THE UTILIZATION OF DIGITAL ASSESSMENT FOR A BETTER LEARNING EXPERIENCES

Penggunaan Penilaian Digital untuk Pengalaman Belajar yang Lebih Baik

Nukmatus Syahria
Universitas PGRI Adi Buana Surabaya
Jalan Ngagel Dadi III/3B-37, Wonokromo, Surabaya (Campus 1)
Jalan Dukuh Menanggal XII, Surabaya (Campus 2)
Pos-eL: syahria@unipasby.ac.id


Abstract

Technology is now becoming an unavoidable part of Indonesian students' life. The application of digital tools have facilitated the students to expand their knowledge and develop their learning. At the same time, it helps to plant learning autonomy toward the students. This paper aimed to explore the teachers’ experiences in applying the digital assessment by using in-depth interview and classroom observation. The teachers can gain a lot of advantages by applying the digital assessment in their teaching and learning activities. It saves a lot of teachers’ time, it breaks the barriers between teachers and students in terms of meeting time and at the same time it also helps to reduce students’ anxiety during the assessment. However, during the application of the digital assessment there were several difficulties faced by the teachers, namely the internet connection, the misconception among the students because the students did not comprehend well regarding the teachers’ feedback as well as there may be a possibility for the students to cheat during the assessment since they can do it anywhere not only in the campus. The teachers’ mastery in technology indirectly can also help the development of Indonesia’s education system.

Keywords: digital assessment, teachers’ perspectives

Abstrak


Kata kunci: penilaian secara digital, perspektif guru
1. INTRODUCTION

New appliance of technology enhanced assessment are increasing both the usage and the intention that incorporated management and processing the results, the analytics skills, and tools which give immediate formative feedback and combination on feedback processes (Beevers et al., 2011). This parallel with the understanding that feedback and assessment should become more deeply attached within the teaching and learning process (Whitelock and Warburton, 2011; Pellegrino and Quellmalz, 2010). Technology enhanced assessment mostly known as ‘stealth assessment’, assessments attached within learning which can help to reduce test anxiety and less distract the flow of learning (Shute et al., 2010). Furthermore, Kleeman et al., 2011 describes how embedded assessments can be applied formatively as knowledge check up in a various kinds of multimedia forms like social networking sites, wikis, web pages, or blogs. Through this, assessment is blended into the learning process to motivate the learners.

Assessment is one of the most necessary and influential elements in the education. Assessment measures the students’ fulfillment and provides documentation of the learning process. It also gives feedback which can be used to intensify the teaching and learning process. However checking, evaluating, and assessing in a big class are time consuming if the teachers have to do it manually. The expansion of Information and Communication Technology (ICT) can tackle those problems and help the teacher to assess in a more innovative way and less time consuming. Though digital assessment brings a good impact on the teaching and learning process but not many schools or institutions in Indonesia apply it. Based on the researcher's preliminary study after visited eight secondary schools and six universities in Surabaya, East Java, only few of them apply digital assessment in their regular teaching and learning activities however the National Exam in Indonesia is done digitally. This condition may confuse the students especially in the secondary level because they are not get used to do the digital National Exam. It may also make the students become anxious about the exam and of course it will influence the students’ output of the exam to be not maximal. Therefore, there is an urgent need for the educators to apply the digital exam as a part of their teaching and learning activities especially in Indonesia so that they students will benefit more of it.

Indonesia Government intends to become a ‘world-class’ education system by 2025. However, it is still a long way to go before it is finally accomplish that target. Many Indonesian teachers and lecturers are incompetent with technology and have inadequate pedagogical skills to be more potential educators, especially the baby boomers (those who were born between 1944 and 1964) and generation X (those who were born between 1965-1979). This causing on the poor learning outcomes of the students and there is an imbalance between the competency of the graduates and the demand of the companies.

In December 2014, Indonesia Minister of Education and Culture, Anies Baswedan, announced in his speech that the country’s educational quality was very poor which also affect the poor tuition, poor learning outcomes, incomplete facilities, and discipline problems, therefore the school system needs to be revised. He informed that the country’s education is in “emergency” period. Indonesia has made little improvement on the educational quality even though over the past few years Indonesia has attempted in upgrading the educational policy as well as opening wide opportunity for all society to be able to accomplish the basic education (Elementary school (grade 1 to 6) and Secondary school, Junior High School (grade 7 to 9) and Senior High School (grade 10 to 12) by providing free education for all of the society.

Differ from the basic level, Indonesia government is still not able to subsidize all of the society to have free education in
higher education. The government only provides scholarship for low economy people and outstanding students with the complicated procedure to claim for the scholarship. Therefore, the competency of Indonesian people are very low since only the people from upper and middle economy level can continue to higher education.

Furthermore, not many teachers in Indonesia follow the training programs especially in technology. This resulted on the inexperienced and unqualified teachers who do not apprehend well in how to make use of technology to boost the language development of their students. For an English as a Second Language (ESL) teachers, to reach the success in the teaching and learning process, the teaching method has to be students centered, can activate and stimulate the students, appropriate with different kinds of students and can evaluate all skills of the language in balance. The traditional assessment methods are not suitable to accomplish the requisites above. Current study found that teachers and students are still skeptical to take part in activities that are using information technology (Reffell & Whitworth, 2002). The real use of information technology for students in the last semester and graduate students is still not consistent and differ significantly from individual courses to individual institutions (Breen et al., 2001). Moreover, Bielaczyc, 2013; Selwyn, 2007 suggest that further research design should spread out beyond the technology-based tools. For those reasons, the researcher would like to investigate more on the usage of digital assessment in Indonesia as an instrument which can be used not only to assess the students’ performances but also to evaluate, to review and to grade students’ assignment. This paper also aimed to investigate teachers’ perspectives on the use of digital assessment in their teaching activities to make a better learning experiences.

The research questions for this study were formulated as follow;

1. What makes the teacher use digital assessment?
2. How do the teachers apply digital assessment to make better learning experiences?

To avoid the ambiguity, it is necessary to differentiate between assessment and testing. Assessment and testing are often used inversely especially in the education system. Based on Pellegrino, J. W. & Quellmalz, E.S. (2010), assessment is the rigorous and systematic process of recording and using factual data on the students’ skills, knowledge, beliefs and attitudes. By using the assessment, teachers are expected to foster the student learning. Assessment is included into individual learner or groups, such as class or institutions. While a test is used to measure someone’s knowledge about something to check what someone knows or has acquired. It analyze the level of skill or knowledge that has been acquired. The phraseology of online assessments are assessments that used the computer technology and the internet networking ability to deliver and mark the tests. The questions are usually in the kind of multiple response, multiple choice, true/false and fill in the blank. E-assessment allows direct feedback compare to paper test, that aid to progress the learning level. As stated by Bull and Danson, 2004; Bull and McKenna, 2004, there are several kinds of terminologies used to describe the application of computer technologies for the process of assessing, namely computer-assisted assessment, online assessment, e-assessment, computer aided assessment and computerized assessment.

Based on the study of Alruwais, Nuha, Wills, Garry & Wald, Mike (2018), the benefit of digital assessment are categorized into four perspectives, namely students, teachers, institution and education aim. The students prefer online assessment because they can take control on their study, the platform are familiar with them and it similar to the recreational activities because they can use it as games or simulations. Because the use of paper
test spent much time to examine and to mark each paper, the use of E-assessment will save the teacher time. On the other side, it also helps the teacher to upgrade the quality of feedback for the students, to let the teachers to investigate the students’ achievement as well as to make finer analysis of typical forms of assessments. While for the institution, online assessment aids to organize for places to seek for better and qualified applicants every of new enrollment year. Moreover, the use of online assessment lessen the cost for institution to test students because the time is reduced. Online assessment avoid the students’ from cheating during the test because it has its own set of security by supplying different set of questions in different order. Online assessment continually audit pupils’ identification by requesting for password verification to assure the students’ identity. For the educational aim, online assessment helps to support the educational objectives, by appealing students’ higher-order thinking skills such as analyzing, arguing and promoting group work projects. Online assessment has the ability to simplify the question which the paper test cannot do, such as the software simulation. Online assessment also provides more accurate results compare to paper test by adapting the test which can change the level of difficulty of the test which is suitable with the user response, by heightening the level of difficulty if the students choose correct response and decreasing the level of difficulty if the students chose the wrong answer.

According to Akdemir and Oğuz (2008), during the usage of computer testing hardware and software may appear problems concerning computer-based assessment. It is not enough to just reorganize the test administration mode; the teachers have to customize the assessment so that it can match with the computer testing hardware and software. However, the application of digital assessment in the university got some challenges (Alruwais, Nuha, Wills, Garry, & Wald, Mike, 2018), namely students who have low experience with the online assessment, poor technical infrastructure, the accessibility of computer and internet, and the complication of scoring the open response such as explaining things.

2. METHODOLOGY
To answer the research questions, a depth-interview and classroom observation were conducted to five persons from different universities to see the different kinds of variation on the application of digital assessments as well as to gain a deeper insight regarding the teachers’ opinion on digital assessment. The participants on this study were five lecturers who teach English in different universities. Most of the lecturers have minimum of one year of teaching experience in teaching and assessing using digital platform, such as Google classroom, EDMODO, CANVAS, and SCHOOLEY. Only one lecturer has applied the digital teaching and assessment for four years up to now. The instruments for this study were voice recorder and field notes. The researcher carried out individual interviews with five lecturers. There were eight questions that they needed to answer regarding their likes and dislikes with the application of digital assessment, their experiences in utilizing the digital assessment, their pros and cons about the digital assessment, their fondness on the mode of digital assessment, as well as their considerations of applying digital assessment in their teaching activities. The interview were done for three times to get a deep information regarding the participants’ opinion on the application of the digital assessment and each time of the interviews, the researcher sometime need to explain the questions in details to make the participants comprehended well with the questions and to get the answer that the researcher really needs to support the data.

This study was conducted for one semester, from January to May 2019 during the even semester. Besides doing a depth interview, the researcher also conducted classroom observation to see
the real application of various kinds of modes of digital assessments which were conducted by each of the participants and to cross check each of the participants’ opinion regarding their students’ preferences toward the digital assessment.

For the purpose to analyze the data, the transcripts of the verbal data were categorized based on the data which were needed to answer the first research question, “What makes the teacher use digital assessment?”. The data was categorized into four parts then they were coded in each part, namely the participants’ experiences in applying the digital assessment [PEX], their likes and dislikes regarding the digital assessment [PLD], and their considerations of applying digital assessment in their teaching activities [CON]. While the data gathered from the classroom observation was intended to answer the second research question, namely “How do the teachers apply digital assessment to make better learning experiences?”. The researcher displayed each of the participants’ activities in applying the digital assessments in the classrooms to find out the uniqueness and variations of each participants’ teaching styles in modifying the application of digital assessment which are helpful and beneficial not only for teaching English in English Department but also in non-English Department.

3. RESULTS AND DISCUSSIONS

From the first interview, the researcher found out that all of the participants in this study were eased in assessing their students and they also got several benefits with the application of the digital assessment, such as saving the teacher time, upgrading the education quality for the students and giving accurate feedback. This answering the first research question regarding the purpose of why they use digital assessment in their teaching activities. The finding is in line with the findings of the study from J. W. Gikandi, D. Morrow, and N. E. Davis, (2011) at Leeds Metropolitan University in where they found that E-assessment saved up to £3000 per cohort in staff time. E-assessment also aids the teacher to enhance the quality of feedback for the learners. Moreover, E-assessment allows the teacher to trace the learners’ performance and create analysis across many assessments. For answering the second research questions, each of the participants’ perceptions regarding the use of the digital assessment as well as the teaching activities done by the five participants are explained in detail below.

Participant A

Participant A has conducted the digital teaching in English Language Teaching (ELT) since 2014 up to now. He applies the digital teaching for teaching Entrepreneurship and Computer Assisted Language Learning (CALL) for English Department and Non English Department. He prefers to use technology in his teaching and learning activities by using EDMODO and CANVAS. He uses EDMODO for assessing the students. He provides the assessment in a form of multiple choice, True or False and Completing the Blanks. However, this platform has a limitation in which it cannot assess the essay type of assessment so the assessor has to check it manually. He uses CANVAS in planning the teaching and learning activities. He always posts his teaching materials from meeting 1 up to 16, so that the students can download the materials by themselves and to have a better preparation in their study. By using CANVAS, there is a menu called discussion where the lecturer can post a topic for a discussion and he can see the flow of the students’ discussion there while directly giving feedback on the result of the students’ discussion. The students really love the application of CANVAS and EDMODO because they can experience learning in a different way and they feel like they are not learning even though they are actually in the process of learning. In brief, the learning activities was fun. As it is stated by J. Donovan, C. Mader, and J. Shinsky, (2007) that most of the students prefer E-assessment, because they can control their own study, friendly look and
treat the test as games and simulations, which is similar to the learning environment and recreational activities. Furthermore, digital assessment also stimulates the students to learn independently at home or at the campus, therefore it helps shaping them to be autonomous learner. Based on participant A’s opinion, digital assessment contributes to the development of the quality of Indonesia’s education system because the teacher must comprehend the technology to be able to apply it in their teaching and learning activities. The teachers’ mastery in technology will simultaneously upgrade the teachers’ competency in teaching.

The following are the practice of the digital assessment of participant A class in Computer Assisted Language Learning (CALL) class;

**Pre- Activities**
1. Prompts the students by showing to them, the digital story about “Ande- Ande Lumut” without mentioning the title.
2. Asks the students regarding the story that they have watched; the title, the plot, the character, the setting and the moral value of the story.
3. Introduces to the students on how to make digital story telling.

**Whilst activities:**
1. Lecturer divides the students into a group.
2. Lecturer assigns the students to choose a title to be developed into a digital story telling. The story can be a fable or folklore.
3. The students work on their story plot and decided the settings.
4. The students begins to sketch their digital story.
5. The lecturer assists the students to develop their digital story telling while provided the answer when there are some students asks questions.

**Post activities:**
1. The lecturer asks the students to collect their works.
2. The lecturer asks the students to present their work.
3. The lecturer distributes the scoring sheet to the students and asks the students to score their peer performances.
4. The lecturer gives feedback on the students’ presentation and asked the students to collect the scoring sheet.
5. The lecturer asks the students to email their work to the lecturer’s and posts their work at You Tube.

**Participant B**
Participant B has taught by using digital technology as well as applied the digital assessment for almost two years, started from 2018 up to now. He applies the digital assessment for his Writing class. He usually asks the students to write the essays online classroom and he directly gives feedback to the students and scores them online. Digital assessment allows him to have the data that are space efficient instead by using papers and can be access anytime and anywhere. His students are also happy with the application of digital assessment since they can get the feedback right after they submitted their assignments. Participant A does not have any difficulty in applying the digital assessment as long as he and his students have the strong connection of internet. Based on his opinion, Indonesian teachers must always follow the development of the technology to improve their teaching skills therefore they also have participated to improve Indonesia’s quality of education.

Below are the application of the digital assessment practiced by Participant B in the Writing class:

**Pre- activities**
1. A day before the Writing class begins, the lecturer posted an announcement to the students to go to the campus at the next day by bringing a laptop.
2. On the next day, the lecturer explains to the students about how to develop descriptive writing, via online classroom.
3. The lecturer asks the students to go outside for about 10 minutes and take pictures by using their gadgets regarding the life in the campus.
3. After taken pictures, the lecturer asks the students to open their laptop and start to write a descriptive essay about the life in a campus (950-1,200 words).

**Whilst activities**
1. The lecturer asks the students to submit their assignments via online classroom.
2. The lecturers directly gives feedback on the students’ assignments.
3. At the second meeting, in the classroom, the lecturer asks the students to start to develop a story about the life in a campus by using the pictures that they have taken before and put them in the collage.
4. The lecturer explains to the students how to work with the photo editor and picture collage as well as to make the digital story.

**Post activities**
1. The lecturer asks the students to present their pictures in front of the classroom.
2. The teacher gives feedback to the students’ work.
3. The lecturer asks the students to print their works and their essays and post them at the campus wall.

***Participant C***
Participant C has applied the digital learning and assessment for a year from 2018 up to now. According to him, digital assessment is an assessment which is done digitally using LMS (Learning Management System) such as Edmodo, Moodle and Schoology. He applies Schoology for teaching Writing and Grammar for non-English Department students. The students are happy with the application of Schoology because they think that it is different application in teaching and they could develop their knowledge in technology every time they do the learning activities. The students can also see their peers’ mistakes from the online classrooms so that they can learn from their peers’ mistakes.

Digital assessment helps participant C to save the time in teaching because the teaching and learning activities are very flexible. This finding is in line with the study done by A. Way (2012) which states that digital assessment is very useful for the students in remote area because it helps them to learn and assess in their locations and it can take it any time, this provides flexibility for students to conduct the exams anywhere and anytime. The assessment in the Writing class is in the form of multiple choice. The platform is very good because it helps him to control the students’ discipline in submitting the assignments since in the platform shows a date and time of the students’ tasks submission. The assignment or the test can be done anywhere and anytime. However, this platform has a disadvantage because the lecturer does not know who is logging in the platform, it can be his own students, their peers or their relatives. Therefore, this platform gives the possibility for the students to cheat during the test. At the beginning, participant C has difficulty in applying Schoology because it is a new platform and he is not familiar with it but not long after that, he could manage the difficulty. As it is suggested by S. Jordan and T. Mitchell, (2009) that several teachers are unaccustomed with technology, or most of them use E-assessment for first time. Therefore, teachers require a training to be more confident in using E-assessment system. The following are the activities applied in the digital assessment in Grammar classroom of Participant C;

**Pre activities**
1. The lecturer posted a quiz in Schoology, the grammar quiz is in a form of multiple choice.
2. Schoology platform sets up the time for the students to do the quiz for 40 minutes.

**Whilst activities**
1. The lecturer asks the students to submit the online quiz based on the time provided.
2. The lecturer checks the students’ punctuality in doing the quiz.
3. The platform shows the students’ mistakes then the lecturer directly distributes the quiz scores to the students.

**Post activities**
1. At the next meeting, the lecturer discusses the quiz together with the students in the classroom.
2. The lecturer provides time for the students to do the QA sessions regarding the quiz.

**Participant D**
Participant D has carried out the digital teaching and the digital assessment for a year. She uses Google classroom for teaching Reading and Writing. She does not only posts her assignments in the Google forms but also the class syllabus, class rules and lesson guides. This platform allows the educator to score the students’ test immediately and to upload several images or You Tube videos. Furthermore, digital assessment helps her when she wants to give additional assessments in an instant time. The students like the application of digital assessment because they can use their gadgets in the classroom and they feel like they are not being assessed even though they are. However, the students have difficulty in understanding the lecturers’ feedback since the students get used already to have the manual feedback from the lecturer, based on their opinion the manual feedback is clearer and they can directly see the lecturers’ face which make them feel secure and satisfied with the results of their assignments.

Based on participant D opinion, students become more independent through the application of digital assessment, they can set their own learning and goals, and therefore digital assessment helps the students to become an autonomous learners. This is in line with the previous study done by Bull & McKenna, 2004, “Experts and educational technologists highlighted that web-based assessment plays an important role in increasing the quality of student learning experiences, especially in the higher education”. Moreover, the increase use of digital tools by Indonesian teachers demand the teachers to always update with the technology enhancement so at the same time it will contribute to the repairmen of quality of Indonesia’s education system.

Below are the steps of teaching activities done by participant D in Reading class;

**Pre activities**
1. The lecturer distributes the class code to the students and asks the students to make Google account.
2. The lecturer asks the students to sign up in Google classroom which has been set up by the lecturer.
3. The lecturer asks the students to watch a video entitled "Death Penalty".
4. After watching the video, the lecturer asks the students to answer several questions regarding the video they have watched.

**Whilst activities**
2. The lecturer gives time for students to read the reading passage for 15 minutes.
3. The lecturer asks the students some questions regarding the passage such as the main idea of the passage, the topic sentence as well as the supporting sentences to check the students’ comprehension of a passage.
4. The lecturer asks the students to answer the multiple choice questions provided in the Google classroom.
5. The lecturer grades the students immediately then discuss the questions with the students.

**Post activities**
1. The lecturer asks the students to develop a paragraph (750-900 words) about their point of view about death penalty in Indonesia.
2. The lecturer asks the students to post their works in the Google classroom if they have finished.

**Participant E**
Participant E has conducted teaching and assessing by using E-platform for almost a year and she is interested to continue to apply the e-learning and e-assessment. She applies the digital teaching in a Speaking class. As she aims to improve the students’ grammar so she asks the students to download a grammar application called *Go Grammar* from their gadgets. In this application, there are two levels of assessment, namely Basic and Advanced. It is a free application with each of the level consists of around 100 multiple choice and True or False questions for the students. If the students would like to upgrade to the Advanced level, they have to pass the Basic level first. The students can do the assessment in their own time. The educator can also grade the students immediately. This platform really helps her to assess the students in a big class even though it cannot assess the speaking skills but it helps to boost their grammar skills. After this grammar enrichment, the students’ accuracy in speaking are raising. Due to the use of technology, participant E notes that it helps to improve the educators’ competence in the teaching activities that can also help the students to achieve their success in learning. The teacher must join the workshops or seminars to keep update with the latest development of the technology. This will impact on the improvement of quality of Indonesia’s education system.

The following are the implementation of digital assessment in Speaking class;

**Pre activities**
1. The lecturer divides the students into several groups. Each group consists of 3 persons.
2. The lecturer describes to the students the tasks that they have to conduct in a group, namely to make a mini drama.
3. The students began to develop the story plot and the settings.

**Whilst activities**
1. The lecturer assists the students in developing the story plot.
2. After they have developed the story plot, the lecturer asks them to present the drama in front of the classroom.

**Post activities**
1. The lecturer asks the students to video tape their peers’ performances.
2. The lecturer distributes the e-scoring rubric to the students and asks them to fill up from their gadgets.
3. At the next meeting, the lecturer plays the video tape of the students’ performances and asks the students to analyze their performances, their fluency, pronunciation, grammar, and so forth.
4. The lecturer asks them to comment on each other performances.
5. The lecturer gives feedback to the students.

From the findings above, it can be seen that the teaching and learning activities done by the five lecturers from different universities were varied and each of the participants shows positive perspectives towards the implementation of digital assessment. Digital assessment has proven can ease the lecturers work in teaching and assessing the students in a big class and at the same time it develops the educators’ competency in technology enhanced learning and assessment. Though, some lecturers once face difficulty in the implementation of digital assessment at the beginning but it did not lessen the participants’ intention to continue teaching and assessing using digital platforms. These findings are in line with the study of Mueller et al., 2008 “teachers experience some challenges and hindrances all the time. The fast pace of technology causes teachers to think again the implications for them in their role as educator as well as lifelong learners. The challenge for teachers is to keep developing their knowledge and skills about what to teach and how to teach. The pace of technological change in society and in
Schools continuously growing and will continue to be so. Teachers usually use ICT to provide their role in advising their students, monitoring their development and assessing their achievement”. Moreover, the students also shows positive feedback toward the application of the digital assessment as it helps them to set up their own learning goal and motivates them to take more part in the learning activities. Digital learning not only useful for the teachers but it also helps to instill the love of learning toward the students so that they can reach success in the future.

5. CONCLUSION

Based on the study that the researcher has conducted, it can be concluded that the use of technology in the teaching and learning activities brings positive impacts for the educators, especially in the tertiary level. It saves the teachers’ time in assessing and grading the students especially in a huge class, it gives the sparks in the teaching and learning activities so that the students do not feel bored during the learning activities, and it helps to bridge the gap between the learners and the educators since they can keep in touch anytime anywhere. Furthermore, digital assessment helps to stimulate the students to learn independently, the learners become the active participant on learning. This will help the students to obtain the success in learning. Based on the participants’ opinion regarding the use of the digital assessment, they are all agreed that the use of technology in digital assessment helps to improve the quality of Indonesia’s education.

Teaching adolescents are indeed a difficult task. It is sometimes hard to attract their attention during the teaching and learning activities. However, the application of technology helps to tackle this problems since most of the adolescents students cannot be separated from the technology because they are from generation Y. There is no doubt that experience and textbooks can aid the students in the learning activities, but technology has proved to be one of the best tools because adolescents love all kinds of gadgets and software programs. They like to get involved with attractive webpages and social networking sites. Several years ago a song or a scene from a movie can entice the students’ interest in learning but nowadays these resources begin to lose their novelty. For this reason, the newer technology can be an effective way to catch the pupils’ attention and interest and help the educators to teach English as a second language in a more interesting way.

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