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DIGIEDU: learning project with digital based to overcome learning lost post covid-19 pandemic in social science education department

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ABSTRACT

The existence of the COVID-19 pandemic adds to the row of problems that exist in tertiary institutions, meaning that we cannot allow this problem to continue because it will hamper the improvement in the quality of graduate learning and the quality of the students it produces. The aim of the research is to improve the quality of learning through digital-based learning projects (DIGIEDU) to address lost learning after the pandemic to increase understanding and absorption of learning. This research is a type of Addie's (1996) development model using the Lee & Owens (2004) model through the use of digital technology development model syntax. The study of product effectiveness in measuring learning is based on assessments from the material validator, media from alpha testing, as well as comments from users and expectations from DIGIEDU product development. Based on the data table, the feasibility and effectiveness scores were obtained from various experts and students. In the media expert's assessment, a score of 82.3% was in the proper category. Assessment from design experts gets a score of 86% in the proper category. In the assessment of the practitioner category, a score of 91.1 was obtained and 82.2 students were in the sufficient category.

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Introduction

The COVID-19 pandemic that has occurred so far has had an impact on various fields and aspects of life. In the education sector, teaching or learning is done online. In the economic sector it affects the income sector but this has a positive impact, entrepreneurs must be more creative and innovative in order to be able to develop the products they sell. On the religious side, worship activities must adapt to existing conditions starting from worshiping activities that must be done at home and limited to certain number of people (Putra & Kasmiarno, 2020).

In the world of Indonesian education, especially in higher education, there are several problems faced in creating creative and innovative young people including the lack of innovative learning systems and curriculum adjustments in improving students' abilities by using technology and then integrating digital object and people so that the graduates become more skilled and competitive by understanding the aspects of data literacy, technology literacy and human literacy.

The existence of the COVID-19 pandemic adds another row of problems that exist in higher education, namely learning that is carried out less effectively. This problem is added with the desire of students to read literature is still very lacking so that learning is only done online.

Online learning has had a significant impact on students in gaining knowledge. This can be seen from the lack of meaningfulness in learning. Students only gain minimal experience and their activities are limited so that they only get in the form of theory without being able to apply it. The conditions that occur make the development of students unbalanced, which means that not fully the required potential can be absorbed because of online learning. Therefore, the results obtained by students decreased and caused students to experience learning in online learning (Assiddiqi & Soeryanto, 2021). The following is data on the impact of online learning due to the COVID-19 pandemic:

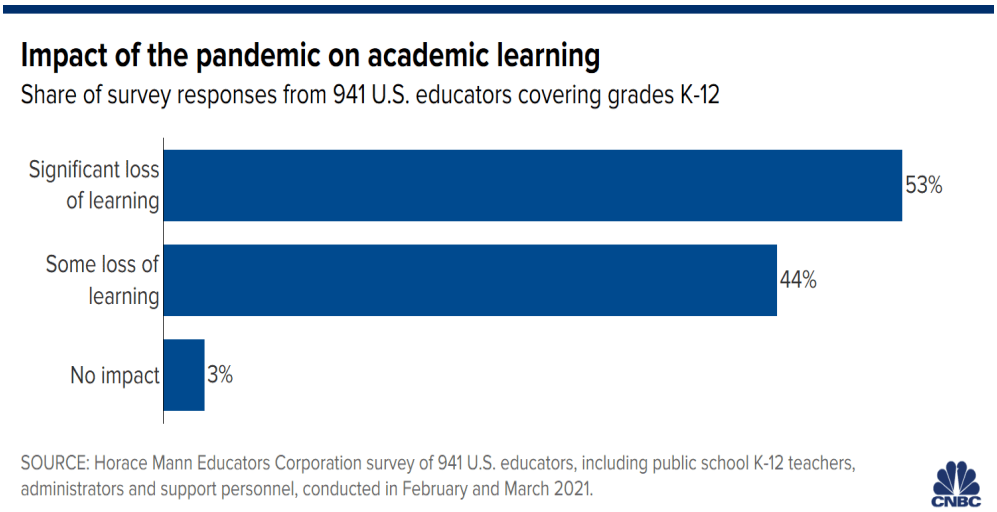

Figure 1. Impact of pandemic on academic learning (Horace Mann found)

Based on the data above, we can see that there was a significant loss of learning as much as 52% and only a few experienced some loss of learning, namely 44% and that had no impact of 3%. This means that the COVID-19 pandemic has had a profound impact on student learning in higher education with considerable implications, meaning that we cannot allow this problem to continue because this will hinder the improvement of the quality of graduate quality learning and the quality of the students produced. The form of learning loss that occurs in online learning is the duration of student learning and limited concentration and study time. (Wiwin Andriani, M. Subandowo, Hari Karyono, 2021)

There are several solutions that can be done in overcoming these problems including adjusting and preparing policies for teachers and students to be able to take full advantage of communication and then have good character after working on all digital facilities and infrastructure (Syamsuar & Reflianto, 2018). One way to overcome these problems is to use project-based learning with the help of Digital. Digital-based learning can increase creativity and improve learning outcomes. As well as increasing student independence in learning and they become more flexible in learning (Gunawan, Hairunnisyah Sahidu, Ahmad Harjono, 2006; Surya et al., 2018). Digital-based learning is believed to be one way to overcome or to improve the quality of learning (Wijayati et al., 2019)

E-learning can be successful if we can identify or understand what students need so that it can reduce boredom and perception in the use of applications or platforms. One example of e-learning activities that can be applied is the use of online whiteboards and the use of various learning models with the implementation of digital learning to improve learning outcomes (Rhamdan et al., 2021)

The basis of this research is an initial study that occurred in the environment of students majoring in PIPS FKIP Jambi University who experienced a significant impact due to the COVID-19 pandemic that occurred since early March 2020. Students feel that the learning material obtained through lectures is still quite low and the absorption they get is also low. Thus they felt that they have not finished with the material obtained during lectures. Therefore, it is necessary to develop an alternative learning that can improve understanding of the material and so that learning can also be more complete.

This research is also based on preliminary data obtained from the field where students majoring in PIPS FKIP Jambi University who use Android smartphones reach 92% which can support students in obtaining information and materials and also knowledge to support learning so that it can be more complete and

overcome learning loss. In addition, this research also supports UNJA's vision and mission which is elaborated through the 2005-2029 RPJP UNJA with the UNJA Chancellor's Priority Program 2020-2024 in the agro-industry and environment focus areas. A World Class Agroindustrial and Environment Entrepreneur University. The following is an overview of research related to the strategic objectives of UNJA SMART 2020-2014 which accommodates technology for digital transformation and student achievement.

Based on the problems stated above, it was found that the learning process that took place in the PIPS FKIP Department, Jambi University, was felt to be still not in accordance with the goals and objectives of the learning, for that we needed a solution that could overcome the loss learning that occurred in students by using technology in the form of digital so that it can help students to understand the material deeper and increase materials absorption in learning. Based on this background, it is necessary to solve the problem, one of which is by using a digital based learning project (DIGIEDU) to overcome learning lost after the COVID-19 pandemic.

Methods

In the research conducted, several approaches are used, namely quantitative research with the development of the model that will be used in the form of a framework in this research, that is the type of model development derived from Borg & Gall. (Meredith D. Gall, Walter R. Borg, 2020) with Addie's development model (Carey, 2015) using the Lee & Owens model (William W Lee, 2004) through the use of a digital technology development model syntax. Product effectiveness assessment in measuring learning based on assessments from material validators, media experts from alpha testing, as well as comments from users and expectations from product development DIGIEDU: Learning Project With Digital Based.

Results and Discussions

Online learning has had a significant impact on students in gaining knowledge. This can be seen from the lack of meaningfulness in learning. Students only gain minimal experience and their activities are limited so that they only get in the form of theory without being able to apply it. The conditions that occur make the development of students unbalanced, which means that not fully the required potential can be absorbed because of online learning. Therefore, the learning results obtained by students decreased and caused the students to experience online learning.

Initial product development

Home Page

On the home page shown a photo of the UNJA main gate, the button to the main menu of the DIGIEDU application and the application maker.

Main Menu

The main menu contains profile menus, lecturer menus, curriculum menus, course menus, material menus, book menus.

Study Program Profiles

The profile menu contains profile menus for Economic Education, History Education, and Civic Education study programs. Then the menu will be directed to the profile of each study program.

Study Program Lecturer

On the lecturer menu, there are 3 lecturers in the study program, namely Economic Education, History Education and Civic Education. On each study program menu will be directed to each profile of each lecturer in the study program.

Curriculum

On the curriculum menu there are 3 curriculum menus in the study program, namely Economic Education, History Education and Civic Education. On each study program menu will be directed to each curriculum for each lecturer in the study program.

Courses

On the course menu there are menus of 3 lecturers in the study program, namely Economic Education, History Education and Citizenship Education. On each study program menu will be directed to each RPS course each lecturer in the study program.

Materials
On the menu, there are materials from 3 study programs to choose from, namely Economic Education, History Education and Citizenship Education.

Book
On the book menu there are several references in searching for e-books and journals, there are three websites for searching e-books and journals, namely Google Book, Z-library and Google Scholar.

Validation results

Validation results by media experts
In assessing products in the form of digital media using 4 assessment criteria including ease of use, interface, language and implementation. In product assessment, 14 statement items are used. The following are the results of expert assessments displayed using a diagram with 2 stages of assessment, the results are as follows:

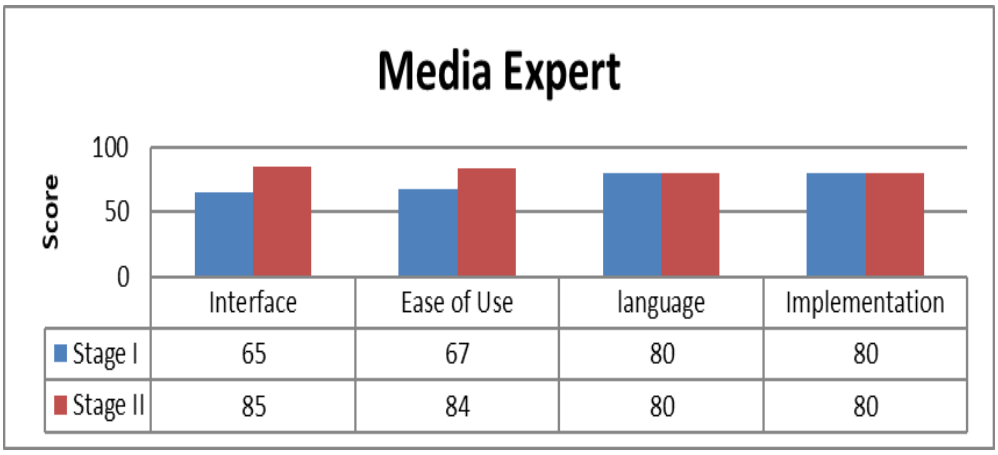

Figure 2. Diagram of validation results by media experts' stage I and II

Based on the bar chart above, the results of stages 1 and 2 are obtained, the results above show the difference in results in stage 1 and stage 2. The results are as follows: 1) In the interface aspect, in the first stage it got 65% and in the second stage it increased to 85%; 2) In the aspect of ease of use, in the first stage it received 67% and in the second stage it was 84%; 3) In the aspect of language, in stage I it received 80% and then in stage II it still 80%; 4) For the aspect of user convenience and for the aspect of usability, in the first stage it received 80% and in the second stage it still 80%.

Validation results by design experts
In assessing product design, 5 assessment criteria are used, namely menus, interface, coloring letters and images. In product assessment, 17 statement items are used. The following are the results of expert assessments displayed using a diagram with 2 stages of assessment, the results are as follows:

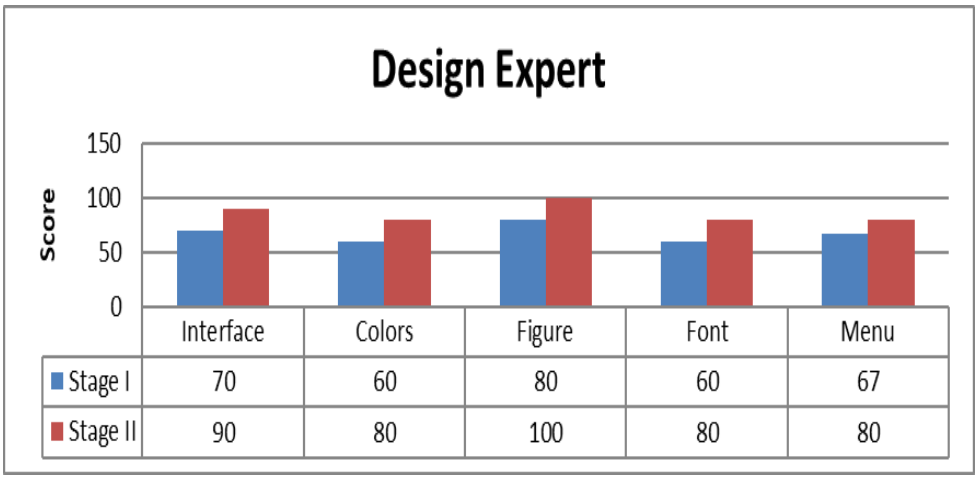

Figure 3. Diagram of validation results by design expert stage I and II

Based on the bar chart above, the results of stages 1 and 2 are obtained, the results above show the difference in results in stage 1 and stage 2. The results are as follows: 1) In the aspect of the menu in the first

stage, it got 67% and in the second stage it increased to 80%; 2) In the aspect of user interface, in stage I it get 70% and in stage II it increased to 90%; 3) In terms of letters, in stage I, it got a score of 60% and then in stage II, it got a score of 80%; 4) In the image aspect, the first stage got a score of 80% and the second stage got a 100% score; 5) In the coloring aspect, the first stage got a value of 60% and in the second stage it increases to 80%.

Validation results by expert practitioners

In validation by expert practitioners, 6 assessment criteria are used, namely menu, interface, content, ease of use, usefulness, and implementation. In product assessment, 17 statement items are used. The following are the results of expert assessments displayed using a diagram with 2 stages of assessment, the results are as follows:

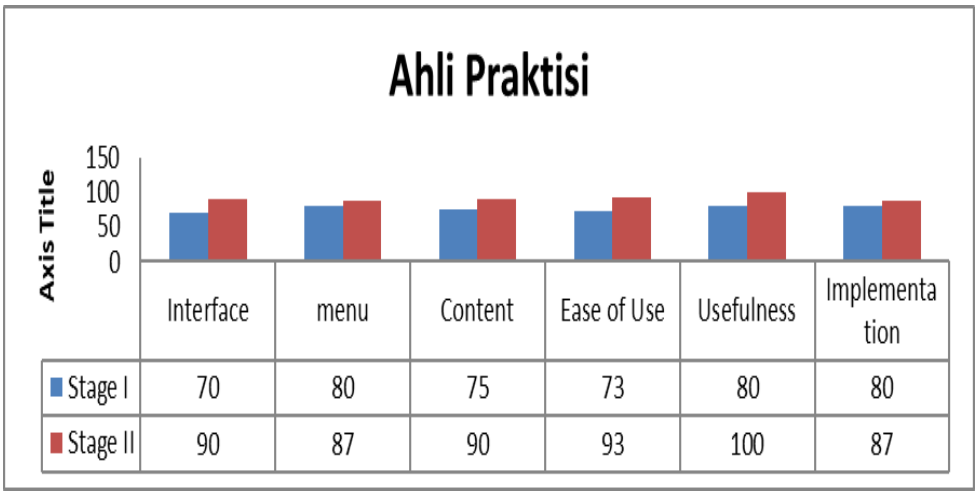

Figure 4. Diagram of validation results by practitioner expert stage I and II

Based on the bar chart above, the results of stages 1 and 2 are obtained, the results above show the difference in results in stage 1 and stage 2. The results are as follows: 1) In the aspect of the menu in the first stage it gets 80% and in the second stage it increases by 87%; 2) In the aspect of display, users in stage I got 70% and in stage II got 90%; 3) In the aspect of content, the first stage got 75% and then in the second stage it got 90%; 4) In the aspect of ease of use, in the first stage it received 73% and in the second stage it received 93%; 5) In the aspect of benefit, in the first stage got 80% and in the second stage got 100%; 6) In the aspect of implementation, the first stage received 80% and the second stage received 87%.

Analysis of usage trials by students

The trial was carried out on semester 2, 4, and 6 students. The trial was carried out to determine the feasibility and effectiveness of the product that had been developed and also to determine the effectiveness of the product to get suggestions and input for product improvement to perfection before being revised into a final product. The trial was carried out by distributing questionnaires to 40 respondents in the PIPS department. The questionnaire was distributed with the aim of knowing the effectiveness and feasibility of digital media.

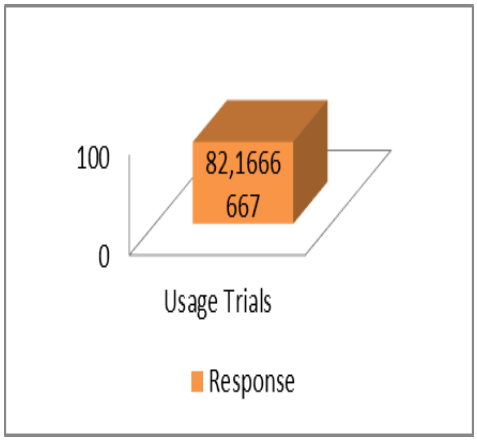

Figure 5. Diagram of product trial results by students

Based on the diagram above, the results of product trials are obtained with the acquisition of a feasibility and effectiveness test of 82.2% with a feasible category.

Conclusions

Based on data above, the scores of feasibilities and effectiveness were obtained by various experts and students. In the assessment of media experts, it got a score of 82.3% in the decent category. The design expert got a score of 86% in the decent category. In the practitioner category a score of 91.1 and 82.2 students are in the decent category.

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