



3D Multimedia E-Book Based on Mobile Learning Basic Competency of Artistic Hair Coloring

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Abstrak

Penggunaan media pembelajaran yang tepat akan sangat membantu dalam proses pembelajaran. Permasalahan penelitian adalah rendahnya pemahaman siswa pada mata pelajaran pemangkasan dan pewarnaan rambut yang berdampak pada hasil belajar siswa. Tujuan penelitian ini adalah mengembangkan media pembelajaran berbasis e-book pada materi pelajaran pewarnaan rambut aplikasi ganda. Jenis penelitian ini adalah penelitian dan pengembangan dengan menggunakan model 4-D. Populasi penelitian ini adalah siswa yang berjumlah 32 orang. Teknik pengumpulan data menggunakan angket validitas dan kepraktisan. Teknik analisis data dengan menghitung skor penilaian media e-book dari kuesioner yang diberikan dan dikategorikan sesuai interpretasi yang diperoleh. Hasil validasi media pembelajaran adalah 0,89 (kategori sangat valid) dan validasi materi 0,82 (kategori sangat valid). Hasil kepraktisan respon siswa sebesar 86,07% (kategori sangat praktis) dan dari respon guru sebesar 87,2 (kategori sangat praktis). Pembelajaran berbasis e-book dapat dikatakan valid dan praktis untuk digunakan sebagai bahan ajar di kelas pada mata pelajaran pemangkasan dan pewarnaan rambut untuk meningkatkan hasil belajar siswa.

Kata kunci: Pengembangan, Multimedia, E-book, pemangkasan dan pewarnaan Rambut.

Abstract

The use of appropriate learning media will greatly assist in the learning process. The problem of research is the low understanding of students in the subject of hair trimming and coloring which has an impact on student learning outcomes. The purpose of this study was to develop an e-book-based learning media on the subject matter of double-application hair coloring. This type of research is research and development using a 4-D model. The population of this research is the students totaling 32 people. The data collection technique used a validity and practicality questionnaire. The data analysis technique is by calculating the score of the e-book media assessment from the questionnaire given and categorizing it according to the interpretation obtained. The results of the media validation study were 0.89 (very valid category) and 0.82 material validation (very valid category). The results of the practicality of student responses were 86.07% (very practical category) and from the teacher's response 87.2 (very practical category). E-book-based learning can be said to be valid and practical to be used as teaching materials in the classroom on hair trimming and coloring subjects to improve student learning outcomes.

Keywords: Development, Multimedia, E-book, Hair trimming, and coloring.

1. INTRODUCTION

Technological developments occur so fast, that it demands that all of us must be able to keep up with the times if we don't want to be left behind (N. Siregar et al., 2020; Z. Siregar & Marpaung, 2020). Likewise in the world of education is something important for human life, because education can affect the quality of life. So that the main purpose of the learning process is to require students to succeed in applying the abilities they have acquired in general theory and practicum in particular, in accordance with the objectives of the SMK itself, namely to produce skilled workers in their fields. Learning is an important part of the educational process. Learning is a process of interaction between the components of the learning system (Dolong, 2016; Sukmawati, 2021). Good learning occurs when the process of good educational communication occurs between students and educators as well as between students themselves (Lanani, 2013; Pane, 2019; Zarrinabadi, 2014). In the teaching and learning process, the presence of the media has a fairly important meaning, in that case, the

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ambiguity of the materials conveyed can be helped by presenting the media as an intermediary for the complexity of the material delivered (Efendi, 2020; Trianasari et al., 2022). The business world or the industrial world is “one of the important elements in the world of employment. So there needs to be an adjustment between the world of business/industry and the world of education as a source of labor income (Disas, 2018; Ta’rifin, 2018). The abilities/skills needed by the business world are: a) Have a good attitude towards work; b) Have the ability to adapt and learn; c) Able to cooperate with other people; d) On time; e) Have good communication skills and f) have a good attitude for example always be friendly to clients.

The use of appropriate learning media will be very helpful in the learning process. Learning media are learning resources other than teachers as distributors or liaisons for teaching messages that are held and or created in a planned manner by teachers or educators (Hendratno et al., 2022; Nasution et al., 2022; Paratore et al., 2016). However, in its implementation, not many teachers make maximum use of learning media. Teachers are required to be more creative in creating a learning atmosphere in order to motivate students to be active, creative, and innovative. Learning media are everything related to software and hardware that can be used to convey the content of teaching materials from learning resources to learning (individual/group) (Nipa & Kermanshachi, 2020; Suryani, 2016). Then learning media can stimulate thoughts, feelings, attention, and interest in learning in such a way that the learning process (inside/ outside the classroom) to be more effective (Elpira & Ghufron, 2015; Jauhari, 2018; Setiawati et al., 2015).

Efforts can be made by teachers to achieve ideal learning, one of which is by using a variety of varied learning media that can be used so that students are able or able to understand the material that has been conveyed (Andriyani & Suniasih, 2021; Chun et al., 2016; Fatkhurrohman et al., 2018; Mudasih & Subroto, 2019). One of the media that is often used for practical subjects during learning is through e-book learning media (Hasbiyati & Laila, 2017; Saputri & Susilowibowo, 2020; Sianturi et al., 2021). Where the e-book learning media is one of the multimedia that can be used by teachers in the teaching and learning process (Astuti & Santosa, 2017). The use of e-book media is expected to encourage student’s interest and understanding during the learning process because in its use students not only listen to explanations of the material presented by the teacher with lectures but students are also invited to see directly with e-book media so that students easily understand the material and will not feel bored listening to the presentation of the material because the material presented is interesting on e-book shows, because so far the learning media used by teachers are less varied.

Based on the results of the researchers' observations while conducting Educational Field Practices in August-December 2021 at SMK N6 Padang City, especially in the beauty department on the subject of Trimming and Hair Coloring in class XI the use of learning media used in the teaching and learning process uses the lecture method. Based on the author's interview with the teacher of hair trimming and coloring subjects on September 29, 2021, at SMK N 6 Padang City, the syllabus made by the teacher in the subject of hair trimming and coloring consists of 8 basic competencies. Based on the observation results, it can be seen that there are still many students scores who do not reach the KKM, (75) out of 32 students in class XI KC2 only 15 students have grades according to and above the KKM, besides that there are also some students who have grades below the KKM. under KKM for not carrying out the task of practicing ombre technique hair coloring. So, it can be concluded that the value of students who do not reach the KKM is more than 50%. One of the efforts that can be made by teachers to improve students' understanding of basic competencies (KD) 3.8 Applying Double hair coloring applications with the ombre technique in the learning process is to develop media in the form of a learning e-book, where the learning e-book that will be created contains a combination of theory with an e-book tutorial for hair coloring practice, the application of the complete ombre technique. The double application of ombre

hair coloring is a difficult subject because students are required to be able to use bleach and choose the right color before applying it to the hair. To produce interesting media, learning e-books can be packaged in multimedia. Learning e-book media can be used to deliver learning materials in a shorter time without reducing the study material of learning materials. Meanwhile, the use of e-books can be very helpful in the learning process that displays a lot of movement. The development of this learning e-book media is expected to improve learning outcomes, interest, and enthusiasm for new learning for students.

2. METHODS

This type of research is research and development (Research and Development) with a 4D model to produce teaching media in the form of an e-book containing hair coloring material with the Double Application of the Ombre Technique. The place of research is SMKN 6 Padang City, and the subject of the product trial of the research is class XIKC2 students of SMKN 6 Padang City in the 2021 academic year, totaling 32 students. The data collection technique used a validity and practicality questionnaire. The data analysis technique is by calculating the score of the e-book media assessment from the questionnaire given and categorizing it according to the interpretation obtained. The instrument used in data collection in this study was a questionnaire (questionnaire). The questionnaire used in this study is a questionnaire in the form of an attitude scale, namely the Likert scale.

3. RESULTS AND DISCUSSION

Result

Data Validity Analysis

Table 1. Validation Results by Media Experts on Learning Media E-book-Based Learning

No	Aspect of assessment	Validation value	Category
1.	Media quality	0,90	Very valid
2.	Use of Language	0,85	Very valid
3.	Media Layout	0,94	Very valid
	Average	0,89	Very valid

Based on [Table 1](#), it is known that the average score of the e-book media assessment obtained from the media quality aspect is 0.90 with a very valid category, the language use aspect is 0.85 with a very valid category and the media layout aspect is 0.94 with very valid category and obtained an overall average of 0.89 which is included in the very valid category. After validating the e-book tutorial-based learning media, there are still revisions according to the suggestions from the validator.

Table 2. Results of Validation by Material Experts on Learning Media Based on E-book Tutorial

No	Aspect of assessment	Validation value	Category
1.	Material Quality	0,89	Very valid
2.	Material Benefit	0,75	Valid
	Average	0,82	Very valid

Based on Table 2, it is known that the average score of the e-book material assessment obtained from the quality aspect of the material is 0.89 with a very valid category and the material usefulness aspect is 0.75 with a valid category. After the validity of the e-book material, there is a revision from the validator. The results of data analysis as a whole obtained an average score of 0.82 with a very valid category.

Practical Data Analysis

Practical Test Judging from Student Responses

Table 3. Practical Results of E-book Media with Beauty Cosmetology Students SMK N 6 Padang

No	Aspect of assessment	Validation value	Category
1.	Appearance	85,83%	Very practical
2.	Operation	85,67%	Very practical
3.	Benefits	86,71%	Very practical
	Average	86,07%	Very practical

Based on Table 3, the practicality of e-book media based on student responses from the Beauty Department from the appearance aspect got a score of 85.83% in the Very practical category, the operational aspect with a value of 85.67% in the Very practical category, and the usability aspect got a score of 86.71 % with category Very practical. Overall, the average score for the practicality test from students is 86.07% with very practical criteria. This assessment shows that every aspect of the learning e-book has been practically used in learning.

Practical Test Judging from the Teacher's Response.

Table 4. Practical Results of E-book Media with Beauty Cosmetology Teachers SMK N 6 Padang

No	Aspect of assessment	Validation value	Category
1.	Student interest	95,5%	Very practical
2.	Process of using	90%	Very practical
3.	Increased student activity	79,16%	practical
4.	The efficiency of time used	87,5%	Very practical
	Average	87,2%	Very practical

Based on Table 4, it can be seen that the practicality of the e-book media based on the beauty management teacher's response from the aspect of student interest got a score of 96.5% with a very practical category, the process aspect of its use with a value of 90% with a very practical category, the aspect of increasing student activity got a score of 79.16% in the practical category and the aspect of time efficiency used obtained a value of 87.5% in the Very practical category. Overall, the average score for the practicality test from the teacher is 87.2% with very practical criteria. This assessment shows that every aspect of the learning e-book has been practically used in learning.

Product Revision

From the testing of media experts and material experts, it was found that the learning e-book media on the subject of hair trimming and coloring is very valid and can be used with revisions according to suggestions by the validator. The revision was carried out after receiving input and suggestions from the validator. The revised video media was then given

to teachers and students for practicality and effectiveness tests in order to find out the practicality and effectiveness of the learning video media that had been developed.

Media Display of Double Application Hair Coloring Learning E-Book

This learning e-book consists of an opening section that contains the title of the e-book and an opening for starting learning.

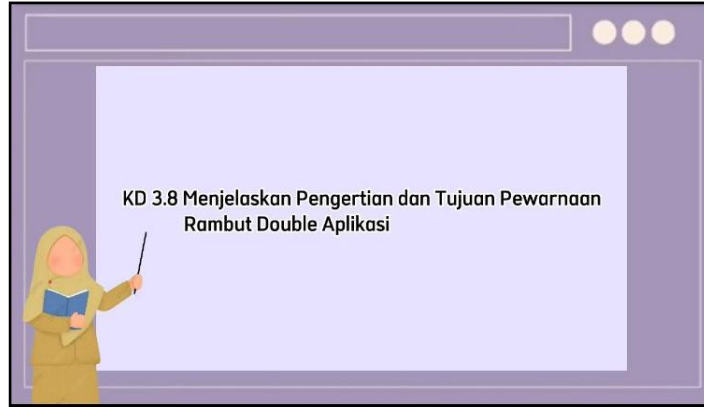


Figure 1. Display of Basic Competencies

Figure 1 shows the basic competence of double-application hair coloring which consists of analyzing and doing double-application coloring.

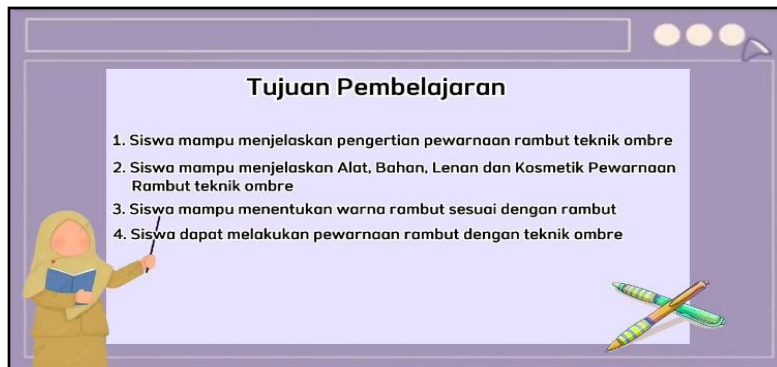


Figure 2. Display of Learning Objectives

In Figure 2, the learning objectives are shown so that students know what will be achieved in the basic competence of double application hair coloring.



Figure 3. Display of Double Application Hair Coloring Material

In [Figure 3](#), the basic application of double hair coloring material is displayed, the goal is for students to pay attention to the delivery of the next e-book, which is in the form of a double application hair coloring process which has been presented in [Figure 4](#).



Figure 4. Display of the Double Application Hair Coloring Process

Discussion

Test the validity of the learning e-book media using a questionnaire, and consultation by showing the initial form of the media that was made. Several aspects were observed in testing the validity of the learning media, namely the design of media and materials. In media design validation, an average score of 0.89 was obtained with a very valid category, and for material validation, an average score of 0.82 was obtained with a very valid category. Based on the assessment of the validator, the learning e-book media is suitable for use with revisions according to suggestions for improvement. Validation shows the degree of accuracy between the data that actually occurs on the object and the data collected by researchers to find the validity of an item, we correlate the item score with the total of these items ([Sugiyono., 2016](#)). The validity of the learning e-book media developed was obtained from validator responses. The media and material validators consist of 7 people who are divided into 3 media expert validators lecturers from the lecturers of the Faculty of Tourism and Hospitality, Padang State University and 3 lecturers for material expert validators, and 1 Beauty Teacher at SMK N 6 Padang.

So, it can be concluded that learning e-book media on the basic competence of double hair coloring application seen from the design of the media and material is very valid. The instrument is valid, it means that the measuring instrument used to obtain the data is valid so that the instrument can be used to measure what should be measured. So, if the learning e-book media has been declared valid, then the media can be used in the learning process. So that the basic technique of hair curling tutorial e-book media is feasible to use in learning activities.

The assessment of the practicality of the learning e-book media was obtained from a practicality test questionnaire based on student responses as many as 32 students got an average score of 86.07% with a very practical category. The practicality test from the results of the responses of 2 teachers obtained an average score of 87.2% with a very practical category. Practicality is the use of learning media that has been developed. Practicality is the convenience that exists in the instrument, both in preparing, using, interpreting, or obtaining results as well as convenience in storing (Jiang et al., 2013; Rahim et al., 2021). The level of achievement with the acquisition of 81%-100% with a very practical interpretation means that the product is practical and suitable for use in learning. With the results that have been obtained from the responses of students and teachers, it can be concluded that this learning e-book is practical to be used as a learning medium to support the job sheet media and textbooks given by the teacher. This learning e-book can answer students' questions about the application of double hair coloring processes that have been described in job sheets and textbooks that can only be read but cannot see the implementation process.

4. CONCLUSION

The development of learning media on the application double hair coloring subject uses a 4D model with a definition stage, Design stage, Development, and Disseminate stage. The results of the study obtained a value for media design validation of 0.89 with a very valid category and for material validation of 0.82 with a very valid category. The results of the research for the practicality test were seen from the student responses of 86.07% in the very practical category and the practicality value obtained from the teacher's response of 87.2% in the very practical category. The results obtained indicate that the media developed has been practically used in classroom learning activities.

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