Online Applications to Support Remote Classroom Dialogue and Assessment

Nur Aisyah Zulkifli 1, Zaitun 2, Yenni Rozimela 3, Mirawati 4

1 English Education Department, State Islamic University Sultan Syarif Kasim Riau, Pekanbaru, Indonesia
2 State Islamic University Sultan Syarif Kasim Riau, Pekanbaru, Indonesia
3 English Education Department, Padang State University, Padang, Indonesia
4 Islamic Education Department, State Islamic University Sultan Syarif Kasim Riau Pekanbaru, Indonesia

* nur’aisyah.zulkifli@uin-suska.ac.id

Abstract. This study investigates the impact of using online applications, which is integrating software or platform to support remote teaching and learning. Lots of online applications, both free and paid-for, can be used by teachers to enrich classroom interaction and to support students’ ability and understanding in the process of teaching and assessment. This study used descriptive mixed method design. To collect data, questionnaire was distributed to 140 students from senior high schools in Riau province. The findings showed that students believe in the significance of online applications to simplify creating, distributing, and grading assignments and receiving immediate feedback which is supported by some applications. On the other hand, the findings indicated that remote teaching did not create huge opportunities for effective learning and collaboration outside the classroom. Students need that the teachers should focus on pedagogy and learning, rather than technology. It is very important to provide immediate feedback during the formative assessment process to enhance students’ performance.

Keywords: online applications, remote teaching and learning, classroom dialogue, assessment

1. Introduction

Technology allows collaboration between teachers and students to support remote learning and to enable new ways of delivering lessons. Technology is the enabler of e-Learning platforms[1]. A platform is what that application runs on. The application can help teachers to create learning activities based on the curriculum demand. Ideally, it is integrated into the existing website or learning management system. Teaching and learning processes using the application is more effective to encourage students to create their own.

The Indonesian government has issued a notice related to the COVID-19 pandemic, one of them is related to the implementation of teaching and learning process. During the Covid 19 pandemic the learning process in schools was replaced by distance learning. After a few weeks the authors noticed something interesting to pay attention to. The distance learning process is not as easy as one might imagine. Learning progresses relatively smoothly but there are also problems that arise in this process.
Furthermore, the teachers are required to do distance learning, or well known as Pemelajaran Jarak Jauh (remote teaching and learning). Social Distancing is forcing teachers to maintain interaction with students. This is appropriate with the recommendation of the World Health Organization (2019) about physical distancing and social distancing. Yet, the teachers get an obstacle to do. Most teachers do not have the expertise in planning, applying, and evaluating distance learning.

Intuitively, both parents and teachers commit to imitate the process of face-to-face learning. This intuition may not be appropriate when learning conditions are no longer the same. The presence of application as technological innovations helps overcome the barriers of space and time[2]. The issue is no longer one of how to use technology to teach. But in some case students, teachers, and parents may be limited in access to up-to-date technology.

Even after years of scholars remain to focus on the institution that intends to provide more eLearning courses using application[1][3], effective teaching with technology[4], and online learning [5]. Besides, online assessment[6] are also integrated with students online learning[7] to enhance learning process [8].

It cannot be denied, the role of technology application in education and learning process[9]. Various applications can be utilized optimally to create various learning innovations. Online learning is form of learning innovation in accordance with current technological developments. Online application is to use some devices and intelligent technologies enriching classroom interaction and assessment.

a. ONLINE Application to support remote teaching and learning

1) Zoom Cloud Meeting

Since the impact of covid-19, Zoom has explosive growth as a product of the teleconference software in the educational world, especially in Indonesia. This application is a web-based video conferencing that allows the users to meet online using desktop or mobile with or without video. Practically, the teachers and students can use this application free, but the time is limited of 40 minutes for some participants. Zoom allows the teachers to record the activity during the conference, share or annotate teaching material on student’s screens.

2) Google Classroom

Google Classroom is developed by Google as a free web service for schools. Google Classroom provides docs, sheets, slides, Gmail, and calendar to manage student and teacher communication integrated into a cohesive platform. It serves the teachers’ strategies and styles. It also assists students’ understanding, idea and participation in each subject[10].

3) Quizizz Application

Quizizz is the application used by the teachers for online assessment in the form of students' quizzes. Quizizz application is used as a teaching and assessment tool [11] to enhance learning process[12]. The quizzes are usually homework with a specific deadline. To use this application, teachers share a unique access code to the students. It can be recorded live as a timed competition

4) Youtube

Potential of YouTube [13] and the effective use of YouTube play a leading role in helping learners understand the lesson [14] in teaching and learning process. YouTube helps students to communicate and to experience the events in the videos. YouTube is being used by teachers to encourage innovation and creativity as an effective method in the age of information and digital technologies

b. Classroom dialogue and assessment

Classroom dialogue is a productive context that happens in the teaching and learning process. Veen and Oers clarified ways of orchestrating classroom dialogue and effects on learning outcomes[15]. A productive classroom talk is also called as classroom dialogue. Classroom dialogue is students’ central participation that promotes student's identities, encourages student engage argumentation, critical thinking and transformative learning. It is not necessarily restricted to direct verbal face-to-face
exchanges but also e ICT mediated interactions. In this study classroom dialogue refers to students' individual oral competence and ability to participate in dialogues.

Furthermore, this study focuses on pedagogical approach for online environment. Almost lecturers use several online applications in the classroom as a product of technology. The applications help lecturers to monitor students’ progress and to assess performance. Online applications also give chance to lecturers to share feedback continually during the teaching process or out of classroom.

This study investigate impact of using online application toward remote classroom dialogue and Assessment. The assessment realizes a place one trust in helping to encourage students' engagement in a shared critique, review and dialogue. [16]. Thus, the assessment should be documented, having criteria, ensuring the content of the course, learning outcomes, it should be appropriate.

2. Methodology

The study employed mixed research methods. Mix- method implicates a higher validity and reliability of qualitative and quantitative data analysis with a multi-process. This approach offset the weaknesses of the research methods, permit researchers to do multiple data analyses, recheck its convergence, and enables researchers to collect effective data. Therefore, this study used a set of questionnaires for the quantitative method using the means and standard deviations, and for the qualitative method integrated with interviews by analyzing students’ responses to three open-ended questions. The questions to employ to boost the authenticity of a research. The participants felt free to express their opinions because the answers were no pre-determined required. Open-ended responses are unique, it offers student's freedom of expression and perhaps most important aspect.”.

1) Sample

The study sample consisted of 140 students in senior high schools, representing 75 people from public schools, and 75 people from private schools. The use of cluster sampling technique was used in this study from each class (X, XI, XII) with different schools. Students who participated in the study were selected students randomly. To collect the data from the students, questionnaires were distributed by using Google form.

2) Instrument

The instruments used in this study are questionnaire and open-ended question. ) Some questions in the questionnaire were appointed from Johan (2014) with some improvement by the authors. The question consisted of 17 items that were related to online application (5), classroom dialogue and assessment (6 items), and the importance and effectiveness of using online applications (6 items). To get a holistic view of student's opinions and level of agreement, a Likert scale was used with 5 response options. The choices ranges are from Strongly Agree to Strongly Disagree. Open-ended questions asked students perception about the impact of using online applications to support remote classroom dialogue and assessment. It also asked problems may be faced by students when using the online application. The questions provide the opportunity to the students to elaborate and clarify their perception regarding the use of online applications as a tool to support remote classroom dialogue and assessment. Triangulate the data collection in mixed-method offer deeper understanding.

3. Result and Discussion

Students’ responses are presented using the mean and standard deviation statistics in this section. Their responses to the open-ended questions are also provided to highlight the most important points that emerged from these responses. Students’ responses promote the answers they shared in the questionnaire. They foreground the important aspects of this study. The open-ended question produced qualitative data that may or may not be accessible by other methods to reveal innermost thoughts, emotional reactions, reference frame, and cultural assumptions” (Woike, 2007).
Table 1. Descriptive Statistic for online application used in the classroom

| Item                                                      | Mean | SD   |
|-----------------------------------------------------------|------|------|
| Online application is simple for teachers and students to use | 4.22 | 1.07 |
| Online application serve various learning styles and make learning pleasure | 4.49 | 1.01 |
| Online learning develops students independence             | 4.17 | 1.11 |
| It needful Internet packages or go to cyber cafe to use the application | 4.32 | 0.80 |
| Technician difficulties encountered obstacles to student learning | 4.27 | 0.77 |
| Overall                                                   | 4.35 | 0.52 |

From the table, it can be understand that the perception of students about online application used in their classroom, their responses indicated that online application is simple for teachers and students to use (Mean = 4.22, SD = 1.07), to provide different learning styles and to make learning more fun (Mean = 4.49, SD = 1.01), to develop students independence (Mean = 4.17, SD = 1.11), even though it is required to buy Internet packages or go to a cyber-cafe (Mean = 4.32, SD = 0.80), and technical difficulties to students learning (Mean = 4.35, SD = 0.52). The results showed that participants agree that using the online application in the classroom (Mean = 4.35, SD = 0.25).

Although the statistical results show good results on the use of online applications, open ended questions show an inverse comparison. There were complaints from students who stated that students were not used to independent learning and felt lack of support because they could not interact directly with teachers. Meanwhile the teacher continues to strive to create learning content that allows students to learn optimally without the presence or face to face with the teacher.

Table 2. Descriptive statistic for classroom dialogue and assessment during remote teaching and learning

| Item                                                      | Mean | SD   |
|-----------------------------------------------------------|------|------|
| Online application allows teacher to explain the material | 4.04 | 1.14 |
| Online application provides question and answer related to the topic | 4.27 | 1.02 |
| Online application helps me get immediate feedback        | 4.19 | 1.09 |
| Online application assists me to check my progress and understanding of the content | 4.12 | 1.27 |
| The online application give chance to the students to analyze and revise what right or wrong answer | 3.98 | 1.31 |
| Online application copy the dialogue and assignment like in the classroom | 4.54 | 0.86 |
| Overall                                                   | 4.23 | 0.56 |

It is obvious that in investigating students perception about classroom dialogue and assessment during remote teaching and learning, their responses showed online application allows the teacher to explain the material (Mean = 4.04, SD = 1.14), in providing question and answer related to the topic (Mean = 4.27, SD = 1.02), in helping students get immediate feedback (Mean = 4.19, SD = 1.09), in assisting students to check my progress and understanding of the content(Mean = 4.12, SD = 1.27), in
giving chance to the students to analyze and revise what right or wrong answer (Mean = 3.98, SD = 1.31), and in copying the dialogue and assignment like in the classroom (Mean = 4.54, SD = 0.86). The results also showed that participants agree that there are classroom dialogue and assessment during remote teaching and learning (Mean = 4.23, SD = 0.56).

Remote teaching and learning provides a belief that the learning process starts with students. Teachers are required to be able to design a learning process that enables students to interact or have a dialogue during the learning process, and carry out a structured assessment process like an assessment in class. The conclusion got from open ended questions that dialogue and assessment has been carried out during distance learning but it does not accommodate all the aspirations of students. This is due to time constraints and technical problems. For example, “the network may be slow or may not work at all”

Table 3. Descriptive Statistic of the importance and effectiveness of using online applications

| Item                                                                 | Mean | SD  |
|----------------------------------------------------------------------|------|-----|
| Online application assists students to understand learning instruction even though far from a teacher | 4.57 | 0.77 |
| Online application manages good practice and homework for the learning | 4.46 | 0.89 |
| Online application helps my lesson more effective compared to offline classroom | 4.29 | 0.96 |
| Online application enables learning at any place and any time | 4.38 | 0.80 |
| Online application gives more advantages rather than disadvantages to my academic achievement | 4.28 | 1.00 |
| Online application impacts to my learning outcome | 4.19 | 0.98 |
| Overall | 4.40 | 0.54 |

The authors have experienced to utilize some online applications to simplify creating, distributing, and grading assignments and receiving immediate feedback for remote teaching and learning. Yet, it is for higher education program students. It was interested in finding out the importance and effectiveness of using online applications to support remote classroom dialogue and assessment for senior high school students. Thus, a preliminary study was conducted to know what application used by the teachers and students to support remote classrooms. The result showed that they used Zoom Cloud Meeting, Google Classroom, Quizizz, and Youtube. The questionnaires were distributed to the students at the end of the semester to measure the importance and effectiveness of using online applications.

Hence, to further reflect the importance and effectiveness of performing online application to support remote classroom dialogue and assessment for senior high school students, overall, students denoted that they agree on the importance and effectiveness of online applications to support remote classroom dialogue and assessment (Mean = 4.40, SD = 0.54). The students indicated that the like to use the online application because assists students to understand learning instruction even though they far from a teacher (Mean = 4.57, SD = 0.77). Furthermore, they stated that the online application manages good practice and homework for the learning (Mean = 4.46, SD = 0.89). The students who participated in this study recognized that online application helps their lesson more effective compared to the offline classroom (Mean = 4.29, SD = 0.96), the online application enables learning at any place and any time (Mean = 4.38, SD = 0.80), Online application gives more advantages rather than disadvantages to their academic achievement (Mean = 4.28, SD = 1.00), and Online application impacts to their learning outcome (Mean = 4.19, SD = 0.98).
In analyzing and discussing the open-ended responses, the authors centered their attention on the relevance of the responses to the aim of the study. In other words, to what extent the participants’ open-ended responses contribute to the research questionnaire. Evidently, the participants’ statements in the questionnaire positively promote remote classroom dialogue and assessment. These responses strongly supported the research question using the online application during remote teaching and learning.

Furthermore, in this study, it found gaps between statistical analysis and students’ response to open ended question. It is found difficulties experienced by students while using online applications. In the introduction, it has been stated that both teachers and students were just using online applications for the first time in one semester as a result of Covid 19. A student said, “The network was slow and often intermittent because it not works. Another student stated “long distance communication was not optimal compared to being carried out directly.” Last student argued assignments and assessment from the teacher makes me feel bored and decreased enthusiasm for learning.

However, they generally agreed that online application is important to simplify creating, distributing, and grading assignments and sharing immediate feedback which is promoted by some applications. Unfortunately, remote teaching did not create huge opportunities for effective learning and collaboration outside the classroom. Students need that the teachers should focus on pedagogy and learning rather than technology. The assignment of each meeting raises the assumption for students that the online application is for giving assignments not to explain lessons. Providing immediate feedback during the formative assessment process, with the aim of improving students’ performance, is very crucial in teaching and learning.

4. Conclusion

The study on the effectiveness using online application in the teaching and learning process have pointed by many experts in enormous literature. The purpose of this study is to investigate the impact of using online application toward remote classroom dialogue and Assessment. The finding to emerge from this study that they generally agreed that online application is important to simplify creating, distributing, and grading assignments and sharing immediate feedback which is assisted by some applications. However, remote teaching did not create huge opportunities for effective learning and collaboration outside the classroom. Students need that the teachers should focus on pedagogy and learning rather than technology. Students feel bored and decreased enthusiasm for learning. In addition, long-distance communication is not optimal compared to being carried out directly. Besides, technical problems such as network have an impact on using online applications for the remote classroom. It is needed to investigate further empirical research on the impact of using online applications on students psychological and performance.

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REFERENCES

[1] A. Bhardwaj and S. Goundar, “Student’s Perspective of eLearning and the Future of Education with MOOCs,” Int. J. Comput. Sci. Eng., vol. 7, no. 5, p. 13, 2018.
[2] A. J. Mendes, I. Pereira, and R. Costa, “Computers and education: Towards educational change and innovation,” Comput. Educ. Towar. Educ. Chang. Innov., no. June 2014, pp. 1–284, 2008.
[3] J. H. Sharp, “Development, extension, and application: A review of the technology acceptance model,” Proc. Inf. Syst. Educ. Conf. ISECON, vol. 23, no. January 2007, 2006.
[4] G. Moses et al., “Effective teaching with technology,” Proc. - Front. Educ. Conf. FIE, no. December, 2006.
[5] Rasmidila, “The Perceptions of Primary School Teachers of Online Learning during The Perceptions of Primary School Teachers of Online Learning during the COVID-19 Pandemic Period: A Case Study in Indonesia,” J. Ethn. Cult. Stud., vol. 7, no. July, pp. 90–109, 2020.
[6] S. Khan and R. A. Khan, “Online assessments: Exploring perspectives of university students,” Educ. Inf.
[7] H. Elmahdi, Ismail; Al-Hattami, Abdulghani; Fawzi, “Using Technology for Formative Assessment to Improve Students’ Learning, Turkish Online Journal of Educational Technology - TOJET, 2018-Apr,” vol. 17, no. 2, pp. 182–188, 2018.

[8] G. Shabiralyani, K. S. Hasan, N. Hamad, and N. Iqbal, “Impact of Visual Aids in Enhancing the Learning Process Case Research: District Dera Ghazi Khan,” J. Educ. Pract., vol. 6, no. 19, pp. 226–233, 2015.

[9] I. K. Sudarsana et al., “Technology Application in Education and Learning Process,” J. Phys. Conf. Ser., vol. 1363, no. 1, 2019.

[10] R. A. S. Al-Maroof and M. Al-Emran, “Students acceptance of google classroom: An exploratory study using PLS-SEM approach,” Int. J. Emerg. Technol. Learn., vol. 13, no. 6, pp. 112–123, 2018.

[11] L. Salas-Morera, A. Arauzo-Azofra, and L. García-Hernández, “Analysis of Online Quizzes As a Teaching and Assessment Tool,” J. Technol. Sci. Educ., vol. 2, no. 1, 2012.

[12] M. J. Sánchez, C. Diego, and A. Fernández-Sánchez, “Using quizzes to assess and enhance learning of English as a foreign language,” Rev. Española Lingüística Appl. J. Appl. Linguist. Española Lingüística Appl. J. Appl. Linguist. Publ. under auspices Spanish Assoc. Appl. Linguist., vol. 30, no. 1, pp. 325–341, 2017.

[13] D. DeWitt, N. Alias, S. Siraj, M. Y. Yaakub, J. Ayob, and R. Ishak, “The Potential of Youtube for Teaching and Learning in the Performing Arts,” Procedia - Soc. Behav. Sci., vol. 103, pp. 1118–1126, 2013.

[14] A. Wael Abdulrahman, “The effective use of youtube videos for teaching English,” Int. J. English Lang. Linguist. Res., vol. 4, no. 3, pp. 32–47, 2016.

[15] B. van der Veen, C. van Oers, “Advances in research on classroom dialogue: learning outcomes and assessments,” Learn. Instr., vol. 48, no. November 2018, pp. 2016–2020, 2017.

[16] S. Warburton and C. Kohls, “Dialogical assessment patterns for learning from others,” in VikingPLoP 2016 - 10th Northern Conference on Pattern Languages of Programmes, 2016, no. September 2018, pp. 1–14.