

Perception of Indonesian Teachers and Learners on the Use of Edubox for Language Assessments

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Abstract—The advancement of technology provides education with many solutions to enhance learning activities. Edubox as a technology application is believed could give a solution for teachers in creating language assessments. This research was aimed to investigate how Edubox was implemented and how teachers and learners' perception in using Edubox for language assessments. This research employed a qualitative approach with a case study design. The research involved three teachers and five learners of a public secondary school in Bandung, Indonesia. The data were collected through interviews, questionnaires and observations. The results showed that the use of Edubox is interesting since this application could be opened using both computers and smartphones without internet connection. The participants generally showed positive responses toward the use of Edubox for language assessments. Some issues on the use of Edubox in this research were poor bandwidth and confusion in using Edubox. The suggestions for the authority and areas of further research were presented.

Keywords—Edubox; technology applications; language assessments; teacher's perception; learners' perception

I. INTRODUCTION

The use of technology applications for language assessment purposes brings some advantages which should be considered by teachers who still use paper-based tests. If a lot of teachers have used technology as a way to acquire more complete materials than got in a textbook for a long time, because of numerous benefits found, many experts develop the use of technology for language assessment purposes [1] in order to enhance assessment activities [2]. That view appears since findings of several researches show that technology could assist assessment practices [3]. The incorporation of technology in language assessments is expected could promote assessments that afford a wide variety of opportunities for learners to produce target languages [4].

For having some essential goals, assessments become an important step in an educational setting [5]. The purposes of assessments are to measure learners' language abilities according to goals of learning processes, to discover how far learners have achieved the objectives of learning processes, to diagnose learners' strengths and weaknesses and to identify what they know and what they do not know [6].

Edubox, as a technology application, is believed to be of assistance for teachers in conducting language assessments.

This application was made by a team created by the local government of Bandung, West Java, Indonesia. It could be used both in computers and smartphones. Most of English teachers in public secondary schools in Bandung have used this application for language assessment purposes as the government's rule since three years ago. Unfortunately, there has not been any researches relate to the use of Edubox. This paper was aimed to investigate how Edubox was implemented and how teachers and learners' perception in using Edubox for language assessments.

II. LITERATURE REVIEW

A. Technology Applications in Language Assessments

The use of technology in language assessments brings many benefits both for teachers and learners. The integration of technology could enhance language assessments [3]. Technology applications assist learners to be more independent. Every single learner could use either computers or smartphones to do technology-based tests by his or herself. The learners' opportunity to imitate or copy their friends' answer is very limited in using online assessments [1].

Various technology applications could improve learners' motivation in doing tasks. A number of features available in technology applications aid teachers to compose interesting looking tests. In addition, the different looking of applications such as *Quipper*, *Rumah Guru*, and others is expected to give stimulus to learners in language assessment processes. Those are supported by Tsai [7] and Baytak, Tarman and Ayas [8] that technology increases students' willingness to engage in assessment routines.

Technology applications also empower teachers to give online feedbacks. The feature "message" available in some applications permits teachers to communicate with students via online. The teachers could give responses via a mobile device which is portable so it can be brought wherever and whenever the teachers are. Teachers do not need to bring many papers to their homes if they want to check the students' works [9].

Technology applications give a high possibility for teachers to score electronically for rapid reporting of results. Teachers do not need to correct learners' answers manually which are very consuming time. The teachers just need to input key answers in a system. The scores obtained using technology

applications are considered to be more valid than obtained manually [5].

Using technology for language assessments could also increase learners' participation in language assessment activities. In *Wiki Page* application for instance, learners could not only get feedbacks from teachers, but they also could give feedbacks for their classmates' works. Technology enables learners to interact and communicate with peers to revise their works based on feedbacks when and where they like. It supports learners to become more active actors in assessment processes. The learners' interaction with both teachers and classmates is increased using features available in technology applications. The online assessments also create an environment where students can provide feedback to their peers without being limited by times and places [10-12].

Incorporating technology for assessment activities also facilitates learners to assess their own works in a more meaningful way and brings them to be more aware to the quality of their works. Technology facilitates learners to check, read and give comments to their friends' works. The learners' awareness to the quality of their works could increase their abilities because they are vigorous to study hard for producing qualified answers [12].

Using technology applications for language assessments give learners a chance to undertake a more self-monitoring role which leads them to a higher opportunity of fulfilling the tasks successfully. The learners could easily monitor their own tasks. They could also revise their works if it is needed [12].

Using technology for language assessments also lowers learners' language learning anxiety as they have more chances to communicate with teachers for asking help for their difficulties. The learners' low anxiety would make them become more comfortable in learning processes. If learners do tasks without anxiety, there would be a high possibility for them in getting higher scores [12].

For some technology applications, both computers and smartphones could be used to operate. As portable mobile devices, smartphones have been used to help teachers in enhancing a language assessment process [13], since nowadays almost all of learners have either smartphones or easy access to one [1]. The incompatibility applications in mobile devices help schools which do not have enough computers.

Smartphone provides advantages for language assessments. Based on Samaie [1], its portability and small shape enables it to bring to classrooms. Smartphone would also create dynamic interactivity and lend more personal and social purposes to its users through easy and fast applications. Those advantages bring many learners become interested in using a smartphone for language assessment purposes.

There are some related studies to the use of technology application for language assessment. The first was a research conducted by Purnawarman [14]. This research was aimed to investigate how Edmodo as a learning platform setting, was implemented in teaching writing in its combination with Genre-Based Approach, how Edmodo facilitated learners' engagement and how learners perceived the use of Edmodo in teaching and learning activities. This research employed a

qualitative approach with case study design. The data were collected through observations, document analysis, interviews and questionnaires. The results showed that in teaching writing, it was possible to integrate Edmodo into GBA writing cycles. Edmodo also facilitated learners' engagement cognitively during classroom sessions. The learners showed various responses towards the use of Edmodo based on the Uses and Gratification Theory (UGT) framework. Some issues on the use of Edmodo identified in this research were bandwidth, confusion in using Edmodo, incompatibility of smartphone applications and learners' lack responsibilities for learning. The suggestions for the authority and areas of further research are presented in this research.

The second related research was written by Cahyono [15]. This is a qualitative research. The respondents of the research are three EFL teachers teaching in a senior high school level and six learners who have used the platform. The result of the research shows that Indonesian EFL teachers used the platform not only for coping with the limited time available for EFL teaching, but also due to the significant value of the platform to support the learners' EFL learning.

The third related research was conducted by Chawinga [16]. This study incorporated Twitter and blogs into two undergraduate courses offered in the Department of Library and Information Science at Mzuzu University which is a public university in Malawi. Data were collected in two ways: first, analysis of blog and Twitter posted by learners and second, a questionnaire was sent to 64 learners to find out their perception towards the use of blogs and Twitter in a classroom environment. Results suggest that if appropriately deployed, Twitter and blogs are catalysts for the much hyped learner-centred approach to teaching because using these technologies, it emerged that learners shared and discussed course materials, posted their course reflections and interacted amongst themselves and with their lecturer. Challenges faced include cost of internet data bundles, inaccessible Wi-Fi, poor bandwidth and insufficient computers.

The fourth research was conducted by Sukawatie [17]. This research focused on the evaluation of features which available in Quipper School may correspond to fundamental components of Computer-Assisted Language Learning (CALL) based on Chappelle's framework [4], including L2-input exposure, interaction and linguistic production. The evaluation results indicated that Quipper is affordable for use as an online teaching and learning EFL assessment. It also corresponded to the three conditions of CALL, thus making it a potential media for activities used in teaching and learning foreign language.

The fifth related research is conducted by Samaie, Nejad and Charrachollo [1]. To explore the efficiency of WhatsApp for assessment purposes, 30 Iranian English learners doing self- and peer-assessments on WhatsApp are studied. The changes and the reasons for the changes in their attitudes towards the two assessment types are also investigated. In a multi-phase study, the participants were trained on the new concepts of mobile-assisted self- and peer assessments. They were also involved in the concurrent tasks of self- and peer-assessments as well as think-aloud protocols and filled out four attitude questionnaires before and after their involvement in the

two assessment types. Finally, they were interviewed for the reasons of change(s) in their attitudes. The t-test and think-aloud results show that though the participants assigned different grades to themselves and their peers, this is not a procedural difference. The questionnaire results show that the participants generally adopted negative attitudes towards mobile-assisted assessments after being involved in them. They also gave various reasons for the changes in their attitudes. The results could substantially contribute to the ongoing debates on the use of alternative assessments through mobile device applications.

Those are some researches relate to the use of technology application in the language learning. Those researches investigate the media which have been familiar for the teachers and learners such as Quipper, Edubox, Twitter, Blog, and WhatsApp. However this research investigated the use of new technology application that is Edubox, which has been just used by English teachers in Bandung for three years.

III. METHOD

Consistent with the purpose of the present research, a qualitative approach [18], with a case study design was utilized [19].

A. Participants

The respondents of this research were three teachers and five students of a public secondary school in Bandung, West Java, Indonesia taken with a purposive sampling technique [20].

B. Data Collection

Three instruments were used to collect the data. First, observations [21], were utilized to see how Edubox was implemented for language assessments in which the researcher acted as a teacher-researcher [22]. Second, close-ended questionnaires [19], were used to check participants' attitudes toward Edubox. Third, interviews with a semi-structured design [19] were mainly used to get data for participants' reasons for their perspectives on using Edubox for language assessments.

C. Data Analysis

The analysis on the whole data was conducted by adapting Creswell's theory [20]. It began with organizing and preparing data, then reading them to get general senses and coding data. The next steps were generating description of the whole data, representing descriptions and themes and interpreting data. The last step was presenting data.

D. Validity and Reliability

The data collected were then validated by triangulation [22]. Triangulation was conducted to make sure that the data collected were matched each other.

IV. FINDINGS AND DISCUSSION

A. Implementation of Edubox in Language Assessments

Edubox is an application created by an information technology (IT) team made by the local government of Bandung, Indonesia. It is the part of Smart City Program in which every sector in Bandung has to use technology in its daily activity. This application can be downloaded in *Play Store*. It does not use internet connection. It can be operated using Edubox server connection. This application can be opened using both computers and smartphones. The findings of the detected studies show that students using smartphones and their apps are more motivated in learning processes [23,24].

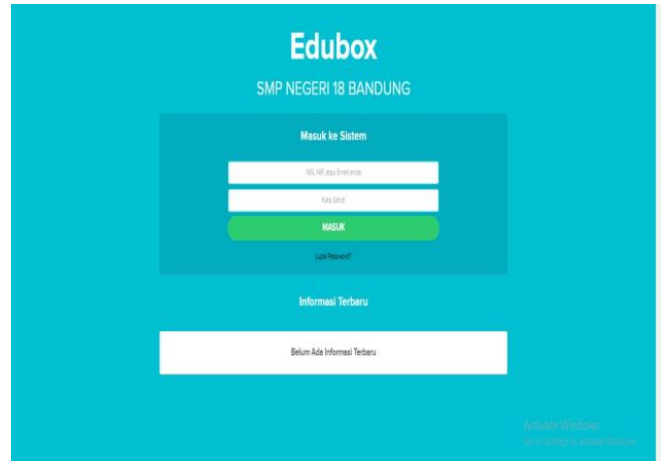


Fig. 1. The appearance of Edubox.

In creating tests using Edubox, there are seven steps that should be followed by teachers. The first is input learners' identities. The second is typing tests. The third is checking the validity and reliability of tests. The fourth is messing up questions. The fifth is inserting pictures or tables. The sixth is typing answers. The last is setting a time constraint.

The learners' identity needed to input in Edubox are their names and students' numbers. The learners' identity is used to limit the access to the tests. When the learners log in to this application, they use their names and their numbers so they could not open their friends' questions. It would make the learners become independent in answering the tests.

The limitation access on opening students' answer would promote students' autonomy and self-regulation. One of the key foundation stones of effective L2 pedagogy today is creating a climate in which learners develop autonomy which is the capacity to control one's learning. In learning autonomy, learners were promoted to do their works by themselves using their self-regulation skill [25]. That idea is supported by Reading that technology facilitates learners to work independently [26].

After limiting the test by the learners' identity, the teachers type questions in the feature provided. The types of questions that could be composed using Edubox are multiple choice and closed-ended questions. Open-ended questions could not be used in this application since the answers would be various that are not feasible to be checked using this application directly.

The specific goal of test could be considered in designing a test [27]. If the goal of learning needs to use open-ended questions, teachers are not suggested to use Edubox.

After typing the questions, the teachers check the validity and reliability of tests using feature available. The teachers could modify the questions if the results show that the test is not valid or reliable. The issues of reliability and validity of tests become important since they determine whether a test really measure the students' proficiency or not [5].

Based on Cohen and Manion, there is a range of issues which might affect the reliability of the tests-for example, the time of day, the time of the school year, the perceived importance of the tests, the amount of guessing of answers by the students, and the way the tests are administered, the way the tests are marked [19]. Those general problems undergone by teachers in assessing reliability test could be solved using Edubox since this application enables teachers to assess the reliability of tests using available feature easily.

If the test has been valid and reliable, the teachers could mess up the questions become some versions. In a class, the learners could get the same questions, but those are in a different order. It supports the students' autonomy and self-regulation which brings them to achieve successful learning [25].

After messing up the questions, the teachers insert tables or pictures in the tests if it is needed. The pictures and tables are usually used to make the test become more interesting and clearer. Good looking tests promote learners in having a high motivation in doing the tests [7].

After that, the teachers type the key answers of questions that will be used for check the learners' answer directly using the feature provided. This application would also show the learners' scores. Time consumed for preparing and scoring a test is important aspects that must be considered for teachers in conducting a test [5].

Setting a time constraint is the last step in composing a test using Edubox. The importance of available time constraint in assessment is stated by Brown [5]. The time constraint would develop students' self-regulation in a language assessment process [25].

In using Edubox for language assessments, we do not need any papers. It would help green-environment program by reducing the rubbish. The teachers would not spend much money every year to purchase any papers as well. That is what Akhtaruzzaman, Shamim and Cemment say that using ICT-based assessment would spend less money [28]. While at first glance it may seem that the initial purchase of hardware or software is the costliest part of the process, the bulk of the total cost of ownership is spread out over time.

In using Edubox, participants do not need internet connection since it uses Edubox server connection. It makes participants do not need to buy internet quota to use this application. As stated by Brown [5], money becomes the aspect to be considered in conducting a test.

Edubox also enables teachers to give feedbacks through menu available in this application. It promotes learners to give

their best effort in doing assessment. It supports Mulyono that technology eases teachers to give online feedback that could increase the quality of learners' works [9].

Even though the use of Edubox gives many advantages, this application still has some weaknesses when it is used for language assessment. At least, there are two weaknesses of using Edubox, those are limited connection and loading time. The connection of Edubox server could just be accessed in the school's area in which the server is located. If the other applications using internet as the source of connection could be opened in the home, this application couldn't be. In answering the test using Edubox, every student from every class would use the same server as the source of connection as well. Sometimes, it brings to the poor bandwidth. When it occurs, it disturbs the language assessment process.

Bandwidth issue in using technology application is also stated by Purnawarman in conducting research relating to the use of Edmodo in teaching writing [14]. That research suggested that to create a stable learning environment, the technology used should be supported by sufficient internet connection. The stable connection of Edubox provider is absolutely needed.

B. Teachers and Learners' Attitude toward Edubox

Regarding the participants' attitudes towards the use of Edubox for language assessments, positive responses were obtained. The participants showed that they agreed to use Edubox for language assessments. They are also comfortable in using Edubox for language assessments. However, they feel confuse in conducting tests using Edubox.

The participants agree to use Edubox for some reason. The participants' awareness that they must follow the advancement of technology for their learning processes is the main reason. They realize that the use of technology for language learning brings many benefits. They believe that the technology would be able to increase the learners' skill. The learners' awareness of the benefits of technology would be base to enhance assessment activity [2].

The participants' comfort in using Edubox was supported by this application features. Based on Wu, the convenience in using technology was the key aspect in creating successful language learning [29]. For teachers, the correction, validity and reliability tool features help them to manage their times to be more efficient in composing the test. The picture and table items also enabled them to create a good looking test. The learners also revealed that they like using Edubox for its attraction. It means Edubox fulfilled the principles of technology application used in the learning process as stated by Bates [30].

However, the participants' confusion in operating Edubox occur for some reasons. The participants need more training in operating Edubox since they have not yet been familiar with this application. That is what Erben, Ban, and Castaneda mention in the principles of integrating technology in learning process that technology application used in the classroom should be familiar for teachers and learners [31]. The participants also get difficulty in operating Edubox for its

limited bandwidth. Although this application does not use internet connection, Edubox provider has limited connection as well. Bandwidth and confusion in using Edubox become the main issues in this research.

V. CONCLUSION

The findings of the present research indicate that Edubox has strengths and weaknesses when it is implemented in language assessment. Using this application, it does not need any paper to do assessment (support green environment program). This application does not need internet connection as well since the source of connection is the server. Validity and reliability tools features help teachers in preparing test with an ease. It is also cheaper than using paper-test for it does not need to spend much money to buy the paper. Correction feature also enable teachers to correct students' answer quickly. The weaknesses of using this application are limited connection (it could be opened in the server area only) and loading time (the connection is just from the server). Generally, the respondents show positive attitude towards the use Edubox for language assessment because they know that they must follow the advancement of technology for their learning process.

Apart from the findings of the research, there are a number of matters have not been covered by the present research. First, the participants involved in this research were just from a public school in Bandung. To get more reliable data, teachers and students from other schools can be involved since Edubox have been widely used by almost all of teachers and learners in Bandung. Second, another domain of this research such as learners' engagement in using Edubox are also worth researching to know the effect of Edubox for language assessment.

Regarding the findings of the study, a number of considerations are suggested. First, in using Edubox, bandwidth comes as utmost factor. Discussing with other teachers to arrange a good schedule for assessment activity will increase sufficient connection from the provider since the user of Edubox are not overloaded. Second, to avoid confusion in using Edubox, introducing Edubox pleadingly is suggested. Improving the teachers' and learners' motivation on using technology application for language assessment will be a key point to enhance assessment.

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