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Development of Mind Mapping Using Whimsical Application in Educational Digital Psychology Course

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Abstract

The purpose of this research is to develop concept maps using whimsical applications in educational digital psychology courses. The method used in this research is the Research and Development method. The development model used in this research is the ADDIE model which consists of 5 stages including analysis, design, development, implementation, and evaluation. The subjects used in this study were one media expert, one material expert, and five students who had taken the educational digital psychology course to determine the quality of the media that had been developed. Based on the research that has been done, the development of mind mapping using whimsical applications in educational digital psychology courses is declared valid by media experts and material experts. The results of the media feasibility test in small groups obtained a result of 92.50 which means that it obtained very high criteria.

Keywords: Development; Mind Mapping; Whimsical Appliacation.

1. Introduction

The rapid development of technology and all digital as it is today, makes learning activities carried out require an innovative and adaptive approach. Technological advances make information exchange very fast, especially in the world of education (Sungkono & Ekaputra, 2024). Learning is designed to be as interesting as possible and uses technological assistance in order to have an impact on students, such as increasing students' understanding and skills. The application of information technology in learning activities can improve the quality of student learning (Husein, 2022). The learning process using a learning tool can affect student learning motivation, learner activities to process, search for information, and apply and use knowledge. Learning activities must be able to facilitate the improvement of knowledge and skills (Ekaputra, 2023). The implementation of learning with conventional methods is often unable to foster student interest in learning and understanding of lecture material. Conventional learning with the lecture method carried out for a long time makes students passive in participating in learning, and feedback on the level of student understanding is difficult to measure (Ekaputra, 2024).

Based on observations of students in the Chemistry Education Study Program at Jambi University, it shows that students have not prepared or studied the material that will be obtained during lecture activities in class. Lack of preparation of students in attending lectures can make understanding of the material limited. Teachers can make the learning atmosphere fun and active for students (Haryanto et al., 2023). The teacher's ability to integrate digital media in learning is very important, because it can make students more creative, active, collaborative (Talitha et al., 2023). The existence of learning tools is needed to assist the learning process carried out, so that it affects student learning motivation (Huda & Ekaputra, 2023). Therefore, the use of learning media that is able to visualize lecture material easily such as mind mapping is expected to be the right and effective solution to improve and facilitate students in preparing and learning lecture material. The use of media that is able to explain abstract material is needed (Ekaputra, 2020). Learners must have the ability to adapt to modern learning so that learning objectives can be achieved thoroughly and students have good independent learning skills (Falah et al., 2023).

Mind mapping is a learning technique that can visualize lecture material in the form of intuitive diagrams so that it is easier to learn lecture material. Mind mapping is a way to group several ideas to help analyze a problem and

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remember material (Akbar et al., 2023). Learning techniques using the mind mapping method can improve understanding of course material and speed up the time needed to learn the material, because mind mapping has advantages in structuring course material. The application of mind mapping media can be utilized to improve student understanding and learning outcomes (Zunaidah & Mukmin, 2017). Mind map is a method that can be used to manage information thoroughly, so as to increase motivation and understanding of concepts (Purwanti et al., 2018). In Educational Digital Psychology lectures, the use of the mind mapping method can potentially help students manage information related to lecture material in depth. The mind mapping application that is easy and easy to use, and has interesting features is the Whimsical application. Based on the background and advantages of the Whimsical application, this study aims to develop Mind Mapping Using the Whimsical Application in the Educational Digital Psychology Course.

2. Literature Review

2.1. Mind Mapping

Concept maps are mapping and connecting concepts of understanding or certain problems, mapping and connecting concepts can be done in all directions and have a hierarchy (Irfadila, 2020). The advantages of concept map media are that it makes learning more meaningful, can increase student understanding and memory and can increase students' thinking creativity in the learning process (Agustiany et al., 2021). The use of mind mapping in learning activities makes students actively develop notes that provide a lot of information, so that learning material can be mapped in an organized and easy to learn way (Marxy, 2017). The utilization of mind mapping in learning activities can improve students' understanding of material concepts, so that it can improve students' learning outcomes (Elita, 2018).

3. Research Methods

The method used in this research is the Research and Development method to determine the quality of concept map development using whimsical applications in educational digital psychology courses. The development model used in this study, namely the ADDIE model which consists of 5 stages including analysis, design, development, implementation, and evaluation. The subjects used in this study were one media expert, one material expert, and five students who had taken the educational digital psychology course to determine the quality of the media that had been developed.

4. Results and Discussion

The development model used in this research is the ADDIE model which consists of 5 stages including analysis, design, development, implementation, and evaluation.

4.1. Analysis

The analysis stage aims to find out and analyze the needs and problems that exist in the field, analysis of student learning styles and interests through interviews with lecturers and students, collecting literacy about whimsical applications, learning plans for educational digital psychology courses.

4.2. Design

The design stage aims to design solutions from the results of the analysis and problems encountered in the field, such as the media and learning models to be used. The design stage is the basis of the media developed in this study as a solution to the problems encountered in the field.

4.3. Development

The concept map development stage uses whimsical applications in educational digital psychology courses. The results of whimsical media development in educational digital psychology courses can be presented in Figure 1.

Figure 1. Developed Whimsical Results.

4.4. Implementation

The whimsical application that has been developed is validated by experts to obtain qualitative data. Media assessment by material experts and media experts was carried out twice. Doing valiation twice aims to produce concept maps using whimsical applications in educational digital psychology courses with the best quality. After the concept map using whimsical applications in educational digital psychology courses is improved and declared feasible by media and material experts, research is carried out at the next stage, namely small-scale trials to determine the feasibility of concept map products using whimsical applications that have been developed. The product feasibility test was carried out on 5 students who had taken educational digital psychology courses and field trials on students who were taking educational digital psychology courses. The results of the media feasibility test by small groups are presented in Table 1.

Table 1. Small Group Feasibility Test Results

Indicator	Value
Sharpness of background color	85.00
Consistency of lay out	100.00
Suitability of sentence placement with layout	90.00
Ease of typeface to read	90.00
Suitability of font size with background size	90.00
Suitability of letter color with background color	90.00
Conformity of image placement with lay out	95.00
Image size suitability with background size	100.00
Image color suitability with background color	90.00
Instructions for use in the media	95.00

Based on the results of the small group media feasibility test, it was found that the concept map using the whimsical application in the educational digital psychology course that had been developed obtained an average of 92.50, which means it obtained very high criteria. Indicators of lay out consistency and suitability of image size with background size obtained a score of 100. Layout consistency is important in a learning media, because it makes it easier for students to use the media. The suitability of the image size with the background size can create a more attractive visual appearance, so that the communication contained in the learning media becomes more effective.

4.5. Evaluate

Analyze suggestions from the assessment results on the validation test, small scale, and large scale, and make revisions from the assessment results of the whimsical application that has been developed. Process quantitative data from the results of the small group feasibility test.

Based on the results of the assessment of whimsical media that has been developed, it shows an average value of 92.5. This indicates that the whimsical media in the educational digital psychology course that has been developed has very good quality. Students feel that the whimsical application that has been developed in the educational digital psychology course can help in learning lectures easily. Learning strategies using mind mapping have a positive effect on improving student achievement (Ferry, 2022). Concept maps can make abstract information into concrete information, making it easier to understand a material concept (Irfadila, 2020).

The results of the media feasibility assessment to students show that the indicators of lay out consistency and the suitability of image size with background size get a score of 100. The consistency of layout can make it easier for students to use whimsical media and make students focus on the material content presented. Layout has a function to influence the audience's perception of the content developed (Astuti, 2021). The suitability of the image size with the background size on the whimsical media developed can make it easier for students to learn the material and improve the quality of the display on the whimsical media. The presentation of clear image displays on the media is needed so that the messages to be conveyed in learning activities are conveyed effectively (Paramita et al., 2019).

5. Conclusion

Based on the research that has been done, the development of mind mapping using whimsical applications in educational digital psychology courses is declared valid by media experts and material experts. The results of the media feasibility test in small groups obtained a result of 92.50 which means it obtained very high criteria. The high value of the media feasibility test, researchers suggest that mind mapping using whimsical applications in educational digital psychology Courses that have been developed are applied to learning to improve student abilities and skills.

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