# Improving The Quality of Learning Through The Development of Digital Textbook for Special Makeup Course

Vita Pujawanti Dhana[1*], Rohana Aritonang[2], Astrid Sitompul[3], Habibah Hanim Lubis[4]
Irmiah Nurul Rangkuti[5]

{vitapwd@unimed.ac.id[1], rohanaaritonang@unimed.ac.id[2], astridsitompul@unimed.ac.id[3], habibahhanimlubis@gmail.com[4], missirmiahnurul@gmail.com[5]}

Universitas Negeri Medan, Medan, Indonesia

**Abstract.** The purpose of this study is to produce a textbook as one of the learning tools in the special makeup course at the Cosmetology Education Study Program, Faculty of Engineering, UNIMED. The textbook is being developed in both digital and non-digital forms, and it is hoped that it will be able to fill in the gaps that are weaknesses in the learning process of special makeup courses so that they can improve the quality of learning both from the lecturer side and for students. The research method used in this research is research and development (research and development) using the Rowntree development model, which consists of three stages, namely the planning stage, the development stage, and the evaluation stage. Data collection is carried out through expert testing, including by media experts, learning design experts, and material experts. After an evaluation from experts, it was continued with trials on respondents, namely students of the cosmetology education study program, through individual tests (one-on-one), small group tests, and field tests. The results of the research on the development of this textbook are that, at the evaluation stage of the expert review of the material, the material expert obtained a value of 4.45, the media expert obtained a value of 4.41, and in the evaluation of the learning design expert, a value of 4.60 was obtained, so that means the textbook is stated to be excellent. Furthermore, there is a one-to-one trial stage where a score of 4.15 is obtained, a small group gets a value of 4.52, and a field test stage of 4.66, which means that the textbooks that have been developed get excellent scores from students. This textbook is also considered to be able to improve learning outcomes, as can be seen from the difference in the completion rate of students who previously did not use textbooks, which increased from 71% to 91% when using digital textbooks.

**Keywords:** Cosmetology, Digital Textbooks, Special Makeup, Research and Development.

## 1 Introduction

Cosmetology is a necessity that cannot be separated from most circles. Although cosmetology is not a basic need, in its implementation, it has been used in various aspects of life, such as the entertainment industry, tourism, and education. As cosmetology education in Indonesia continues to develop, the number of cosmetology educational institutions has emerged as proof that it is true that cosmetology has become a necessity in various aspects.

The Cosmetology Education Study Program, Faculty of Engineering, Medan State University, is one of the programs that produces experts in the field of cosmetology who will become professionals in spreading knowledge in the field of cosmetology. Graduates are expected to be able to become teachers, coaches, and cosmetologists. To achieve this, of course, there are efforts that must be continuously improved by the Cosmetology Education Study Program, one of which is improving the quality of learning through the provision of textbooks that are relevant to the industrial world.

During this time, the learning process for special makeup courses was not equipped with appropriate textbooks. Some teaching materials are still derived from trade books, regardless of their suitability for the needs of students or the predetermined curriculum. Students also have difficulty getting references that are in accordance with the material discussed in the syllabus or RPS because the teaching materials have not been collected into a single unit that can be easily read and learned independently. The unavailability of qualified learning resources and appropriate learning media is also the reason for the lack of student ability to meet learning outcomes [1]. As a result, students' mastery of special makeup courses is regarded as low, as is their activeness and enthusiasm for participating in learning. If it continues to be allowed, the quality of learning will decrease, student abilities will be low, and it is feared that graduates will not be well absorbed in the world of work.

Through this research, researchers are trying to develop digital textbooks that are designed to be used with lecturers in class or independently in their respective residences. Some of the materials in the book include corrective makeup for seven different face shapes, stage makeup, cicatric makeup, geriatric makeup, and character makeup. The textbook will be developed in accordance with the curriculum that already has relevance to the industrial world, so that it will later be very useful for students and lecturers in the process of teaching and learning activities, and it is expected to result in the emergence of a superior generation in the field of cosmetology who are capable of competing in the world of work.

## 2 Research Method

Rowntree's product development design model was researched and developed as the research method in this study.Prawiradilaga stated that the Rowntree model is a product-oriented model, especially for producing teaching materials [2]. The stages of this model are planning, development, and assessment or evaluation.

In more detail, the procedure for developing a special makeup textbook adapted from Rowntree and Tessmer's development model can be seen in the following figure:
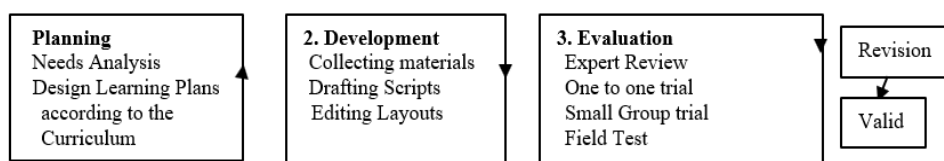


**Figure 1**. The scheme of the Outcome Development Procedure and Adaptation from Rowntree

Data collection techniques used in this study are as follows:
1) Preliminary Study

   At this stage, the instrument used is a questionnaire. Questionnaires are used to determine the strengths and weaknesses of the learning process that has been carried out so far.

Questionnaires are given to students to determine their abilities and weaknesses before taking special makeup courses.

2) Planning and Development

At this stage, the instrument used is an expert review questionnaire. Questionnaires were given to learning material experts, learning design experts, and graphic/media design experts.

3) Product Trial

The trial in this study was carried out by distributing questionnaires given to students to determine student interest in the textbooks developed. The scale for the questionnaire was 1 to 5.

The guidelines and assessment criteria for interpreting the percentage response criteria (score criteria guidelines) according to Sudijono in this case can be seen in Table 1 below [3]:

**Table 1.** Guidelines for Assessment Criteria

| Percentage | Criteria | Value |
|---|---|---|
| 81% $\leq \times \leq$ 100% | Very Good | A |
| 61% $\leq \times \leq$ 80% | Good | B |
| 41% $\leq \times \leq$ 60% | Enough | C |
| 21% $\leq \times \leq$ 40% | Not Good | D |
| 0% $\leq \times \leq$ 20% | Very Not Good | E |

From the table above, it can be seen that the response presentation criteria if you get a score of 81%$\leq \times \leq$100% then it is categorized as "very good" and gets an "A" score, if the percentage score is 61%$\leq \times \leq$80% then it can be categorized as "good". and gets a "B" score, if the percentage score is 41% $\times \leq$ 60% then it can be categorized as "enough" and gets a "C" score, if the percentage score is 21% $\times \leq$ 40% then it can be categorized as "not good" and get a "D" score, whereas if it is categorized as "0%$\leq \times \leq$ 20%" then it can be categorized as "very poor" and gets an "E" score.

To find out the increase in student learning outcomes, the following formula is used:

$$\text{Classical Percentage} = \frac{number\ of\ students\ who\ finished}{number\ of\ students} \text{ x } 100\%$$

As for individual completeness, it can be seen from the Passing Grade, > 70.

## 3  Results and Discussion
### 3.1 Planning stage

This textbook's development begins with the planning phase, which includes conducting a needs analysis and creating learning designs. The Cos [4]metology Education Study Program, Family Welfare Education Department, UNIMED Faculty of Engineering conducted a needs analysis by distributing questionnaires to 50 students.

According to the responses to the questionnaire, 100% of students indicated that they required a special make-up textbook. 44% of them indicated a need for digital textbooks, 18% for printed textbooks, and 46% for both print and digital textbooks. In response to the

numerous requests from students indicating that printed books are still required, the development of a special make-up.

Based on the results of the needs analysis questionnaire distributed to students, the following conclusions were obtained:

1) The majority of students (96%) agreed that the special makeup course had a significant impact on the field of work for cosmetology program graduates.
2) The majority of students (90%) believed that the special makeup course was a challenging subject because it contained numerous competencies.
3) All students (100%) indicated that they required textbooks to supplement the lecture.
4) The majority of students (94%) reported that reading books alone was insufficient for studying special makeup courses.
5) 9 students (18%) desired a printed version of a special make-up textbook. 15 (44%) students indicated that they required textbooks in digital format, and some (46%) indicated that they required both print and digital textbooks.

On the basis of the results of the needs analysis, it can be concluded that the development of digital textbooks for special makeup courses in the makeup education program at the State University of Medan is urgently required.

After the needs analysis stage, the next step is compiling learning materials that will be written into a textbook. The composition of the lecture material is adjusted to the semester learning plan (RPS) for the special makeup course, which has been prepared and adapted to the current conditions of the working world in the special makeup field [5]. The textbook material consists of 8 learning activities, including: 1) special makeup concepts; 2) face shapes and facial members; 3) corrective makeup; 4) stage makeup; 5) cicatricial makeup; 6) geriatric makeup; 7) photo and film makeup; and 8) character makeup.

## 3.2 Product Development Stage

The second stage of this development research is the development stage, which consists of the preparation of the book manuscript and the production of photos and video tutorials until finally it becomes a draft book that is ready to be validated and tested by experts and users (students) [6].



**Figure. 2**. Cover of Special Makeup Digital Book

The preparation of textbook manuscripts was carried out by researchers together with a team of lecturers for special makeup courses. Photo and video tutorials are required as a

supplement to special make-up textbooks that are more practical and require examples of images and videos of work steps so that students understand more and learn more easily [7].
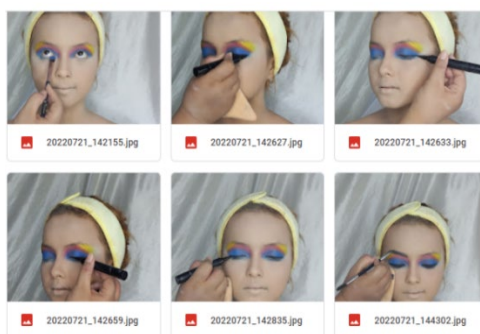


**Figure 3.** Photo Production of Special Makeup Textbook

### 3.3 Evaluation Stage
### 3.3.1 Material Expert Validation

According to the findings of an evaluation conducted by material experts, textbooks are of very high quality in terms of content feasibility, presentation, and language. Based on the numbers obtained on the instrument, from the aspect of the feasibility of the contents in this textbook, the average score is 4.80; from the aspect of the presentation, this textbook gets an average score of 4.57; and from the linguistic aspect, this textbook gets a score of 4.00. For the overall value of this special make-up textbook, it got an average score of 4.45, so this textbook was declared very good.

**Table 2.** Material Expert Validation Results

| Aspect | Average | Percentage | Criteria |
|---|---|---|---|
| Content Eligibility | 4,80 | 96% | Very Good |
| Presentation | 4,57 | 91% | Very Good |
| Language | 4,00 | 80% | Good |
| Average | 4,45 | 89% | Very Good |

### 3.3.2 Media Expert Validation

According to the results of the evaluations conducted by media experts, the textbooks are of very high quality in terms of program, learning design, and visual communication.

**Tabel 3.** Media Expert Validation Result

| Aspect | Average | Percentage | Criteria |
|---|---|---|---|
| Program | 4,50 | 90% | Very Good |
| Learning Design | 4,50 | 90% | Very Good |
| Visual Communication | 4, 25 | 85% | Very Good |
| Average | 4,41 | 88,3% | Very Good |

Based on the numbers obtained on the instrument and the program aspect of this digital textbook, the average score is 4.50, which means that the contents of the special facial makeup digital textbook are very good. From the aspect of learning design, this textbook received an average score of 4.50, which means that the learning design is stated to be very good. From the aspect of visual communication design, this textbook got a score of 4.25, which means it has a very good visual communication design.

### 3.3.3 Learning Design Expert Validation

Based on the evaluation results that have been carried out by learning design experts, the digital make-up special textbook is considered to have very good quality, both from the aspect of learning design as well as the characteristics of the textbook.

**Table 4.** Learning Design Expert Result

| Aspect | Average | Percentage | Criteria |
|---|---|---|---|
| Learning Design | 4,55 | 91% | Very Good |
| Textbook Characteristic | 4,66 | 93% | Very Good |
| Average | 4.60 | 92% | Very Good |

Based on the numbers obtained from the instrument, the learning design aspect of this digital textbook got an average score of 4.55, and the characteristic aspect of the textbook got an average score of 4.66, which means it is stated very well. For the average score by learning design experts, this special make-up textbook got a score of 4.60, so this textbook was declared very good.

### 3.3.4 Student Trial

**Table 5.** Student Trial Result

| Trial | Average | Percentage | Criteria |
|---|---|---|---|
| One to One | 4,15 | 83% | Very Good |
| Small Group | 4,52 | 90% | Very Good |
| Field Test | 4.66 | 92% | Very Good |

At the one-to-one trial stage, the score was 4.15; at the small group stage, the score was 4.52; and at the field test stage, the score was 4.66, which means that the textbook was declared very good.

**Table 6.** Percentage  of Class Comppleteness Score

| Class | Number of Completed Students (>70) | Total Students | Percentage |
|---|---|---|---|
| No digital textbook | 25 | 35 | 71% |
| Use digital textbook | 30 | 33 | 91% |

The use of textbooks as media and learning resources for students and lecturers is also seen as improving learning quality. This is demonstrated by the increase in students' completeness scores from 71% without textbooks to 91% when using digital textbooks.

## 4 Conclussions

A digital textbook of special makeup that has been developed into a suitable learning media for use in the classroom both independently and guided. A special make-up digital textbook offers a structured, clear, and effective learning experience that improves learning quality and student learning outcomes. Nonetheless, in order to optimize the learning process, students must be provided with a variety of media and other learning resources. Internet access, journals, books, social media, and various appropriate video tutorials can all be made available so that students can study independently. That way, all the learning objectives that were originally set can be achieved to the maximum.

## Acknowledgements

## References

[1]  Pujawanti Dhana, V. (2021). Pengembangan Video Tutorial Rias Wajah Panggung sebagai Media Pembelajaran Jarak Jauh. *Jurnal Pendidikan Indonesia*, 2(10), 1812–1823. https://doi.org/10.36418/japendi.v2i10.313

[2]  Prawiradilaga, D.S. (2015). *Prinsip Desain Pembelajaran*. Kencana:Jakarta.

[3]  Prastowo Andi. (2015). *Panduan Kreatif Membuat Bahan Ajar Inovatif*. Jogjakarta: Diva Press.

[4]  Bates, A. W. (2019). Teaching in a Digital Age – 2nd Ed. Tony Bates Associates Ltd.

[5]  Fuada, S. (2018). Pengembangan Buku Ajar Ips-Sejarah Digital Smp. *Jurnal Teknik Informatika,* 10(1), 37–48. https://doi.org/10.15408/jti.v10i1.6969

[6]  Purmadani, T. H., Siregar, J. S., & R, A. D. (2022). Pengembangan E-Modul Penataan Sanggul Teknik Sirip pada Mahasiswa Tata Rias Universitas Negeri Jakarta. *JIIP - Jurnal Ilmiah Ilmu Pendidikan*, 5(7), 2640-2645. https://doi.org/10.54371/jiip.v5i7.734

[7]  Sugiyono. (2010) *Metode Penelitian Pendidikan Kuantitatif, Kualitatif Dan R&D*. Bandung : Alfabeta.