



**STUDENTS' PERCEPTION ON THE USE OF ANDROID
BASED EXAM BROWSER AS THE MEDIUM TO ASSESS
FINAL EXAMINATION IN SMK NEGERI 3 MAGELANG**

a final project
submitted in partial fulfilment of the requirement
for the degree of *Sarjana Pendidikan*
in English

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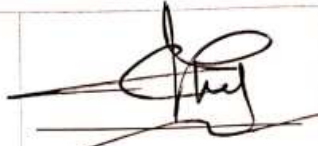
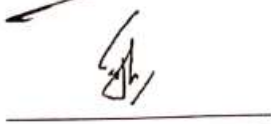
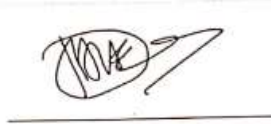


**ENGLISH DEPARTMENT
FACULTY OF LANGUAGES AND ARTS
UNIVERSITAS NEGERI SEMARANG**

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APPROVAL

This final project entitled *Students' Perception on the use of Android-based Exam Browser as the Medium to assess Final Examination in SMK Negeri 3 Magelang* has been approved by board of examiners and officially verified by the Dean of the Faculty of Language and Arts of Universitas Negeri Semarang on February 2020.

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The researcher stated that this final project is the result of my own work that has gone through the process of guidance, discussion, research and examination. The writing of this thesis has also been adapted to the norms of writing which are prevalent in writing scientific papers, both direct and indirect quotations that obtained from electronic media, literature sources, or other sources. If it is proven that my statement is not true, it is entirely my responsibility.

Semarang, 31th August 2020

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MOTTO

“Jangan beri kesempatan pada diri sendiri untuk menunda-nunda sesuatu yang harus dilakukan. Pastikan untuk segera bertindak seperti yang telah anda putuskan. Action is power!” – Andrie Wongso

“If you are working on something that you really care about, you don't have to be pushed. the vision pulls you.” – Steve Jobs

“Fake it until you make it! Act as if you had all the confidence you require until it becomes your reality.” – Brian Tracy

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ABSTRACT

Fegasanti, Prahda, Alifa. 2020. “*Students’ Perception on the use of Android-based Exam Browser as the Medium to assess Final Examination in SMK Negeri 3 Magelang*”. Final Project. English Department. S1 Degree of English Education. Supervisor: Arif Suryo Priyatmojo, S.Pd., M.Pd.

Key Words: *Students’ Perception, Android-based Exam, Exam Browser, Final Examination.*

This final project was a study about the students’ perception toward the use of Android-based *Exam Browser* as the medium for assess final examination in SMK Negeri 3 Magelang. The objective of this study was to find out the students’ perception whether it was positive or negative toward the use of Android-based *Exam Browser* as the medium to assess final examination in SMK Negeri 3 Magelang. This study was employed qualitative survey design in which the data of the students’ perception on the use of Android based Exam Browser as the medium to assess final examination were obtained by questionnaire, interview, and also observation. Thirty-three students of SMK Negeri 3 Magelang were the participants of this study. The findings are presented into five parts; they are the students' intention about the use of Android based Exam Browser as the medium to assess final examination, students' perception (perceived usefulness) about the use of Android based Exam Browser as the medium to assess final examination, students' perception (perceived ease of use) about the use of Android based Exam Browser as the medium to assess final examination, students' anxiety about the use of Android based Exam Browser as the medium to assess final examination, and students' Android attitude about the use of Android based Exam Browser as the medium to assess final examination. Based on the result of the study, most of the students give a positive perception about Android based Exam Browser. The students believed that Android based Exam Browser was a useful, clear, and understandable platform for conducting online examination and it gave some positive impacts such as improving students’ speed in answering the questions, improving students’ performance in the test, and helping them to answer the exam easily. This is also evidenced by the results of the questionnaire which shows that 75,8% students give positive perception toward the use of Android-based *Exam Browser* as the medium for assess final examination in SMK Negeri 3 Magelang.

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CHAPTER I

INTRODUCTION

This chapter presents the background of the study, the reasons for determining the topic, the research questions, the objective of the study, the significance of the study, the limitation of the study, and the definition of key terms.

1.1 Background of the Study

The development of information and communication technology from the future increasingly facilitates human needs. Along with the development of the age of technology increasingly role and benefit almost in all fields, including education. To improve the quality of education several factors must be considered, the use of information and communication technology is one of the factors that affect the quality of education. In the world of education, examinations have become one of the effective ways to measure the level of student learning achievement in schools, such as the Daily Exams, Midterm Exams and End Semester Exams.

According to Handri (2011) in the process of conducting the exam there are two factors that must be considered, including valid and invalid factors assessment. The invalidation factor for an assessment can be triggered through cheating by the participant. Cheating is one of the behaviors of students that occur during either the examination or the exam. The situation occurs when they are not ready for the examination or when they believe the subject is difficult or want to pass the test with a good score (Mustaine & Tewksbury, 2005).

In the 2014/2015 academic year there was a new policy that emerged related to the implementation of the national exam, namely the national exam can be carried out in 2 (two) ways. First, national exams are carried out by a written mechanism or Paper Based Test (PBT). Second, national exams can be carried out with a computer-based mechanism or what is known as the Computer Based Test (CBT).

Paper-Based Test (PBT) has many shortcomings in the preparation of test material, multiplication and distribution of question scripts, cheating during the test, it requires steps to scan the FSI and scoring, requires a lot of cost, energy, time. With the development of technology at this time, one way to deal with the problem of the invalidity of the assessment is that the implementation of the national examination no longer uses the paper-based test system but uses the computer-based national examination system or Computer Based Test (CBT).

Computer Based Test (CBT) is expected to be able to answer the shortcomings of conventional exams conducted using paper and pencil or Paper-Based Test (PBT). With CBT, the examination process is carried out through a computer, starting from the making of questions, setting the participant user, the examination process, to the results of the exam making it easier for school agencies to run the teaching and learning process evaluation curriculum.

Computer Based Test (CBT) is a test implementation system using computer media, android, and iOS. Applications that can be used to carry out this test are HTML applications that can be used for applications on the OS, for example Android, iOS and all computer operating systems, which is very

important to use this application we need a web browser, for example Google Chrome, etc.

The use of technology has long been used in learning evaluation programs to help improve the quality of learning outcomes. Using technology in the learning evaluation process, particularly in computer technology, makes it easy for educators to quickly get the results of digital and updated learning evaluation.

1.2 Reasons for Choosing the Topic

The final semester exam is part of the evaluation aims to measure and assess student competencies, so students can continue learning to a higher level or there needs to be testing. The final semester exam is a method of student assessment to assess the competency attainment at the end of an educational unit. The purpose of conducting the final semester exam is as a form of evaluation or test that measures the achievement of students' learning competency outcomes taught by the teacher for a single semester. Moreover, the final semester examinations can also be used to monitor the progress of student learning in the learning process, as well as provide feedback and enhance learning programmed.

It used to be very time-consuming to conduct a final semester examination in Vocational High Schools (SMK), particularly those relating to competent / practical skills assessment tests. For example, testing 3 to 5 subjects for each skill level and it takes about 1 week, followed by an examination of 8 to 11 subjects to measure knowledge in general subjects, which also takes about 1 week. In total, the final semester examination for vocational schools takes an average of 2 weeks. Such length of time for the final semester examination of vocational schools must

be costly. Paper based examinations in this way contain some weaknesses, including (1) provisioning of examination materials (paper, copy of the questions script, fee for the question script, etc); (2) Provisioning of honorarium for the exam supervisor team and organizer of the exam; (3) Provisioning of consumption for the supervisor team and organizer of the exam; (4) Provisioning of papers and other stationery; and (5) Checking of examination results which takes a long time.

The final semester exam, typically carried out conventionally using a paper-based assessment, has slowly started to be replaced by Computer Based Test (CBT). Utilization of computer technology is the right solution, so it is designed and made a computer-based examination system. The success of the process of utilizing this system cannot be separated from several things. The first thing, a big desire from all elements of the school so that the process can take place efficiently, effectively, safely, accurately and quickly. Second, the presence of supporters and human resources who are ready to use the system that is supported continuously.

Computer Based Test (CBT) is a test that is held using a computer as the main media in conducting exam activities. CBT is a new innovation in the era of digital technology, where CBT presents an online evaluation system or test managed by a server (Wati, Kasmawi & Mawarni, 2018).

SMK Negeri 3 Magelang had already conducting examination using Computer Based Test (CBT) at the end of the semester exam. Through observation and interview with the Headmaster, Examiners, Technicians and some students of SMK Negeri 3 Magelang, we obtained some information that the

examination using Computer Based Test (CBT) was good, the level of cheating can be suppressed, the funding is relatively effective and the results of the exam was good.

In addition, there are still gaps in the problems found, namely limited devices or testing facilities such as (Servers, Personal Computers and Laptops). Students are very burdened by the use of computers for CBT-based exams because they have to be divided into several groups to conduct examinations due to the lack of adequate facilities for conducting CBT-based exams.

Besides that, the use of Android is growing very fast, so that this can be used as a supporting tool for conducting computer-based test (CBT). In Indonesia, the number of Android users was expected to reach 81.87 million by 2020. At present, after China, India and the United States, Indonesia is the fourth-largest smartphone market in the world.

According to Meier (2008):

“Android is the world's most popular operating system (OS) for mobile devices and tablets. It is an open source OS, created by Google, and available to all kinds of developers with various expertise levels. Android is the first free, open source, and fully customizable mobile platform, a software stack for mobile devices including an OS, middleware and key mobile applications. The Android SDK provides the tools and APIs necessary to develop applications on the Android platform.”

A mobile-based assessment or generally abbreviated as a Mobile-based exam are generally conducted through the phone or tablet with mobile application for Android/iOS. Based on a survey conducted by SMK Negeri 3 Magelang, only 28 students did not have Android out of a total of 1141 students. Therefore, the

school principal dared to implement an Android based Exam Browser system because most students owned and used android every day so that there would be no obstacles. Since schools no longer have to spend money on printouts and paper, the Android based Exam Browser system is considered very beneficial with a realistic process, saving costs and time.

1.3 Research Question

We identified the study problem in the context of this study which becomes the discussion 's concern by presenting this problem: What are the students' perception on the use of Android based Exam Browser as the medium to assess final examination in SMK Negeri 3 Magelang?

1.4 Research Objective

The objectives of this research are to find out students' perception on the use of Android based Exam Browser as the medium to assess final examination in SMK Negeri 3 Magelang.

1.5 Significance of the research

The expected benefits of the application research program for the use of Android based Exam browser are:

a. Theoretical Significance

Android based Exam Browser is a secured web browser application for conducting online examination. Exam Browser prevents opening of any page, switching to unnecessary programs, operating system-specific key combinations and functions, leaving the browser secure at any time and

opening gallery. Therefore, the use of the browser-based android exam is expected to minimize the opportunities for students to cheat.

b. Pedagogical Significance

The development of Android-based Exam Browser is expected to facilitate the examination process and improve student learning evaluation results at the Vocational High School Final Examination. Android-based Exam Browser, also can be as a choice of evaluation models that can be applied in Vocational High School in the form of an Android-based Exam application.

1.6 Limitation of the Study

As it was impossible to study all areas relating to the research subject, it was necessary to have study limitation. The limitation of this study was the students' feeling. The perception in this study means the students' feeling about their experience in the use of Android-based Exam Browser as the medium to assess final examination. This study also limited to observe thirty-three students of *SMK Negeri 3 Magelang* which was selected purposively, that is the class leader as the representative of each class who has taken the online exam using the Android-based Exam Browser.

CHAPTER II

REVIEW OF RELATED STUDIES

This chapter consists of review of previous studies which have similar topic or related topic with this study, review related theories, and theoretical framework.

2.1.1 Review of Previous Studies

There are some studies which were carried out by some researcher. The first research is conducted by Chikmah (2016) entitled “Students’ Perception on Proprofs Online Computer-Based Assessment Software as An Assessment Tool at English Education Departement, UIN Sunan Ampel Surabaya”. The objective of the study was to determine the perception of the students and the result score for the use of online ProProfs CBA (Computer Based Assessment) software as an evaluation tool. In this study, it used questionnaire and interview as the instruments. The population of this study was Classroom Management Course that consists of 73 students. The result of this research is that the positive component was 93 %, and the negative component was 7 %. It means the perception of the students about Proprofs online machine as an evaluation tool was good. Furthermore, the conclusion of this study may also give appraisal to the lecturer who uses ProProfs.

This study correlates with our research because of the same discussion regarding students' perceptions about the use of technology as a medium to assess assessment. The differences in this research are the subject,

method, object and measured population sample. This previous study focused on the perception of students towards Proprofs Online Computer-based Assessment Program as an assessment tool, while our research focused on students' perception of using Android-based Exam Browser as the medium for assessing the final exam. For the previous research the approach was quantitatively descriptive while our analysis used qualitative descriptive approach. The population of this previous study was Classroom Management Course that consists of 73 students, while our study is consists of 33 students. The subject of the previous study was the students of English Education Department, UIN Sunan Ampel Surabaya, while our research focus is the students of SMK Negeri 3 Magelang.

The second research was by Ozden, Erturk, and Sanli (2004) about "Students' Perceptions of Online Assessment: A Case Study". The research had the goal to examine the students' perceptions of the use of CAA (Computer Assisted Assessment) and to investigate the ability for the use of student feedback in assessment validation. This study used a descriptive quantitative using a paper-based survey and data-gathering interview. The population of this study were students in 3rd year registered in the course. The findings of this study reported the effectiveness of the online assessment system that the most popular features of the online assessment system were instant feedback, randomized question order, question item analysis and scoring immediately after the test.

This study correlates with our research because of the same discussion regarding students' perceptions about the use of technology, especially computer as

a medium to access assessment. The differences in this research are the subject, method, object and measured population sample. This previous research focused on students' perceptions of online Assessment, while our research focuses on students' perception on the use of Android based Exam Browser as the medium to assess final examination. The method in the previous research was quantitative descriptive while our study used qualitative descriptive method. The population of this previous study is 46 students, while our study consists of 33 students. The subject of the previous study were third year students in the Computer Education Department at Kocaeli University, registered in the course Masaüstü Yayıncılık (Desktop Publishing), while the subject of our study were the students of SMK Negeri 3 Magelang majoring in Hotel Accommodation, Catering, Beauty, Fashion and Multimedia.

The third research was by Öz (2014) about Pre-service English teachers' perceptions of web-based assessment in a pedagogical content knowledge course. This research examined pre-service English teachers' perceptions of web-based assessment within the methods and approaches they took in an English teacher training program at a large state university in Ankara. This study used a qualitative design using interviews for the data collection. The population of this study consisted of 50 pre-service English teachers enrolled in the Undergraduate English Language Teaching Department (ELT) Approaches and Methods course at a major state university in Ankara. The findings of this study showed that although the students did not seem to fully appreciate the use of web-based assessment and showed lack of interest to use this form of assessment in their future classes, they

showed a positive computer attitude and positive perception towards ease of use of web-based testing for their course.

This study correlates with our research because of the same discussion regarding students' perceptions about the use of technology as a medium to access assessment. The previous research examined the views of the pre-service English teachers' web-based assessment using the tools and techniques they learned in an English teacher training course. While, our study focusses on students' perception on the use of Android based Exam Browser, however this current research focus on the teachers' perceptions of web-based assessment in a pedagogical content knowledge course.

The Fourth research was by Nugroho, Kusumawati and Ambarwati (2018) about students' perception on the use of Computer Based Test. This research filled the void in the literature by offering the experience of the students on the two evaluation methods (CBT and PPT). This study used a quantitative design using online-survey with close-ended questionnaire. The population of this study consisted of 30 members of students in a higher degree vocational education that is pursuing diploma certificate in administration science. The result of this study Indicates a significant difference in use of CBT between two groups of students.

This study correlates with our research because of the same discussion regarding students' perceptions about the use of technology as a medium to access assessment. The differences among this study are the subject, approach, object and population sample which is measured. This previous study focused on students' perception on the use of Computer Based Test, while our research focuses on

students' perception on the use of Android based Exam Browser as the medium to assess final examination. The approach in the previous research has been quantitative, while our study is using qualitative descriptive approach. The population of this previous study consisted of 30 members of students, while our study is consisting of 33 students. The subject of the previous study was the Higher-level vocational education students pursuing a diploma in administration sciences, while the subject of our study is the students of SMK Negeri 3 Magelang.

The last research was by Jamil (2012) about perceptions of university students regarding computer assisted assessment. This research examined the attitudes of students about the contemporary use of CAA (Computer Assisted Assessment) or online exams in Punjab, Pakistan's public sector universities. This study used a qualitative design using close-ended and open-ended questionnaire. The population of this study consisted of 1877 students from all teaching departments of different disciplines. The researcher uses questionnaire to answer that question. The result of this study was clear that the overall attitude of the students towards CAA was positive, and the students were very interested in CAA.

This study correlates with our research because of the same discussion regarding students' perceptions about the use of technology as a medium to access assessment. The differences among this study are the subject, object and population sample which is measured. The previous study examined the perceptions of the students about the contemporary use of CAA or online examinations. Though my research focuses on the students' perception on the use of Android based Exam

Browser as the medium to assess final examination. This previous study was focus on students' perception on the use of Computer Based Test, while our research focuses on students' perception on the use of Android based Exam Browser as the medium to assess final examination. The population of this previous study consisted of 1877 members of students, while our study is consisting of 33 students. Students from all teaching departments of different disciplines from universities in Pakistan were the subject of the previous study, while the subject of our study is the students of SMK Negeri 3 Magelang.

Unlike those five previous studies, there are differences between those previous researches and this research. In this research, we explained and described about the students' perception of their satisfaction toward the use of Android based Exam Browser as the medium to assess final examination. The online examination by using Android-based Exam Browser will build the positive and negative perception from the students of SMK Negeri 3 Magelang. That is why, we want to know about the students' perception of their satisfaction toward the implementation of Android-based Exam Browser the medium to assess final examination at SMK Negeri 3 Magelang. And all those previous study above was not discussed about the students' perception of their satisfaction toward the implementation of Android-based Exam Browser. So, this study is unique and different from others. This study should be done as a new information and new study to be conducted.

2.2 Theoretical Review

1. Perception
 - a. Definition

Perception is derived from Latin, meaning the organization, identification and interpretation of sensory information in order to recognize and comprehend the information presented or the environment (Schacter, Daniel 2011). Human beings are formed differently, and each person has different perceptions. The presence of discrepancies between individuals, such as one object and another who doesn't like the object, really depends on how the individual's interpretation of the object responds.

Koentjaningrat (1982) explained that perception is a re-alignment of the human brain process and appears to be a phenomenon view Many factors, such as feelings, needs, motivation, educational background, experiences, etc., are involved in this process. Then the process is followed by a process which a person's brain arrives at meaningful perception of stimuli.

Perception is correlated with a shift in the sense-organ, and this is cause by the object of perception (Knuuttila & Kärkkäinen, 2008). We offer an argument about this perception theory that shifts in the sense-organ, and this is induced by the object of experience , meaning that everyone has a feeling of similarity or disdain for the object they expect.

According to May (2009), perception is the awareness of consciousness of what we sense. In reality, the majority of attitudes, habits, and adjustments are dictated by their perceptions. This process is related to the acceptance of messages or information by the human brain. From this point, the interaction of humans with his environment occurs because of the

five senses human uses, which are touch, sight, hearing, smell, and taste. The stimulus that five senses get will be registered by the human brain and send to the nervous system. From here, the process of getting perception needs the role of sensory devices with their senses to interpret the information from the stimuli they get in human surroundings.

b. Factors that affect Perception

According to David Krech and Richard S. Crutch (1974), perceptions are influenced by functional and structural factors. Functional aspects come from personal needs, past experiences and other issues such as learning processes, horizons and knowledge, cultural background, education, all of which are colored by their personality values. Functional factors are commonly referred to as frame of reference. This reference frame influences how people give meaning to the message they receive or perceive it.

Meanwhile structural factors are factors which come from outside the individual, in this case are stimulus and the environment. In order for the stimulus to be realized by the individual, the stimulus must be strong enough because at one time the individual receives various stimuli. In other words, the stimulus is considered because it has prominent properties, including movement, intensity of stimuli, new things, and repetition.

According to Robbins and Judge (2003) perception is formed by three factors, namely: (1) the perceiver, the person giving the perception, (2) the object or the target, the person or object that is the target of perception,

and (3) the situation, the state at the time of perception done. The transmitter factor contains components of attitudes, experience, motives, interests, and expectations. The target factor contains the components of novelty, motion, sound, scale, context, proximity and similarity. While the situation factor contains time components, work settings, and social settings.

When individuals see the target and try to interpret what is seen, the interpretation is strongly influenced by individual personal characteristics such as attitudes, personalities, motives, interests, past experiences, and expectations. Vice versa, the characteristics of the target being observed also affect what is felt by the individual. Besides the context or situation is also important and decisive in determining perception. From the description above it can be concluded that there are three factors that influence perception, namely functional factors, structural factors, and situational factors.

c. Types of Perceptions

In addition, David O'Sears, as quoted in Sarwono (2002), clarified that perception could be a way of feeling happy or unhappy. This can be classified as positive perceptions and negative perceptions. Positive perception plays a role in our senses that we continue to like or support a specific object. On the other hand, negative perception is a perception where a person tends to dislike or not support something. In addition, Robbins (2002) described positive perception is an individual opinion about an

object or information with an outlook, or the information is the same as that predicted by a person.

Meanwhile, negative perception is an individual perception that has a negative perspective on an object or specific knowledge that is different from the individual's expectations. The dissatisfaction of a human with an object is the source of negative perception. Otherwise, a positive perception is triggered by a person's happiness with something. The factors that affect both attitudes are the degree of knowledge, and the student's experience of being introduced to the object. When students know the object well and have adequate knowledge of the object, they should have a positive view of the object. In addition, according to Harnad, as cited in Nursanti (2016), one dimension of perception is a cognitive aspect that can be explored through emotion, experience, and intelligence.

After defining the term of perception, it can be concluded that perception is a process of human thinking about certain phenomenon after they get the sensation from the environment through the sense of organ. In this case, this study would like to know the students' perception on the use of Android based Exam Browser as the medium to assess final examination in SMK Negeri 3 Magelang.

2. Android-based Exam Browser

a. Definition

Exam Browser is a Knowledge Management Program for Quizzes, Tests, Practice, Flashcards and Information Bases. Exam Browser is an

application that is packaged in All in One Moodle CBT or AIOCBT mode which is a program to run computer-based exams but can also be accessed using Android/iOS.

Exam Browser is an online exam assistive browser to access the web of online examinations. By using the Exam browser, the display is in locked mode so students are unable to open or exit the browser because a password can be installed to exit the browser.

b. Advantages

The benefit of students using mobile devices when conducting examinations is that they are more flexible because they do not need cable networks (Sarrayrih and Ilyas, 2013). Compared to traditional written exams, a mobile phone exam can save both human and material resources and save time and energy.

Exam Browser prevents any website from being opened, changing to undesired programs, operating system-specific key combinations and features, leaving the browser safe and gallery opening at any time. This is because the test browser is activated in kiosk mode. Kiosk mode is usually intended to refer to certain modes offered by most browsers to run full screen applications without browser user interfaces such as toolbars and menus. The aim is to prevent users from running features other than browser-based content in a full screen browser window (Kuscher et al., 2016). Kiosk mode makes the device useless for different features apart from the work being done. In the case of online exams, the browser must be

in kiosk mode so the examinees can only run the browser during the test session. The browser can lock the device and so cannot communicate via the internet, or access to the file system (Lüthi, et al., 2019).

Android Kiosk is basically a gadget or smartphone that is intended to run a single application and to serve certain cases. Some basic requirements to be in kiosk mode include the need to be in a single mode serving specific use cases, hiding navigation, removing the toolbar, controlling or blocking all ways of setting it to the smartphone, turning off calls or messages according to the use case and the application must continue to run in mode full screen (James, 2018).

Lockdown application is a computer program used during an online exam that attempts to prevent users from accessing software other than the exam application. The application will lock the online exam environment in a classroom or through an actor; prevent access to applications and other websites during the exam; prevent test takers from copying or printing exam content; as well as displaying the contents of the exam in full screen and cannot be minimized (William, 2012).

c. Key Features of Android-based Exam Browser

The first appearance of the safe exam browser application is the input form server test URL. The URL can be an IP address or server domain name. If the server or domain URL entered is valid, the main index file will be accessed from the test server. Usually it will contain a login page.

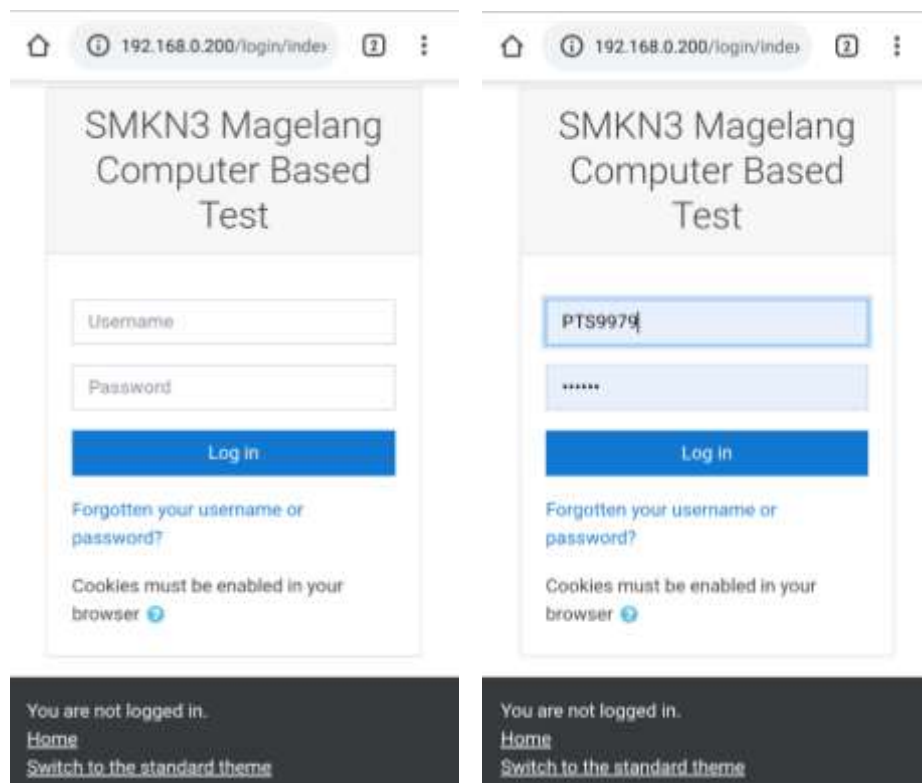


Figure 2.1. Login Page

Figure 2.1 displays the administrator's login page and examines it so that it can continue to the next menu. The username box should be filled in with the name of the administrator or the Student Identification Number (NIS) of the examiners in order to show all the activities available in the Exam Browser, and the password should be filled in with 6 combined characters, consisting of letters, numbers and symbols, to ensure that illegal logging by unauthorized parties is protected.

Next will go to the test page of Exam Browser. It was accessing the questions page provided by the server. On that page, all button accesses are controlled by the system. Screen shoot button, home button, back button are all not activated. All notifications from messages, phone calls, and access to local files are disabled.

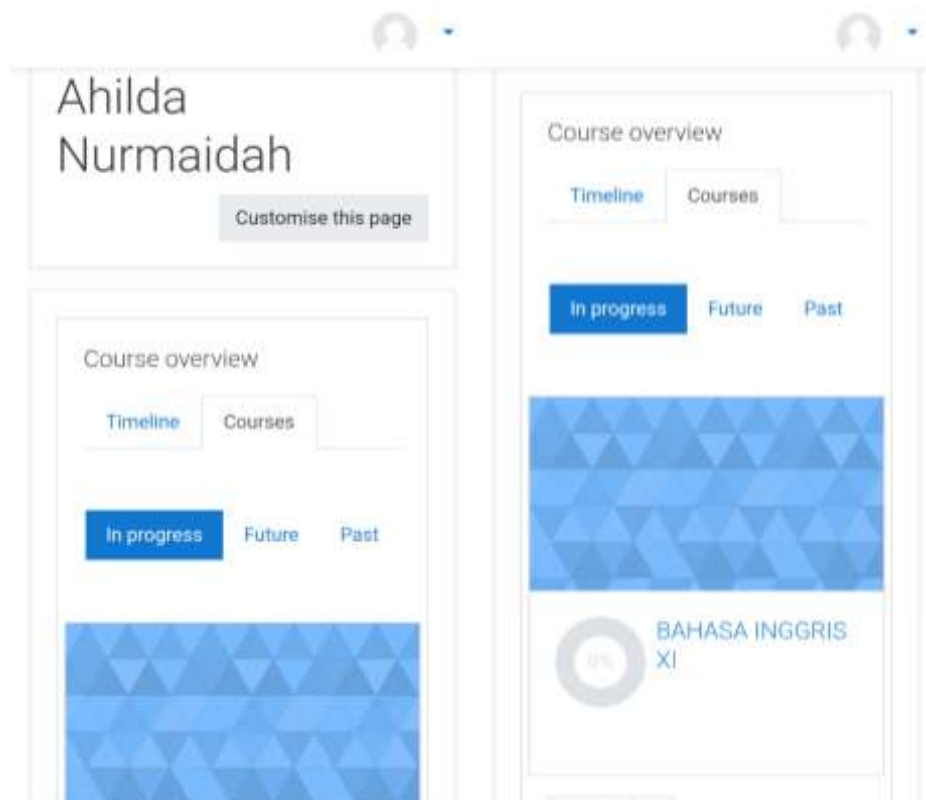


Figure 2.2. Test page of Exam Browser

Figure 2.2 shows one of the subjects in SMK Negeri 3 Magelang already mentioned in the Exam Browser. The date and length of the test will appear in the first icon for the final semester exam. Before that, students can take part in the exam by strictly following the time limit set as shown in figure 2.3.

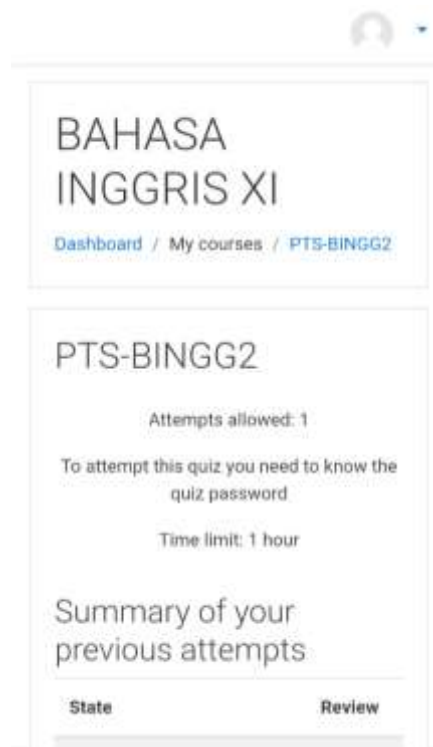


Figure 2.3. The date and length of the test

The Token Confirmation as shown in Figure 2.4 is intended to provide protection for this Android-based exam system. Before answering the question, each examiner must enter the token number first. The token number for each examiner is different as shown in Figure 2.4.

The image displays two side-by-side browser screenshots of a quiz start attempt page. Both screenshots show the URL '192.168.0.200/mod/quiz/' in the address bar. The page is titled 'Start attempt' and contains a 'Password' section with the text 'To attempt this quiz you need to know the quiz pas'. Below this text is a 'Quiz password' input field. In the left screenshot, the field is empty. In the right screenshot, the field contains the password 'YZTVSQ'. Below the password section is a 'Timed quiz' section with the text 'The quiz has a time limit of 1 hour. Time will count your attempt and you must submit before it expires now?'. At the bottom of each screenshot are two buttons: 'Start attempt' (highlighted in blue) and 'Cancel' (greyed out).

Figure 2.4. The Token Confirmation

After filling the token number in the browser, the student is considered to have been identified as an examiner in the final semester exam and must comply with the schedule as shown in Figure 2.4. If the student clicks the Start attempt button, the exam will start and the questions for the subjects will appear and must be answered by the examiner, as shown in Figure 2.5.

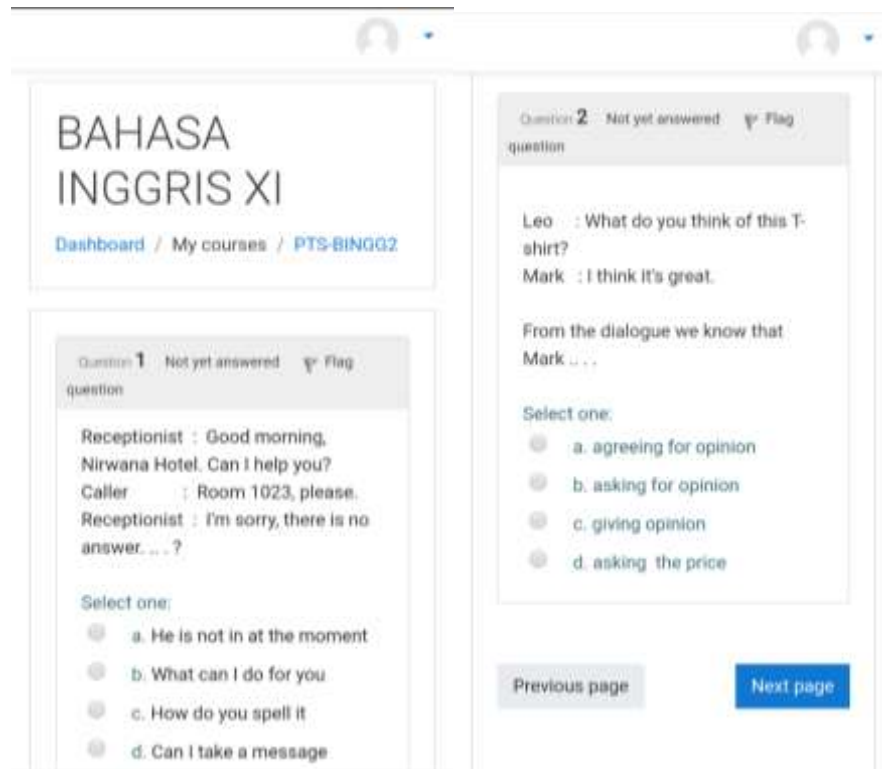


Figure 2.5. Questions Page

The type of questions presented in the Exam Browser is typically multiple-choice questions in which the questions were validated by the relevant teachers of the subjects so that they meet the requirements to be considered.

At the end of the display of questions, there is a navigation boxes icon as in Figure 2.6 shown at the conclusion of test questions, namely a brief report on the exam such as the remaining time and the number of questions that have been and have not been answered.

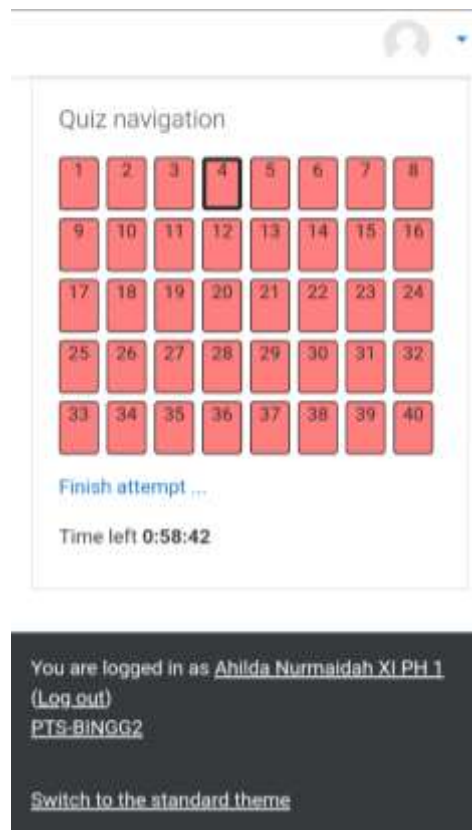


Figure 2.6. Quiz Navigation

To exit the application can be done by selecting the finish attempt button on the page. When leaving the browser, Exam Browser will request confirmation to exit as shown in figure 2.7. If the examinee has validated the button, the test is ended.

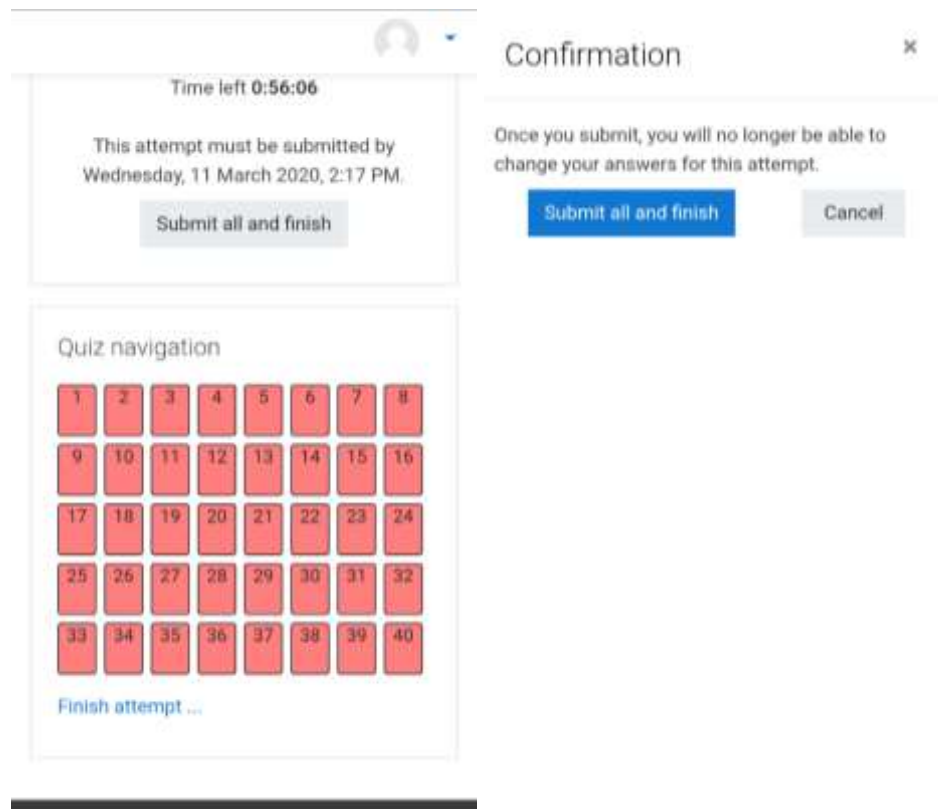


Figure 2.7. Confirmation Page

3. Evaluation

a. Definition

Based on Alkin (1970), an evaluation as a method for evaluating the decision areas of concern; the selection of relevant information, the collection and information review to provide a description of data that would be helpful to decision-makers in choosing alternatives.

Dressel (1976) described the Assessment as both a judgment on the value or impact of a project, practice or entity and the decision-making process.

Furthermore, Yoloye (1981) described the evaluation as assigning certain values to a person in relation to the values or goals of certain parameters.

In general, the definition of evaluation is a process of getting comprehensive and continuous information about the process and results of an activity carried out by someone, which later can be used as a basis for further determination.

b. Types of evaluation

1. Diagnostic Evaluation: The evaluation is done during the formation of educational objectives.
2. Formative Evaluation: Evaluation within or during the development of a class or course.
3. Summative Evaluation: The evaluation is performed at the end of a class or course.

CHAPTER V

CONCLUSIONS AND SUGGESTIONS

This chapter presents the conclusions derived from the findings of the research and suggestions by the researcher.

5.1 Conclusions

We drew the conclusion based on the research problem which was about what students' perception on the use of Android based Exam Browser as a medium to assess final examination. There were two conclusions based on the result in chapter four about the students' perception on the use of Android based Exam Browser as the medium to assess final examination in SMK Negeri 3 Magelang.

The students' perception on the use of Android based Exam Browser as the medium to assess final examination was positive. The students of SMK Negeri 3 Magelang believed that Android based Exam Browser is an attractive and enjoyable system or platform to assess final examination. It can be proven by the result of questionnaire that 75,8 % of the students give a positive perception about Android based Exam Browser. The students believed that Android based Exam Browser was a useful, clear, and understandable platform for conducting online examination and it gave some positive impacts such as improving their speed in answering the questions, improving their performance in the test, and helping them to answer the exam easily. Besides the positive perception about the use of Android based Exam Browser as the medium to assess final examination there

were also the negative perception. The 57,6 % students believed that using the Android-based Exam Browser was somewhat intimidating to them because not all students used Android with enough internal memory to install these applications. The students also feel afraid of making mistakes in using Android based exam because sometimes the application is often slow and even suddenly exit from the application. The use of Android based Exam Browser not only makes the students afraid, but also anxious and nervous due to sometimes their Android not as friendly as hangs, runs out of battery, and disconnected from the connection server.

5.2 Suggestion

Based on the conclusion, there are several suggestions for the school/teacher and future researchers who aim to conduct a study about Android based exam by using Exam Browser. The suggestions are as follow:

1. The school / teacher

The students have positive and negative perception toward the use of Android based Exam Browser for conducting final examination in SMK Negeri 3 Magelang. We suggest that the use of Android based Exam Browser can be continued for further exams because students believe that the Android based Exam Browser is an effective platform or application for conducting Android based online examination. Therefore, SMK Negeri 3 Magelang should improve this Android based examination platform by increasing the number of internet servers and improving the site in the application.

2. Future researcher

This research is about the students' perception on the use of Android based Exam Browser as the medium to assess final examination. For the future researchers, they could probably conduct similar research by focusing on identifying other parties' perceptions, including teachers' or institution perception. Also, we would suggest for future researchers to conduct the research in other applications that are used to carry out exams such as Mobile Exam, Zambro, Fly Exam Browser, and many more.

REFERENCES

- Alkin, M. C. (1970). *Products for Improving Educational Evaluation*. Center for the Study of Evaluation. Fifth Annual Report.
- Ary, D., Jacobs, L. C., Irvine, C. K. S., & Walker, D. (2018). *Introduction to research in education*. Cengage Learning.
- Bryman, A. (2004). Triangulation and measurement. Retrieved from Department of Social Sciences, Loughborough University, Loughborough, Leicestershire: www.referenceworld.com/sage/socialscience/triangulation.pdf.
- Cambridge dictionaries online. (2020). Retrieved from <https://dictionary.cambridge.org/dictionary/english/perception>
- Damara, G. (2016). Students' perception on the use of Kahoot! As an ice breaker in movie interpretation class. *Skripsi thesis, Sanata Dharma University*. Retrieved from <https://repository.usd.ac.id/view/creators/Damara=3AGheza=3A=3A.html>
- Denzin, N. K., & Lincoln, Y. S. (2008). Introduction: The discipline and practice of qualitative research.
- Dressel, P. L. (1976). *Handbook of academic evaluation*.
- Handri, R. (2011). *Pemanfaatan remote desktop untuk optimalisasi sistem ujian online* (Doctoral dissertation, Universitas Pendidikan Indonesia).
- James, K. 2018. *Kiosk Mode*. Retrieved from <https://technostacks.com/blog/android-kiosk-mode/>
- Knuuttila, S., & Kärkkäinen, P. (Eds.). (2008). *Theories of perception in medieval and early modern philosophy* (Vol. 6). Springer Science & Business Media.
- Krech, D., & Crutchfield, R. S. (1974). *Elements of psychology*. Alfred a. knopf.
- Kuncaraningrat (Raden Mas). (1982). *Persepsi tentang kebudayaan nasional*. Lembaga Research Kebudayaan Nasional-LIPI.

- Kuscher, A. F., Sheth, R., Nagarajan, V., Sengupta, C., & Hornung, Z. (2016). *U.S. Patent No. 9,389,873*. Washington, DC: U.S. Patent and Trademark Office.
- Lincoln, Y. S., Lynham, S. A., & Guba, E. G. (2011). Paradigmatic controversies, contradictions, and emerging confluences, revisited. *The Sage handbook of qualitative research, 4*, 97-128.
- Lüthi, T., Kern, M., Reuter, K., Halbherr, T., & Piendl, T. (2019). *Competence-Oriented Exams Using Virtual Desktop Infrastructure (VDI)*. Technical Report, 3rd Edition, Retrieved from https://www.safeexambrowser.org/news_en.html
- May, M. (2009). *Sensation and perception*. Infobase Publishing.
- Mustaine, E. E., & Tewksbury, R. (2005). Southern college students' cheating behaviors: An examination of problem behavior correlates. *Deviant Behavior, 26*(5), 439-461.
- Nursanti, Y. (2016). Students' Perception of Teacher's Bilingual Language Use in an English Classroom. *Journal of English and Education, 4*(1): 159-176.
- Rahardjo, M. (2012). Mengenal Lebih Jauh Tentang Studi Kasus. *Malang: Materi kuliah Metodologi Penelitian PPs UIN Maliki Malang*.
- Robbins, S. P. (2002). Prinsip-prinsip perilaku organisasi. *Jakarta: Erlangga*.
- Robbins, S. P., & Judge, T. (2003). *Essentials of organizational behavior* (Vol. 7). Upper Saddle River, NJ: Prentice Hall.
- Sarrayrih, M. A., & Ilyas, M. (2013). Challenges of online exam, performances and problems for online university exam. *International Journal of Computer Science Issues (IJCSI), 10*(1), 439.
- Sarwono, S. W. 2002. Psikologi Sosial. Jakarta: Balai Pustaka
- Schacter, D., Gilbert, D., & Wegner, D. (2011). Sensation and perception. *Charles Linsmeiser Psychology Worth Publishers p, 158, 159*.
- Sugiono, S. (2016). Metode Penelitian Kuantitatif, Kualitatif, dan R & D. *Bandung: Alfabeta*.
- Suryana, S., Sekaran, U., Lee, S., Stearns, T., & Geoffrey, G. M. (2013). Metode Penelitian Kuantitatif, Kualitatif, dan R&D. *International Journal of Management, 56*(8), 143-154.
- Techterms.(n.d.). Retrieved from <https://techterms.com/definition/android>

- Triangulation, D. S. (2014, September). The use of triangulation in qualitative research. In *Oncology nursing forum* (Vol. 41, No. 5, p. 545).
- Wati, L. L., Kasmawi, K., & Mawarni, S. (2018). IMPLEMENTASI COMPUTER BASED TEST (CBT) DI SEKOLAH MENENGAH KEJURUAN. *Batoboh*, 3(1), 83-91.
- Wiersma, W. (1985). *Research methods in education: An introduction* (No. LB 1028. W53 1985).
- Wiersma, W. (1995). *Research Methods in Education: An Introduction*. Boston : Allyn & Bacon
- William, H. 2012. What is Lock Down Browser. Retrieved from <https://www.igi-global.com/dictionary/technological-approaches-maintaining-academic-in-tegrity/17447>
- Yoloye, E. A. (Ed.). (1978). *Evaluation for innovation: African primary science programme evaluation report*. Ibadan University Press.