Implementing Exambro Application as Android Based Test

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Abstract

This article explored how technology had been used at school to make the education system better and helpful. Exambro as the tech-based assessment tools was used to assess the students' capability efficiently and effectively. This article also describes how the final examination in SMAN Wajo using the ABT system and the problems during the exam. This article found various problems still occur in the implementation of the ABT system in SMAN 7 Wajo. These problems containing technically issues and maintaining a problem than the CBT system or PBT system. However, this problem can be solved with preparing, managing and arranging the examination with maximizing the sources of the schools, good communication, and good teamwork.

Keywords: *ABT, examination, weakness*

Introduction

Technology simplify human activities with just one click and connect to other people around the world. Technology also assists students in preparing themselves in the industry revolution 4.0 competition. This article focused on how technology, in this case, Exambro had been used for schools' examination based on the regulation No.5/2015 of Minister of Education and Culture of Indonesia. The government substitutes the previous PBT (paper-based test) system into CBT (computer-based test) since the PBT is not effectively and efficiently. Exambro was used in the English final exam in the third grade of SMAN 7 Wajo. Since 2015, SMAN 7 Wajo is one of the schools that conducted the CBT system and then upgraded it into an Android-based test not only for the national examination but also for the final semester for all classes. However, several cases stick around on the application. Start from the preparation, during the test and checking the test result had quite obstacles. Exambro needs android specification to run, namely the screen wide is 4,5 to 6.9 inch, Kit-kat Android with RAM 1,5 GB with 720x960 pixels screen resolution, protocol wireless must 802.11n/802.11ac with minimum 200MB memory system and 200MB memory internal.

Literature Review

The use of computers and technology has grown tremendously in all aspects of life, especially in education. For the past decades, the people's attention to integrate computer and technology has increased, especially in the education system. Although, finding appropriate pedagogical methods are required to cope with these new challenges in educational institutions.

BSNP (2010) illustrates that the advancement of internet triggers the change in education. Internet as a giant network, which connects billions of data centers/information around the world, has changed the development of science. An example of such a change is scientists can easily search their reference via search engines, then they can collaborate effectively via electronic mail in a "real-time" . All that is possible because the searching and collaborating process has been successfully digitized by technology. This matter is intended to ease the

process of knowledge exchange among people around the world to improve the quality of human life.

In the same way, there are various major specifications of the 21st century. Firstly, the opening of the broader mobility flows from one country to another. Secondly, this century is dominated by the development of sophisticated science and technology. Therefore, to be able to compete in the global society, every nation must literate on the development of science and technology (BSNP, 2010)

An example of such a change in the last decade is the advancement of information and communication technologies (ICTs), which is supported by the use of computers or smart mobile gadgets (smartphone, tablet, phablet, or pad). Then this era explores the social aspects of culture, politics, economy, including education. This means that the influx of ICT has changed the communication patterns and distribution of information without boundaries as supported by Prayoga (2019) in his study.

Methodology
This study interviewed with the head of the technician and the school administrator. The interview was designed to provide deeper insights into teachers' and administrators' perceptions and experiences of the Exambro by shifting the emphasis on the relative successes and failures of Exambro usage and problem solving.

Result
Based on the result of the interview, the ABT system has four important aspects that need to run the Exambro application. They were as follows:
ABT (Android Based Test) Infrastructures
1. Local server
   It is must be able to perform a maximum of 50 clients under the server in one link. If the clients more than 50, the local server should be supported with overclock into 3.2 GHz and RAM 16 GB. The criteria of the local server should be Computer not a laptop with a processor 4 core and frequency clock 1.6 GHz 64Bit. It must have RAM 8 GB with hard disc 250GB capacity, operating system (64bit) should be windows 8 or windows 7. Also, the browser should be google Chrome and it had been installed with Exam browser Admin (ExambroCBTSync).
2. Client
   This application needs specific android specification to run in students' android or tablet. It needs to be 4,5 to 6.9 inch for the screen, Kit-kat android with RAM 1,5 GB with 720x960 pixels screen resolution, protocol wireless must 802.11n/802.11ac with minimum 200MB memory system and 200MB memory internal.
3. Supporting Infrastructure
   Supporting infrastructure that supports the system is a must to have by the school. It is UPS for server, monitor or computers in the main laboratory to observe and processing the data, the printer is using for printing the data that had been processed by the application.
4. Human Resources
   Firstly, proctor who responsible to check students, attendance lists, running the application and uploading the data to the main server. SMAN 7 Wajo had 20 proctors for 20 rooms. However, some of them do not have enough skills to run the applications, so the operators and technicians help them during the examination.

Next, the technician who must have on IT skills. Most of them got training from South Sulawesi government. They should maintain the application, preparing the laboratory or examination rooms, check on the problem of the local servers and main server.

Lastly, the supervisor, this role has responsibility in administration during the examination and observe the examination. this role should help proctors to handle students who had problems during the event such as incomplete score, came late, cheating, etc.

Problems on ABT examination

1. Exporting data

   A month before the examination, the committee prepared the data that should be input on the application. 5 persons had responsibility for exporting item questions for the exam. Basic skills in Microsoft Excel and Microsoft Word were must have for arranging the formula and data. They used snipping tools and saved it in JPG format for images and texts since the application can not read the data when the text is too long and used various symbols. Some teachers had a lack of awareness on submitting their data, as a result, the exporter could not examine and export the data on time.

2. During examination

   This article found several problems that happened on the ABT examination.

Problems	Reason	Strategies
Cannot Uploading data	Server is down during the session	The technician restart and fixing the server
The image of the text is broken and unreadable	The formula or the data is unreadable by the server Format images were incorrect The excel format was incorrect	The Administrator tried to check the files and re-do the format. The administrator checked the format of the images and change it
The students were cheating	Using Chrome to open the link, not with Exambro application	The proctors e-check the application used by the students.
The students cannot enter to the exam bro	The connection is low	Restart the applications and enter again
The answers are deleted by itself	The connection is error The server is down	Restart the server
The electricity was off during the session	Electricity malfunction	Nothing, wait for the reparation by the facility officer
The students are difficult to enter to the application	Local server connection is too low	Adding two localhost in one laboratory

(Interview, 2019)

Mostly the problems that happened during the examination were technical issues. The prize of equipment that quite expensive and lack of maintenance of the server could be one of the issues that always happened in the exam.

Conclusion

This article concludes that various problems still occur in the implementation of the ABT system in SMAN 7 Wajo. These problems containing technically issues and maintaining a problem than the CBT system or PBT system. However, this problem can be solved with preparing, managing and arranging the examination with maximizing the sources of the schools, good communication, and good teamwork.

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