultural arts who teach at the State Secondary School 1 Batang Kapas. The first teacher's assessment in the aspect of assessing the quality of content and objectives obtained a score of 86.6% while in the aspect of technical quality obtained a score of 82% with the criteria "Very Practical". The second teacher assessment on the aspect of assessing the quality of content and objectives obtained a score of 90.6% while in the aspect of technical quality obtained a score of 100% with the criteria "Very Practical". The third teacher assessment on the aspect of assessing the quality of content and objectives obtained a score of 82.6% while in the aspect of technical quality obtained a score of 88% with the criteria "Practical". Each aspect obtained a value of "Very Practical" with an average percentage value of 88.3% which is categorized as "Very Practical" based on product feasibility criteria.

6. Small-Scale Trial Data Analysis by Students

The small-scale trial was conducted on 29 students of class VIII at the secondary school of Negeri 1 Batang Kapas. The small-scale trial used a learner response questionnaire containing statements about the experience and opinions of students using multimedia learning to draw illustrations. The results of students' responses include aspects of media design appearance and material assessment with 15 statement instrument items. The overall average score of the 15 items of the statement instrument is 88% which is in the "Very Practical" category.

7. Large-Scale Trial Data Analysis by Students

The large-scale trial was applied to classes VIII 2 and VIII 3 at the State Secondary School 1 Batang Kapas with a total of 56 students. Class VIII 2 amounted to 30 students and class VIII 3 amounted to 26 students. The large-scale trial used a learner response questionnaire containing statements about the learning experience and opinions of students after using multimedia learning to draw illustrations. The results of students' responses include aspects of media design appearance and material assessment with 15 statement instrument items. It is known from the total acquisition of students' responses which amounted to 86% including the category "Very Practical".

Product Revision

Illustration drawing learning multimedia products have been improved based on revisions and corrective feedback from media experts and material experts. Improvements to learning multimedia from media expert validators are related to technical aspects and multimedia design.

1. Revision by Media Expert

Media experts assess the product's visuals, navigation functions, graphic clarity and ease of use. Media expert validators also check whether multimedia learning products for illustration drawing can be used without technical problems or interference that will hinder the learning experience of students. The revisions from the media validators are: 1) The loading display is still too long, the duration is shortened, 2) The font size on the information about the teacher is enlarged, made flat left and right (Figure 3), 3) Consistency of button placement (Figure 4), 4) On the learning material menu, give a sequence number so that students know which material to learn first (Figure 5), 5) The submaterial column is made flat and parallel to make it look neat (Figure 6) and 6) Add information on quiz instructions (Figure 7).

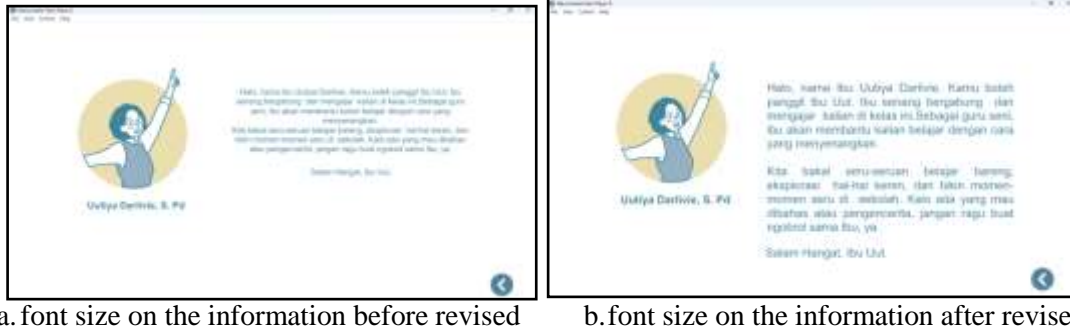


Figure 3. Application of Multimedia Learning Main Page Design

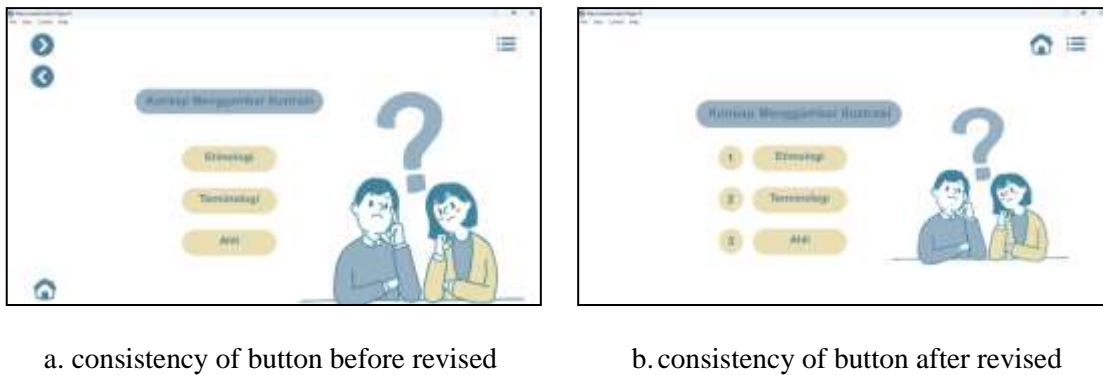


Figure 4. Consistency of button

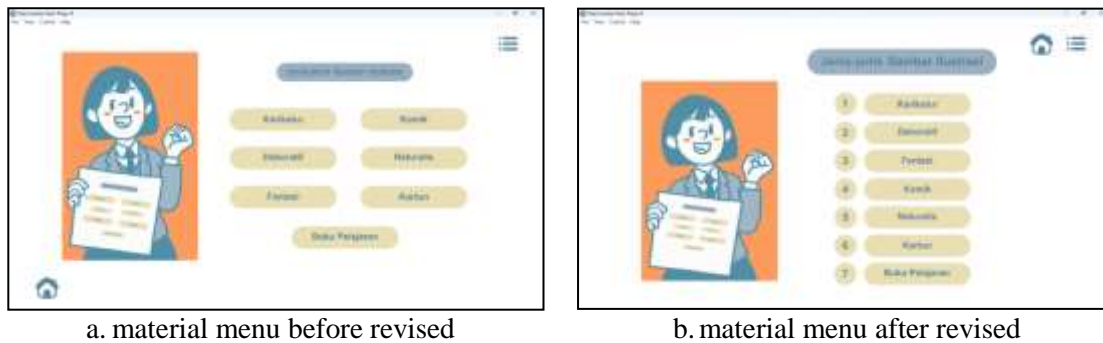


Figure 5. The Learning Material Menu

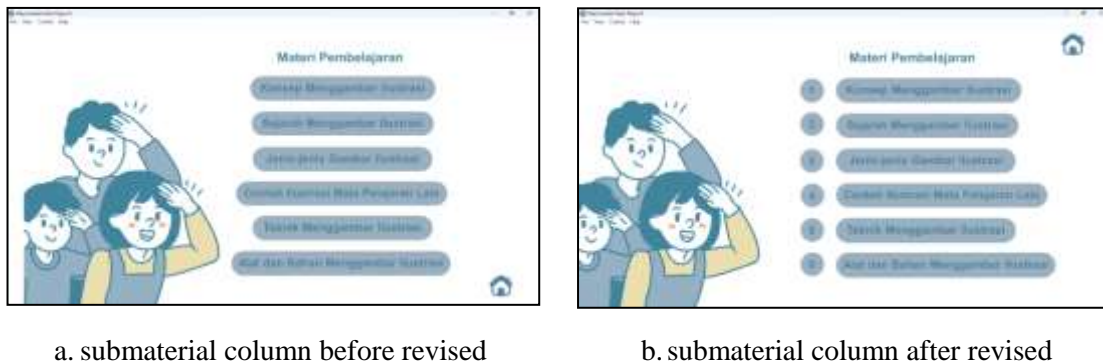


Figure 6. The Submaterial Column



Figure 7. Information on Quiz Instructions

2.Revision by Material Expert

The material expert is responsible for ensuring that the material content in the illustration drawing multimedia learning product is presented with relevant sources, accurate and in accordance with the learning objectives. The expert validator assessment includes the suitability of information, the depth of material explanation, and whether the illustration drawing material to be learned is in accordance with the applicable curriculum or standards. The revisions from the material validator are: 1) Add learning competencies, combined with learning objective frames, add units of learning activities (Figure 8), 2) Give bold fonts on important material so that students can focus on important points of material (Figure 9), 3) Video tutorials are used as alternative videos only, add videos to each illustration drawing technique in the main learning material.



a. learning competencies before revised



b. learning competencies after revised

Figure 8. Learning Competencies



a. material look before revised



b. material look after revised

Figure 9. Important Points of Material

Final Product Review

The quality of learning multimedia products is based on the ADDIE research and development stages, which start from the Analysis, Design, Development, Implementation and Evaluation stages. At the analysis stage, researchers analyzed the identification of needs consisting of analyzing the needs of

teachers as educators and analyzing the needs of students, analyzing the curriculum, analyzing the characteristics of students and analyzing the development of learning multimedia.

The design stage includes designing the structure of learning multimedia products starting from determining the flow of learning objectives, compiling a map of material needs and collecting relevant reference sources. In the learning multimedia concept design stage, researchers choose the background color, font selection, color palettes, illustration image insert design, navigation button icon design and background selection to make a learning multimedia storyboard. At the design stage or product design of multimedia learning to draw illustrations follows the principles of learning multimedia theory which states that learning through multimedia must combine text, images and sound.

The development stage is the realization stage of multimedia learning products for illustration drawing. Beginning with the preparation of learning multimedia structures, learning material frameworks, preparation of illustrative drawing learning materials, design implementation, navigation button processing, making video tutorials to testing the feasibility of illustrative drawing learning multimedia products and revision of improvements by expert validators for product improvement. Based on the assessment of learning multimedia products that have been carried out through media expert validators obtained a score of 92% in the category worthy of use with some revisions and the acquisition of scores from material validators with a final percentage of 98% including in the category worthy with some revisions.

At the implementation stage, multimedia products are tested directly in the process of learning cultural arts drawing unit illustration drawing material. The trial for the practicality of learning multimedia products consisted of teachers and students of class VIII 1 for small-scale trials, VIII 2 and VIII 3 for large-scale trials with a total of 85 students. Overall, the assessment results from the teacher and learner responses showed a high score with the "Very Practical" assessment category. This assessment identifies that multimedia learning products for illustration drawing can be used as an interactive and practical learning media option.

The evaluation stage is the last stage of the development stage to assess and review whether this illustration drawing learning multimedia product is feasible and practical to use in learning cultural arts drawing units, especially in illustration drawing material. The final quality of multimedia products for learning to draw illustrations after being improved and refined proves that development in the discipline of cultural arts education can provide new innovations in a more interactive way of learning in order to achieve predetermined learning objectives.

Conclusion

Research and development of multimedia learning products for drawing illustrations as interactive learning multimedia has been successfully developed in accordance with the ADDIE development stages. Based on the results of product development that has been described, the output of the product developed in the form of an extension file with the .swf format made using the Macromedia Flash 8 animation-based application has the following conclusions:

1. Learning multimedia products developed for cultural arts subjects drawing unit illustration drawing material class VIII secondary schools in Padang City successfully realized by using Macromedia Flash 8 application. This learning multimedia product includes illustration images, video tutorials and quizzes that are presented visually and dynamically. This learning multimedia product is designed to facilitate the learning process of drawing illustrations by displaying clear learning steps.
2. The use of learning multimedia in the learning process of the cultural arts drawing unit of illustration drawing material in class VIII secondary schools in Padang City shows that learning is

more interesting and interactive compared to conventional learning methods. With video tutorials, students can learn drawing techniques gradually and quizzes can provide opportunities for students to test their understanding independently.

3. Based on the assessment of expert validators, this learning multimedia product is declared suitable for use in learning cultural arts drawing unit illustration drawing material. The assessment of the media expert obtained a score of 92% with the category “Very Feasible” and the assessment of the material expert obtained a score of 98% with the category “Very Feasible”. The conclusion based on these assessments, this multimedia learning product for illustration drawing is considered feasible to use.
4. The practicality of multimedia learning to draw illustrations shows that the multimedia products produced are considered practical and meet the minimum criteria for practicality. Based on the total teacher response assessment of 88.3% with the category “Very Practical”, it is known that the student response is 88% in the “Very Practical” category in the small-scale trial and 86% in the “Very Practical” category in the large-scale trial. So that from the aspect of practicality, the multimedia learning product for drawing illustrations produced is considered practical to use.

References

- Anwar, Muhammad. (2015). *Filsafat Pendidikan*. Jakarta: Kencana.
- Arsyad, Azhar. (2016). *Media Pembelajaran*. Jakarta: Raja Grafindo Persada.
- Rahma, M. W., & Wikarya, Y. (2023). Pengembangan Modul Pembelajaran Seni Rupa Berbasis Model Pembelajaran Project Based Learning Materi Menggambar Model Di MTs N 02 Mukomuko. *Serupa The Journal of Art Education*, 12(1), 9-15.
- Rohani, R. (2020). Media pembelajaran. Diktat Universitas Islam Negeri Sumatera Utara.
- Rupa, J. S. (2021). Scribble art: Teknik Pembelajaran Menggambar Ilustrasi di SMP Negeri 1 Kesamben Jombang Jawa Timur.
- Schunk, Dale. H. (2012). *Motivasi dalam Pendidikan Teori, Penelitian, dan Aplikasi*. Jakarta: PT. Indeks.
- Sudjana, Nana. (2011). *Dasar-Dasar Proses Belajar Mengajar*. Bandung: Sinar Baru Algensindo
- Sugiyono. (2022). *Metode Penelitian Kuantitatif, Kualitatif, dan R&D*. Bandung: Alfabeta.

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