

# Student Assessment of Android-Based Applications for Individual Counseling Course Project Assignment Collection

Miswanto Miswanto<sup>1\*</sup>, Nuraini Nuraini<sup>2</sup>, Nur Arjani<sup>3</sup>

{miswanto@unimed.ac.id<sup>1</sup>, nurainisamsul@unimed.ac.id<sup>2</sup>, arjani1961@unimed.ac.id<sup>3</sup>}

Faculty of Education, Universitas Negeri Medan, Medan, Indonesia

**Abstract.** The Android-based application is to provide flexibility for students. This application is designed to make it easier for students to submit project assignments in this case recording in the form of individual counseling practice videos, which are then uploaded to each student's YouTube account and the YouTube link is sent to the application. This study aims to assess and analyze the quality of the menu and the usefulness of the application in learning. This research is descriptive statistics. Data collection using a questionnaire consisting of six online-based statements via google form with a rating applied 4 criteria, namely very inadequate, inadequate, sufficient and adequate. The subjects of this study were 47 students of the Guidance and Counseling study program at the Faculty of Education, State University of Medan. The results showed that 66% of the application was adequate from the aspect of usefulness; 57.4% of the application was adequate from the aspect of easy to use and understand, 53.2% of the application was adequate from the aspect of making it easier for students to collect project assignments, 53.2% of the application was adequate from the aspect of being interesting, and 51.1% of the application was adequate from the aspect of the functionality of each menu. On this basis, the application is useful for students in collecting project assignments through their respective androids, and is further developed.

**Keywords:** Android-based Application, Project Assignment, Counseling

## 1 Introduction

Higher Education is a special implementation link of the country's talent strategy. In recent years, the country has vigorously promoted education reform and the application of education technology [1][2]. In the era when education is becoming increasingly digitized, thus changing the learning pattern. The learning process fully utilizes information and communication technology (ICT) as the only new academic tool, to maintain ongoing educational activities [3]. Learning at Medan State University currently uses a project-based learning method. So every course must be project-based output. In this course is individual counseling with a student project to make a video of counseling practice. Project-based learning, or PBL, is a learning method that focuses students on complex problems needed to investigate and understand lessons through investigation. This method also aims to guide students in collaborative projects that integrate technology, which provides opportunities for students to explore content in various ways that are meaningful to themselves and conduct collaborative experiments [4].

The development of learning applications is also increasing. This development is continuously very important as a supporting component, to improve the quality of education. Ease of access to learning through the integration of technology in learning can increase learning opportunities for all students from various backgrounds. One of the applications developed is a student cloud classroom in selecting and organizing the material studied so that it can learn independently [5]. This research develops an android-based student project assignment collection in individual counseling courses.

The development of technology in this modern world is increasingly advanced. Tools that were once unknown to us are now one of the needs, especially in this case is android (small electronic devices that have special functions), for example: smartphones, netbooks. Most of these smartphones are android-based [6]. The use of smartphones (small computers that have the ability to call) is extraordinary, especially in Indonesia, its users have penetrated into the village including eliminating the age limit in it. Owners of this type of smartphone in Indonesia are from various circles, government employees, private employees, teenagers, even students in schools are not free from using smartphones. It seems that this device is not a luxury item as a tertiary need, due to the progress of the times it has turned into a secondary need even for some circles it may be a primary need.

Nowadays, teenagers ranging from students to college students almost all have personal smartphones and almost never escape from the grasp of every activity carried out, especially this smartphone. Affordable prices, facilities in this device and no minimum age limit restrictions make anyone able to have it, not to mention students, especially since this item is no longer a tertiary need but a secondary need due to the development of the times. Having a smartphone is a lifestyle of people in this modern era [7].

Many benefits are obtained in using this smartphone-based application, namely as a driver of learning activities to achieve maximum learning results and student learning motivation. Smartphones are also one of the latest technological devices that can be integrated into education as one of the supporters during the learning process [8][9]. This emphasizes that motivation plays an important role in determining the success or failure of student learning, because someone who is not motivated will not carry out learning activities [10]. The use of Smartphone as an interactive media in the learning process is another aspect that affects the achievement of student learning success competencies [11][12]. The majority of studies report that the learning process is better in an educational environment 53.3%, learning motivation 28.1%, student involvement in learning 15.6%, learning comfort increased 12.5%, and positive attitudes increased 12.5% [13]. In addition, android-based applications can be used for project assignment collection.

The problem in the field of teachers utilizing technology is still in the low category. This is based on the results of research [14] showing that teachers carry out learning with question and answer methods 76.7%, discussions 72.8%, lectures 56.4%, trials 17.3%, study tours 5.9%. The media used by teachers in the classroom is 93.1% using a blackboard, 61.9% using powerpoint, 26.7% learning videos, and 17.8% online applications. Furthermore, the teaching materials used by teachers in the classroom, 64.4% use printed modules, 39.6% textbooks, 3.55 infographics, and finally 34.2% electronic teaching materials. Through these data and problems, students cannot be optimally active in developing their abilities in the learning process. Meanwhile, teachers in learning must have the skills to process teaching materials in a pleasant atmosphere, one of which is through the use of smartphones as learning resources.

Based on these problems, an android-based application is needed to support student learning in improving basic communication skills of individual counseling. 21st century learning is closely related to technology-based learning, so it is hoped that android-based

applications will be able to support students in improving basic communication skills of individual counseling and facilitate lecturers in conducting assessments of the results of counseling practices. Android is currently also used to process learning activities. Android can be defined as facilitating and improving the learning process through smartphone devices anytime and anywhere, while the use of smartphone devices in education is considered along with its potential pedagogical benefits such as increasing student motivation, achievement, and communication [15][14]. Android-based applications are integrated into a website that can later be used by students to collect project assignments given by lecturers. Furthermore, lecturers assess student project assignments from the website. This android-based website is a combination of data or media used with the role of building, storing, delivering, and receiving information in the form of text, graphics, animation, audio, and video [16]. Android-based websites are very important to improve skills and update technology in today's learning, especially the collection of student project assignments. Several studies related to android-based applications have been conducted, for example, research conducted found that android-based applications have had a lot of impact on the world of education through the Android operating system, namely smartphones. Other research also states that learning designs that use android-based applications are often an effective learning approach to improve student abilities and make it easier for students to collect project assignments. Other research findings state that android-based applications are practical, easy, efficient, and effective for improving 21st century skills, one of which is the basic communication skills of individual counseling [17].

The expected results of this android-based application for collecting student project assignments are to make it easier for students to collect project assignments and lecturers can also collaborate in assessing student project assignments in the form of video recordings uploaded to their respective YouTube accounts, after which the YouTube link is uploaded to the application via each student's smartphone. Students upload tasks and lecturers assess not necessarily when on campus but anywhere with the condition that the place / location must be connected to the internet.

## **1.1 Research question**

- a. How does the developed android-based application menu look like?
- b. How do students evaluate the android-based application menu?
- c. How useful is the android-based application for collecting project assignments for students in the learning process?
- d. How do students suggest the application for improvement?

## **2 Research Method**

### **2.1 Participants**

This study used a descriptive quantitative research design. Data was collected between October 6 and 17, 2024 using an online Likert scale. A total of 47 respondents were collected to represent the population of guidance and counseling study program students while taking individual counseling courses. By using purposive sampling technique, a total of 47 people who have used android-based applications for collecting project assignments. Before distributing the scale to participants, researchers created a WhatSAPP Group to facilitate distribution.

## **2.2 Prosedur**

The use of technology is currently developing rapidly, for the sake of time and financial efficiency. The researchers chose to collect data through the Google online survey platform. Access to the webpage was shared through various social media platforms such as WhatsApp to the participating guidance and counseling students. Through the link, students could view the statements by simply clicking on them and then answer the statements. The scale can be completed within 10 to 13 minutes by the students.

## **2.3 Study Instrument**

This research uses a self-designed questionnaire based on the needs that will be assessed from the developed application. In addition, the questionnaire also adapts various literature studies. The questionnaire is in the form of a Likert scale with 4 (four) alternative choices, namely (1) very inadequate, (2) inadequate, (3) sufficient, and (4) adequate. The number of Likert scale statements is 6 items and 3 open questions to explore suggestions from respondents.

## **2.4 Data Analysis**

Descriptive statistics in the form of frequency counts, percentages, means, and standard deviations were calculated to obtain ratings from respondents. Data analysis was performed with SPSS version 20 (IBM Corp, 2011).

# **3 Results and Discussion**

## **3.1 Result**

In the results of this study I explain based on the questions that have been compiled in the introduction. There are 4 questions, namely how the android-based application menu looks like that has been developed (RQ1), how students assess the android-based application menu (RQ2), how useful the android-based application is for collecting project assignments for students in the learning process (RQ3), how student suggestions for applications for improvement (RQ4). The following are the results of research based on research questions.

### ***3.1.1 How does the Android-Based Application Menu Look Like that has been Developed (RQ1)***

The menu display of the android-based application for collecting student project assignments developed based on the needs and convenience of students in uploading assignments in the application. Here's a look at the android-based application menu.



Fig. 1. Dashboard View

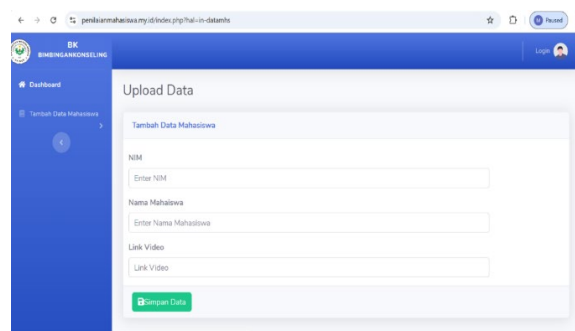


Fig. 2. Upload View of Student Project Assignment

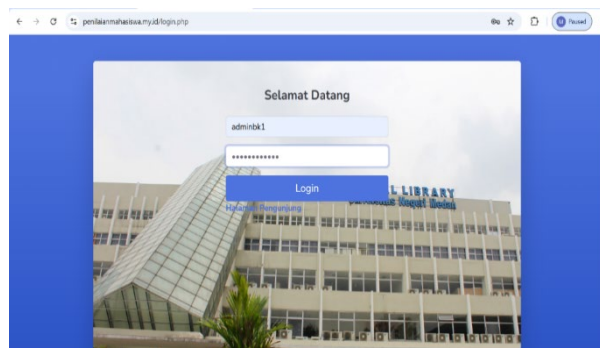


Fig. 3. Login View for Appraisers

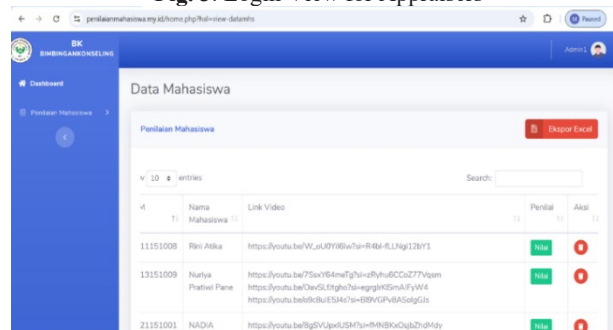


Fig. 4. Application View of the Counseling Assessment Process

Based on the appearance and usability of each menu from the student assessment, it is attractive and can be used easily. Therefore, students are very happy to use the application to collect their project assignments in individual counseling courses. Students can also find out the results and input from lecturers on practices that have been carried out through video recordings.

### 3.1.2 How do Students Evaluate the Android-Based Application Menu (RQ2)

In this section, the results of student assessment of the application menu for collecting project assignments for individual counseling courses will be described. The assessment results are described in table 1 below.

**Table 1.** Student Assessment of the Android-Based Application Menu

S/N	Items	Responses	
		Frequency	Percent (%)
1	The appearance of the Android-based application for collecting project assignments in individual counseling courses looks attractive.		
		Adequate	22
		Adequate	46.8
		Inadequate	25
		Inadequate	53.2
2	Android-based application for collecting project assignments in individual counseling courses is easy to use		
		Adequate	0
		Adequate	0
		Inadequate	0
		Inadequate	0
3	Android-based application for collecting project assignments in individual counseling courses is easy to learn		
		Adequate	24
		Adequate	51.1
		Inadequate	23
		Inadequate	48.9
4	The available Android-based application dashboard is functioning properly		
		Adequate	0
		Adequate	0
		Inadequate	0
		Inadequate	0

In connection with the students' assessment of the android application menu for collecting project assignments in individual counseling courses, revealed in table 1 shows that 53.2 students rated quite interesting from the appearance of the android-based application for collecting project assignments in individual counseling courses; 51.1 students rated adequate from the android-based application for collecting project assignments in individual counseling courses easy to use; 57.4 students rated adequate from the android-based application for

collecting project assignments in individual counseling courses easy to learn; 51.1 students rated adequate from the available android-based application dashboard that was functioning properly.

### ***3.1.3 How useful is the Android-Based Application for Collecting Project Assignments for Students in the Learning Process (RQ3)***

Knowing the student's assessment of the usefulness of android-based applications for collecting project assignments in learning is very important, this can be a consideration for researchers to develop the application further. The results of student assessment are described in table 2 below.

**Table 2.** The usefulness of Android-Based Applications for Collecting Project Assignments for Students in the Learning Process

S/N	Items	Responses	
		Frequency	Percent (%)
1	Android-based application for collecting project assignments in individual counseling courses is useful		
	Adequate		
	Adequate	31	66.0
	Inadequate	16	34.0
	Very Inadequate	0	0
2	Android-based applications make it easier for students to collect individual counseling course project assignments		
	Adequate		
	Adequate	25	53.2
	Inadequate	20	42.6
	Very Inadequate	2	4.3
		0	0

In relation to students' assessment of the usefulness of android-based applications for collecting project assignments in learning, revealed in table 1 shows that 66.0 students rated adequately from android-based applications for collecting project assignments in individual counseling courses as useful; 53.2 students rated adequately from android-based applications making it easier for students to collect project assignments for individual counseling courses.

### ***3.1.4 How do students suggest the application for improvement (RQ4)***

In this section, there are three questions asked to respondents to explore what menus need to be added, other problems encountered when using the application, and suggestions for improving the application. The summary of the respondents is outlined in table 3 below.

**Table 3.** Student Suggestions on the Application for Improvemen

S/N	Student Response
<b>What Menus to Add</b>	
1	Please add information or a feature to check whether the collected assignment has actually been sent.
2	I think that a notification can be given that the project assignment has been input according to the number of times the project assignment has been entered so that students are not confused about whether the project assignment has been input or not.
3	So far it has been very easy to input project tasks
4	What needs to be added is an automatic time reminder regarding the deadline for submitting the uploaded assignment and the status of the work (for example: in progress, pending, completed).
5	Add comment menu
6	The maximum file size can probably be increased again
7	Add a menu to upload a letter of willingness for the counselee to be recorded during the counseling process.
<b>Other issues encountered when using the app</b>	
1	Unstable network issues
2	Link crashed once, but has been fixed
<b>Application Improvement Suggestions</b>	
1	Using brighter colors
2	Conduct regular website maintenance
3	Provide clear guidelines on how to upload assignments
4	Add an edit feature and a success display for saving links

Based on the student responses above, as a basis for improving the application for optimal development results. Suggestions from students have been corrected.

### 3.2 Discussion

Based on the results of the research above, the usefulness and ease of collecting project assignments for individual counseling courses in the adequate category, as well as the appearance and functionality of the menu of the Android-Based Application for collecting project assignments for individual counseling courses in the sufficient category. In terms of appearance and functionality of the android-based application menu, maintenance needs to be improved so that it does not error. Student suggestions will be used as input for further application development.

Further application development focuses on the use of colors that must be considered, the preparation of guidelines for using the application, and menus suggested by students such as a comment menu, a menu for uploading a letter of willingness of the counselee to be recorded during the counseling process, and a notification that the project task has been input according to the number of times the project task is entered so that students are not confused whether the project task has been input or not. The application must also develop an edit feature and a successful display of saving links.

Android-based applications can make it easier for students and lecturers to collect and assess student assignments [18][19]. Students do not need to come to campus when collecting their project assignments, students can be anywhere in collecting assignments as long as their android is connected to the internet. Lecturers can also collaborate with their teaching team so



that the assessment of student project assignments can be assessed optimally. Android-based applications also provide users with the ability to schedule tasks and scheduled activities with a predetermined date and time limit [20]. Scheduling tasks for students needs to be done, especially students at Medan State University who refer to six tasks for each subject including Routine Tasks (TR), Critical Book Report (CBR), Critical Journal Review, Engineering Ideas (RI), and Project, from the many tasks assigned by students, students must make scheduled activities so that which tasks need to be prioritized to be done. Whatever you do, making a to-do list is the best way to stay focused and productive [21]. If students make a priority list of tasks they want to do, it can support academic success on campus.

Student task management is helped by the existence of android-based information system technology [22]. Furthermore, android also supports learning media in education [23].

## 4 Conclusion

In this era of digitalization, the use of technology in supporting lectures is very necessary. Android-based applications in assessing student project assignments in individual counseling courses that are built are very helpful for students and for lecturers in lectures so that they are more optimal in data processing via android which can facilitate lecturers and students in assessing and collecting assignments. The results of the evaluation of the android-based application that has been built are carried out with users, where the results are adequate to user expectations. The application built consists of two sides, first an android-based application that will be used by the lecturer concerned in assessing student project assignments. Second, an android-based application that will facilitate students who will submit project assignments in the form of links to video recordings of individual counseling practices. Further development is needed and hopes for the improvement of the android-based application system in assessing student project assignments in individual counseling courses.

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