



INTERACTIVE MULTIMEDIA DEVELOPMENT WITH THE AUTORUN PRO ENTERPRISE II APPLICATION VERSION 6.0 IN ICT GUIDANCE IN SECONDARY SCHOOLS

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ABSTRACT

The learning process results in students not actively participating in the learning process and students' creativity not developing because the learning process is still oriented teacher center or teacher centered. Teachers have not fully utilized existing teaching media, including multimedia, so that learning is not interesting and enjoyable for students. This research aims to develop interactive multimedia products as valid and practical alternative learning media so that they are ready to be used in the learning process. This research is development research using the Borg & Gall model which consists of stages, namely: (1) Planning, (2) Initial Product Development, (3) Product Validation, (4) Trial and (5) Product. The research subjects consisted of four respondents, two validators for media aspects and two validators for material aspects as well as 20 students at State Junior High School 1 Lubuk Basung in Natural Sciences subjects as a test of media practicality. The product validity test results for the material aspect are in the very good category with a percentage of 95% and for the media aspect they are in the very good category with a percentage of 94.88%. The results of the product practicality test based on the 2 stages of testing that have been carried out are in the very good category with a percentage of 92.4%. The results of this research show that the overall quality of the interactive multimedia developed is in the very good category with a percentage of 94.1%. From the results of all stages of interactive multimedia development using Macromedia Director declared suitable for use in the learning process.

Keywords: Interactive Multimedia; Learning Media; Macromedia Director; Natural Sciences

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INTRODUCTION

The increasingly rapid development of technology has a major influence in various fields. Technology is used for various purposes, one of which is in the field of education. Education will not be separated from technological developments which

are utilized in developing learning media for children. Learning media can be used by teachers when teaching in class or when children study alone. Education is an effort by adults in their interactions with children to grow and develop their physical and spiritual potential in accordance with the values that exist in society and culture ([Purwanto, 2014](#)). Learning is an important thing for humans themselves, by studying we can learn about values, language and cultural development ([Rahmi, U., 2016](#)). Based on experience in teaching, we can determine learning methods and media that are suitable for learning purposes, to achieve success in learning in addition to the teacher factor and the content of the lesson itself. Interactive learning media technology is able to have a great impact in the field of learning media because it can integrate text, graphics, animation, audio and video ([Daryanto, 2016](#)). Interactive multimedia has developed the teaching and learning process in a more dynamic direction. The use of interactive multimedia is an added value for successful learning, especially interactive media ([Sharon et al, 2011](#)). The advantage of interactive media over the use of multimedia is its characteristic that it involves students making choices to move around material in meaningful ways, so that they can participate in learning. Interactive multimedia can combine various components, namely text, images, animation, audio and video. Interactive media can present information that is multisensory (seen, heard and acted upon) by stimulating many human senses at the same time, so that it is effective and efficient in attracting attention and interest in learning during the learning process. This research aims to develop interactive multimedia using the Auto Run Pro Enterprise II Version 6.0 application which is in accordance with the appropriateness criteria for media and materials in Information and Communication Technology guidance lessons through interactive multimedia. The instruments used in this research were documentation and questionnaires. The questionnaire is used to see the results of validity tests produced by interactive learning media. The data obtained was then analysed quantitatively descriptively to determine the quality of the interactive media products being developed.

METHODS

This type of research is research and development or better known as Research and Development (R&D). The research and development method can be interpreted as a scientific way to research, design, produce and test the validity of products that have been produced which can be shortened to 4P, namely research, design, production and testing ([Sugiyono, 2019](#)). Research and development are research that is about overcoming limitations and adapting to goals, solving problems, making decisions, reasoning in uncertainty, searching, searching and planning ([Rusidi, 2018](#)). The main goal of research and development is not to formulate or test theories, but to develop effective products for use in schools ([Emzir et al, 2011](#)). The development model is the basis for developing the product that will be produced. In this development research, researchers used the 4-D development model (*Four D*).

RESULT AND DISCUSSION

Planning

The curriculum analyzed is the 2013 Curriculum, in Basic Competencies (KD) 3.1.1, 4.1.1, 3.1.2, 4.1.2, 3.2.1, 4.2.1, 3.2.2, 4.2.2, 3.3.1, 4.3 .1, 3.4.1, and 4.4.1 which consist of material on the definition of information and communication technology, the role and benefits of information and communication technology, computer hardware, computer software, computer operating systems and the meaning of IPR (Intellectual Property Rights) which must be mastered by students so it is necessary to develop interactive multimedia, because interactive multimedia is one of the teaching materials that gives students the opportunity to learn independently and improve their weaknesses until they are complete. Student analysis is designed to determine student characteristics such as student background in terms of age, motivation for the subject, in other words it must consider what skills students must have. By knowing the characteristics of students, researchers can design interactive multimedia according to the grade VII middle school level. Concept analysis is intended to identify, detail and systematically organize relevant concepts that will be taught based on curriculum analysis. This analysis is the basis for developing learning objectives.

Design

At this stage, the next thing to do is design an interactive multimedia prototype specifically designed for text material. simple written and spoken words to express, ask, and respond to self-introductions including making *Flowchart* interactive multimedia for materials and Creating *storyboard* for written and oral text material. Create interactive multimedia on predetermined or selected subjects using the main application, namely *Autorun Pro Enterprise II*

Development Stage

Validity

Average value	3,7	2,8
Average value (Percentage)	74% (good)	56% (Good enough)
Average Validator Rating (percentage)	65% (Good)	

Based on the results of the table above, there are 5 aspects and 20 indicators in media assessment. The validation results from media experts stated that the interactive multimedia developed based on the average assessment of the two validators was good for being used as interactive learning media. The total assessment score of media experts 1 which was assessed by Mrs. Novrianti, M.Pd. one of the media expert lecturers from the department of curriculum and educational technology, faculty of educational sciences, Padang State University was 74, while the total score of the media expert assessment was 2 which was assessed by Mrs. Dr. Ulfia Rahmi, M.Pd. one of the media expert lecturers from the department of curriculum and educational technology, faculty of educational sciences, Padang State University is 56. The average result of media expert assessment 1 is 3.5 with an assessment percentage of 74% while the average result of media expert assessment is 2, 8 with a scoring percentage of 56%.

The average assessment of the two validators is 65%. In the results of this first stage of assessment there is a different assessment from the assessment of media expert 1 and media expert 2. According to media expert 1, based on the average of the scores obtained, interactive learning media is good to use, whereas according to media expert 2, based on the average score obtained that interactive learning media is good enough to use. However, there is still a lot that needs to be improved so that we can get interactive multimedia results that are suitable and very good for use by students

Average rating	4,9	3,9
Rating average (Percentage)	98% (very good)	78% (good)
Average Validator Rating (Percentage)	88% (Very good)	

After revisions were made to interactive multimedia, it was reassessed by media experts. The results of stage 2 media validation were declared very good or very valid based on the average assessment of the two validators in stage 2. Based on the results of the table above, the total score obtained from media expert 1 was 98 while the total score obtained from media expert 2 was 78. The average assessment result for media expert 1 is 4.9 with a percentage of 98%, while the average assessment for media expert 2 is 3.9 with a percentage of 78%. The average assessment of the two validators is 88%. The assessment of the first media expert was dominated by a score of 5 in almost every aspect of the assessment, while the assessment of the second media expert was dominated by a score of 4 in almost every aspect of the assessment. Almost every point increase on each question when compared to the assessment in stage 1.

Average rating	4,13
Average material expert assessment of all aspects (percentage)	82% (very good)

Based on the table above, there are 5 aspects that are subject to expert assessment. Within the 5 aspects there are 15 indicators in the material expert assessment. At this stage a score of 62 was obtained with an average assessment of 4.13 with an assessment percentage of 82%. Thus, according to material experts, multimedia is interactive using applications *Autorun Pro Enterprise II* version 6.0 meets the assessment of very good or very valid.



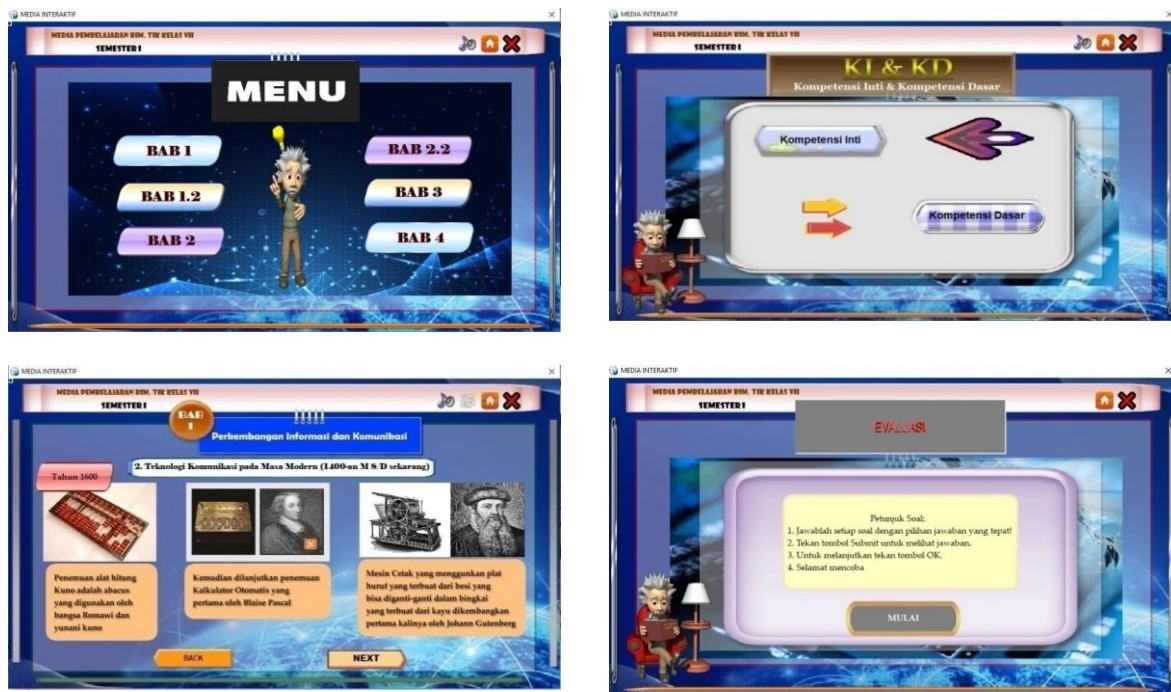


Figure 1. Display of Interactive Learning Media

Dissemination stage

The dissemination stage was carried out in the schools studied by providing the Principal or Curriculum Deputy as an intermediary so that the media could be used by all students.

CONCLUSION

Based on the results of the research and discussions that have been carried out, it can be concluded that interactive multimedia development uses applications *Autorun Pro Enterprise II* version 6.0 in ICT guidance for class VII SMP was declared very good for use by both media experts with an average assessment result of 88% and in terms of material it was declared Very good by material experts with an average assessment result of 82%. Thus, interactive multimedia using applications *Autorun Pro Enterprise II* version 6.0 in ICT guidance for class VII SMP is suitable for use.

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