Development of Colour Knowledge Learning Media in Beauty Design Courses
Department of Makeup and Beauty
Siska Miga Dewi¹,⁎ Merita Yanita²

¹,²Department of Make-up and Beauty, Faculty of Tourism and Hospitality, Universitas Negeri Padang
⁎Corresponding author. Email: siskamigadewi@fpp.unp.ac.id

ABSTRACT
This study aims to develop learning media in beauty design courses that can help students understand the concept of beauty design material regarding colour knowledge so that students can mix and match colours appropriately and correctly. The learning media model will be designed using the Macromedia Flash CS6 application and supporting software for character creation, animation, combining music, and narration to become a unit of learning media. The development of beauty design learning media goes through three stages that adopt the media development model from Alessi and Trollip, namely planning, design, and development. Product validation was carried out at the alpha test stage involving two media experts and two material experts. Meanwhile, the beta test involved six students. This study's results, namely the learning media developed, were considered suitable for use in learning in terms of media, material, and student assessments. This feasibility can be seen from the media expert assessment score of 4.75 excellent categories, 4.75 categories, perfect material expert score, and the student assessment score 4.7 categories very good.

Keywords: Learning media, Colour Knowledge, Beauty Design.

1. INTRODUCTION
The learning process changes every year and can affect the quality of learning. It also affects the use of learning resources and learning media used in the learning process[1]. The learning process that is expected at this time is the learning process of student centre learning. SCL (student centre learning) is "a broad teaching approach that encompasses replacing lectures with active learning, integrating self-paced learning programs and/or cooperative group situations, ultimately holding the student responsible for his advances in education [1]–[4]. It can be explained that SCL is an approach that tries to change learning to be more active and integrated, which ultimately makes students responsible for their development in education.

The learning process is student centre learning in which the lecturer directs students to want to learn and find out, while the lecturer acts as a student facilitator during the learning process[2], [5], [6]. The learning process with the principle of student centre learning can involve all the senses in a comprehensive and integrated manner. Learning is not limited to using learning resources in the form of printed materials but can also use multimedia[1]. Multimedia technology has had a significant impact on learning content that provides opportunities for active learning[2]. Books are only a means of conveying messages that emphasize the visual dimension. Many other sources can be used to improve the learning process, including audio recording tapes, videos, sound slides, CDs, DVDs, and others. The use of multimedia in instructional videos in beauty design courses can help students understand the concept of beautiful design, mostly material about colour knowledge.

The development of this learning media uses the Macromedia Flash CS6 application and supporting software for character creation, animation, and combining music and narration to become a unit of learning media[7]. Macromedia Flash is a combination of learning concepts with audiovisual technology that can produce new features that can be used in education. Multimedia-based learning can certainly present a more exciting subject matter, is not monotonous, and facilitates delivery[8]–[10].
The development of interactive video learning media is not introduced to the students of Makeup and Beauty at FPP UNP. This media can help lecturers deliver material and save time, both in preparing for learning and in the learning process itself. The media also is used repeatedly to save on the use of production costs. Besides, the learning media can help students to study independent because media has interactive abilities, and lecturers can apply student centre learning (SCL) learning[11].

Based on lecturers' observations and the researchers when teaching beauty design courses about colour knowledge, it found several things. It is: (1) students were unable to mix colours correctly and correctly, (2) students had difficulty determining whether the results of mixing the colours they did were correct and correct, (3) students were not able to determine colour groups based on colour circles, (4) students had difficulty in determining the right and correct colour combinations [12]–[15][11]–[14]. The use of learning media is expected to provide innovation in learning to help students understand the colour knowledge material and apply it better.

2. METHOD

This research uses research and development (R&D) research, which is research that aims to produce products that can be used to improve and improve the quality of education, covering various aspects of education. In this study, researchers produced learning media about colour knowledge in beauty design courses, majoring in Makeup and Beauty [13]–[15]. The benefit of this research is the existence of learning media that can make it easier for students to understand design elements, namely knowledge of colours, to mix and match colours appropriately and correctly.

This study develops instructional media using the Alessi & Trollip development model, namely, planning (planning), design (design), and development (development) [16]–[18].

Figure 1 Outline of the Research and Development Phase

After completing developing learning media to produce colour knowledge learning media products in the beautiful design course, a field test is carried out to identify and identify deficiencies in the learning media program.

The trials in this study consisted of two stages. The first is the alpha test/expert validation, in which the results of the validation will be used as material for revising the initial product. The second is a beta test conducted to test whether the learning media's quality is feasible. The action taken was to ask for an assessment of six selected students based on their academic abilities, namely high, medium, and low. Based on the input, the final revision of the product is carried out so that the product is obtained that is ready for use in product trials.

The type of data in this research is qualitative data and quantitative data. Qualitative data is obtained from comments and suggestions from experts, while material experts, media experts, and students obtain quantitative data from the validation results. Quantitative data in the form of scores then analyzed and converted into qualitative data. The results of the conversion are then used as benchmarks to determine the feasibility of developing instructional media.

Instruments or data collection tools used were in the form of observations, interviews, and questionnaire sheets (for validation of material experts and media experts and questionnaire sheets for assessment or product trial responses). This study's data result is in the form of material experts, media experts, and students' responses. It is to the quality of the products that have been developed in terms of material and media aspects. Data in the form of comments, suggestions, revisions, and the results of researchers' observations during the trial process were analyzed descriptively and qualitatively. The result is concluded as the input to improve or revise the products that developed.

Meanwhile, the data in the form of scores of responses from material experts, media experts, and students were obtained through a questionnaire, analyzed descriptively quantitatively with categorization techniques. The steps used to determine the product quality criteria have been developed. Namely the data obtained from the questionnaire is converted into interval data as follows: Very Good = 5, Good = 4, Enough = 3, Less = 2, Very Less = 1. The score obtained is converted into a qualitative scale of five, about the formula[5]:

Table 1 Conversion of Mean Scores into Criteria for Assessing Product Eligibility

| Score | Criteria  | Mean Interval Score |
|-------|-----------|---------------------|
| 5     | Excellent | 4.2 <x              |
| 4     | Good      | 3.4 <x <4.2         |
| 3     | Enough    | 2.6 <x <3.4         |
| 2     | Less      | 1.8 <x <2.6         |
| 1     | Very Less | x ≤ 1.8             |

3. RESULT AND DISCUSSION

The products produced in this study were instructional media containing attention-grabbing
materials, instructions, learning outcomes, materials, and evaluation questions. The product developed has gone through a series of preparations and merging of material that will be used as content and other supporting material such as sample questions and discussions so that later this product can be evaluated.

The data were obtained from two experimental activities, namely from the Alpha test data and the beta test data. Expert trial data/expert validation is carried out to assess or determine the validity of the multimedia learning makeup produced and ask for input or comments from several experts. The data obtained are qualitative data, namely expert assessment scores and qualitative data, in the form of suggestions or input that will be used to improve the product. The alpha test data consists of: (1) there are two media experts as media experts. The media expert's assessment of the entire instrument obtained a score of 4.75 in the excellent category, therefore from the media side, it was declared "feasible" to be tested on the next test, namely the beta test; (2) there are two experts in the field of beauty as material experts. Based on the results of the conversion, it can be concluded that the assessment of the two material experts on the entire instrument obtained an average rating of 4.75 in the perfect category, therefore from the material side it is declared "feasible" to be tested on the next test, namely the beta test. The data was then conducted with six students selected based on their academic abilities, namely high, medium, and low, to observe the products produced. The assessment score based on beta test data involving six students was 4.7 in the excellent category. The data was then conducted with six students selected based on their academic abilities, namely high, medium, and low, to observe the products produced. The assessment score based on beta test data involving six students was 4.7 in the excellent category.

Two material expert lecturers covering aspects of learning and content carried out the material expert. The validation results show that the material's feasibility is "Very Good" so that it can be continued to the beta test stage by first making the initial revision as suggested. To provide an overview of the product's quality based on the assessment of the two material experts, it can be seen in table 3.

Two material expert lecturers covering the appearance and programming aspects carried out the media expert validation. The validation results indicate that the feasibility of learning media for colour knowledge is "Excellent" to continue to the beta test stage by first making the initial revision as suggested. The overview of the quality of the product provided based on the two media experts' assessment can be seen in table 2.

### Table 2 Recap of Average Score of Media Expert Validation Results

| No | INDC | EXPERT 1 | EXPERT 2 | SUM | AVR | CRI |
|----|------|----------|----------|-----|-----|-----|
| 1  | Display | 90       | 22       | 179 | 4.7 | SB  |
| 2  | Program | 55       | 33       | 106 | 4.8 | SB  |
|    | Sum    | 145      | 75       | 220 | 9.5 | SB  |
|    | AVR    | 4.5      | 4.7      | 4.6 | 4.75| SB  |

### Table 3 The Mean Score of Material Expert Validation Results

| No | INDC | EXPERT 1 | EXPERT 2 | SUM | AVR | CRI |
|----|------|----------|----------|-----|-----|-----|
| 1  | Learning | 58       | 56       | 114 | 4.7 | SB  |
| 2  | Content | 5528     | 28       | 56  | 4.8 | SB  |
|    | Sum    | 86       | 84       | 170 | 9.5 | SB  |
|    | AVR    | 43.0     | 42.0     | 85.0| 4.75| SB  |

### Table 4 Recap of Average Beta Testing Score

| No | INDC | RESPONDENT 1 | RESPONDENT 2 | RESPONDENT 3 | RESPONDENT 4 | RESPONDENT 5 | RESPONDENT 6 | SUM | AVR | CRI |
|----|------|--------------|--------------|--------------|--------------|--------------|--------------|-----|-----|-----|
| 1  | Media| 20           | 22           | 25           | 25           | 22           | 21           | 135 | 4.5 | SB  |
| 2  | Theory| 34           | 33           | 35           | 35           | 30           | 34           | 201 | 4.8 | SB  |
| 3  | Utiliz | 20           | 20           | 20           | 20           | 17           | 18           | 115 | 4.8 | SB  |
|    | SUM   | 74           | 75           | 80           | 80           | 69           | 73           | 451 | 14.1|     |
|    | AVR   | 4.6          | 4.7          | 5.0          | 5.0          | 4.3          | 4.6          | 28.2 | 4.7 | SB  |

Two media expert lecturers covering the appearance and programming aspects carried out the media expert validation. The validation results indicate that the feasibility of learning media for colour knowledge is "Excellent" to continue to the beta test stage by first making the initial revision as suggested. The overview of the quality of the product provided based on the two media experts' assessment can be seen in table 2.

4. CONCLUSION

The learning media developed are considered suitable for use as a learning resource in media, material, and student assessments. This feasibility can
be seen from the media expert’s assessment score of 4.75 in the excellent category, the material expert’s score of 4.75 in the excellent category, and the student’s score of 4.7 in the excellent category.

Learning media for colour knowledge in increasing student knowledge of makeup and beauty by the learning design, according to the syllabus and has been through validation by media experts, material experts, and student responses, then the use of this learning media can be implemented by lecturers in the learning process of design subjects.

REFERENCES

[1] E. Kurniati, “Learning in School Based on Multimedia,” 2019, doi: 10.2991/icoie-18.2019.12.
[2] C. Winterbottom, D. F. Richard, and J. Nicholson, “Student-Centered Learning,” in The Routledge International Handbook of Student-Centered Learning and Teaching in Higher Education, 2020.
[3] J. Hattie and G. Yates, “Understanding Learning: Lessons for learning, teaching and research,” How Brain Learn. What Lessons Are There Teaching?, 2013.
[4] E. & Mousoulides, “Models and Modeling: Cognitive Tools for Scientific Enquiry,” Springer, 2011.
[5] A. Rumney, “Facilitating learning,” in New Directions in Vocational Education, 2019.
[6] A. Gray, “Constructivist Teaching and Learning,” SST Research Centre Report, 1997.
[7] I. Yeni, I. Epria, D. Putra, V. Anggraini, R. Nofindra, and A. H. Pamungkas, “Digital Press Social Sciences and Humanities Stimulating Children ’ s Mother Tongue Development Through Animated Children Song Stimulating Children ’ s Mother Tongue Development Through Animated Children Song,” 2020.
[8] E. Kurniati, “Learning in School Based on Multimedia,” Adv. Soc. Sci. Educ. Humianit. Res., 2018, doi: 10.2991/ICOIE-18.2019.12.
[9] H. Piyayodilokchai, P. Panjaburee, P. Laosinchai, W. Ketpichairong, and P. Ruenwongsa, “A 5E learning cycle approach-based, multimedia-supplemented instructional unit for structured query language,” Educ. Technol. Soc., 2013.
[10] S. M. Alessi and S. R.Trollip, “Multimedia for Learning, Methods and Development,” Multimed. Learn. Methods Dev., 2001.
[11] S. Ratnaningsih, “SCIENTIFIC APPROACH OF 2013 CURRICULUM: TEACHERS IMPLEMENTATION IN ENGLISH LANGUAGE TEACHING,” English Rev. J. English Educ., 2017, doi: 10.25134/erjee.v6i1.792.
[12] A. Joiner, I. Hopkinson, Y. Deng, and S. Westland, “A review of tooth colour and whiteness,” J. Dent., 2008, doi: 10.1016/j.jdent.2008.02.001.
[13] D. V. M. Akshay P. Vartak, “Colour image segmentation - a survey,” Int. J. Emerg. Technol. Adv. Eng., 2008.
[14] H. Kauppinen-Räisänen and M. N. Jauffret, “Using colour semiotics to explore colour meanings,” Qual. Mark. Res., 2018, doi: 10.1108/QMR-03-2016-0033.
[15] D. G. Stavenga, “Colour in the eyes of insects,” Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology, 2002, doi: 10.1007/s00359-002-0307-9.
[16] W. C. H. Prentice and C. E. Osgood, “Method and Theory in Experimental Psychology,” Am. J. Psychol., vol. 67, no. 3, p. 555, 1954, doi: 10.2307/1417956.
[17] A. Peters, “4. Methods of data collection and analysis,” in Linguistic Change in Galway City English, 2016.
[18] Save the children, “06. Methods of data collection and analysis,” Monit. Eval. Account. Learn., 2014.