Student Perspective on User Interface in Team Based Project Application Development

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Abstract. The development of learning applications is a form of innovation that needs to be done to improve the effectiveness and efficiency of learning, analysis in determining the initial form of the application is the first step in development research. This study aims to describe the initial design of the user interface of the application that will be used to implement a team based project in a 21st century lecture model. This research was carried out by analyzing the habits of Medan State University students in filling out logbooks in the application. The results obtained are that the application to be developed must be (1) easy to learn; students are easy to remember, remember and use the command button, (2) easy to be skilled; students make few mistakes in using the application, (3) and it is easy to use; when students use different devices the application still runs well.

Keywords: Team Based Project, 21st Century Lecture Model, User Interface.

1 Introduction

21st century skills are something that is very important to be mastered by students, in today's global developments new mixed skills are needed [1], where work that is only done routinely and involves simple thinking skills has been replaced by higher skills such as expert thinking skills with communication skills. Complex [2], and the basis of the need for 21st century skills to be integrated in lectures is that today's world is changing like an industrial world that provides opportunities for anyone with skills [3], then acceleration and increasingly heated global competition, as well as technological advances[4]. which makes most of the old jobs lost [5]. through research conducted by other researchers stated that through 21st century skills-based learning provides a high increase in creativity, motivation, involvement in the classroom up to 80% [6], in addition through the application of team-based projects to improvise skills 21st century turned out to be able to have a significant impact on improving student learning skills [7], by applying 21st century skills-based TEC to students helping them complete learning with high scores [8], in the process of Lectures by implementing a team base project will improve students' skills in collaborating, communicating, thinking critically, creatively [9], information literacy [10] and most of them will train students' life skills such as flexibility, leadership, initiative, productivity and student social skills. The importance of implementing learning that focuses on achieving 21st century skills through the implementation of team base projects will certainly be more effective and efficient if combined with the use of technology [11] such as applications that are able to support the implementation of learning with team based projects, so the development of these applications needs to be done, this research is a step towards the beginning of the development of a team based project application, where this research seeks to describe the ideal form of application used in learning with a team based project, this is done to find an initial design that will later be developed in further research.

2 Method

This study was carried out by analyzing student habits in filling out eKKN applications, in which there were assignments to groups of students in groups in overcoming problems experienced by the community, the data in this study were obtained from Medan state university students who took part in KKN in 2022, these students represented seven faculty at Medan State University.

3 Result

Based on the analysis it was found that students had problems using the eKKN application, using the application on different devices such as laptops and cellphones turned out to give a slightly different appearance, the eKKN application gave a better display on laptops and PCs because it allowed a wider display of applications compared to smartphones. , on the use of applications on smartphones that have smaller screen sizes, it turns out that the eKKN application must be scrolled sideways to display other buttons, so this makes it difficult for students to upload their project reports because they do not pay attention to the scroll sign, this is possible because students are more practical in using smartphones to do or organize their assignments, based on the results of the analysis it was found that 90.1% of students use laptops and smartphones to do project assignments, 3.5% of students only use laptops a in doing project assignments and 6.4% of students who only use smartphones in doing their project assignments, through further analysis it was found that most students did not find the "upload report" button when using smartphones, so students switched to using laptops in order to upload reports In their project assignment, it was found that 75.8% of students did not find the button completely when using a smartphone, and 24.2% of students were able to find the complete eKKN application button on their smartphone.

Subsequent analysis was carried out on students' habits in using the eKKN application, it was found that 19.8% of students did not read the information in the application thoroughly so that the student did not know that there was a maximum size limit of the project assignment report file, this caused students to be unable to upload reports. their project assignments, then 80.2% of students knew information related to the instructions for using the eKKN application, in another case, it was found that students had problems using the application such as the password used was declared wrong by the system, so students needed to reset the password through the IT team of the eKKN application, In this case, it was found that 24.6% of students experienced the problem of "wrong password" even though the password used was the correct password to login, while 75.4% of other students did not find the problem while using the application.

The use of the eKKN application has been supported by the use of the right buttons and symbols, so that students have no difficulty knowing the functions of the buttons. It was found that 99.3% of students know the functions of the buttons in the eKKN application well and 0.7% of students have errors in recognize the functions of the buttons on the eKKN application.

4 Conclusion

Based on the results found through the analysis, it was concluded that the team-based project application needs to be designed and developed by taking into account the element of convenience in learning to use the application, where the eKKN application has been able to answer this question so that the use of buttons in the eKKN application can be used as a reference in developing team applications. based project, it was concluded that the team-based project application needed to be developed properly to avoid cases of system errors that resulted in students resetting passwords, as well as to emphasize the display of important information so that students would not be mistaken in using the team-based project application later. team, based projects need to be developed by taking into account the use of devices by students so that there is no significant difference in appearance when using applications through different devices.

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