The Use of E-Learning through Google Classroom to Improve Students' Articulation Phonetic Ability

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Abstract: This study aims to determine whether Google classroom can improve the students' ability in articulation phonetics or pronunciation at the English Department of IAIN Metro. The type of this research is classroom action research. It was conducted in 2 cycles. Data collection techniques of this study were test and observation. The results of this research showed that there was improvement in the students' ability in Articulation Phonetics. It can be seen from the average score in the pre-test was 60.3, post-test cycle 1 was 64.5, and post-test cycle 2 was 75.8. From the results, it can be concluded that the use of Google Classroom can improve the ability of articulation phonetics at the English Department of IAIN Metro.

Keywords: Phonetic, articulation, Google Classroom

BACKGROUND

The integration of information and communication technology (ICT) and education has become a common phenomenon of the 21st century. Therefore, the use of ICTs must be able to provide authentic material accessible to students in the class, so the use of ICT is not only taught about technology or how to use technology but also has to motivate students to use technology to improve knowledge and skills. The teacher should be able to make integration of content, pedagogical, and ICT (Yeop, Wong, Don, & Zain, 2019)

As we know, we are in the era of industrial revolution volume 4.0. This also affects the world of education which is different from the past because of the impact of the 4.0 industrial revolution (Suherdi, 2019). Globalization is very possible for us to communicate wherever we can, so the students are expected to take advantage of this because of the effects of globalization in the world of education. The development of information and communication technology must support ICT-based learning activities to improve student competency(Winasih, Cahyono, & Prayogo, 2019).

There are several applications that can be used to support internet-based learning such as Google Classroom, Schoology, and Edmodo (Hakim, 2016). The application can be used free of charge using a computer or cellphone. The online learning will be boring if only posted material with plain text, so it also requires the ability to create interactive images, blogs, and videos.

Articulation phonetics is one of the materials in the English Phonology course at IAIN Metro that learns how to pronounce sound through the organ of speech. There are several speech organs used in English pronunciation, namely the upper and lower lip, upper and lower teeth, tongue, alveolar ridge, hard palate, soft palate, uvula, and vocal cords (Carr, 2013). In this case, the researcher is the lecturer of the subject. According to the researchers' experience, in the learning process of the course, researchers need more time, given the vast scope of course material. The time given by the curriculum is 2 credits or 100 minutes per meeting. For this problem, researchers took the initiative to look for ways that material can be delivered quickly and completely, one of them is using E-learning facilities.

Students who are not used to pronounce English sounds will have difficulty if there are no models or examples of how to pronounce them (Lestari, 2013). Tutorial videos will make it easier for students to learn how to pronounce a sound through the speech organ (Deiniatur, 2019).In this case, the researcher makes a video that will make it easier for students to learn Articulated Phonetic material. After the video is made, the video is shared through E-learning.

Google Classroom is a web-based E-learning Application developed by Google. In 2014, Google introduced Google Classroom as part of Google Apps for Education (Shaharanee, Jamil, & Rodzi, 2016). Google Classroom can post the materials in the form of links from websites, Youtube, or files in the form of word and excel. In addition, Google Classroom can make it easier for us to communicate with students in one class, post announcements, post assignments, and take exams online.

There are some previous studies that have been done by other researchers before. The research about the use of Youtube which has been integrated with Google Classroom. Learning Media The use of Youtube integrated with Google Classroom-based E-Learning has much greater learning outcomes compared to students who use the internet to access websites without control (Prastiyo, Djohar, & Purnawan, 2018). The next relevant research is research that aims to find out the effectiveness of using Google Classroom as a learning media in SMK 1 Bangkinang. This study concluded that the increasing knowledge of SMK Negeri 1 Bangkinang teachers about the use of E-Learning, blended learning and the use of Google Classroom as a learning medium minimizes the use of paper in the teaching and learning process (Soni et al., 2018). From some of the studies mentioned above, researchers used Classroom Action Research with a focus on the use of Google Classroom to enhance articulation phonetic ability. This research is different from studies that have been done by previous researchers because this study uses Classroom Action Research. The formulation of the problem in this research is Can the use of E-learning based on Google Classroom increase the ability of Articulation Phonetic of Students in the English Department of IAIN Metro?

Articulation Phonetics

Phonetics is the study of speech sounds (Fromkin, Rodman, & Hyams, 2018). In phonetic studies, according to experts, it is divided into two main branches, namely Articulatory Phonetics and Acoustic Phonetics (Ramelan, 2003). Articulatory phonetics which is the main focus in the English Phonology course has the understanding that this study examines the workings of human speech organs functioning in producing language sounds, and examines the way the sounds are grouped. Whereas Acoustic Phonetics is not studied in lectures, because this study requires expensive and impractical electronic devices to be taught in class. Acoustic phonetic study is the study of the sounds of a language that is investigated for its vibrational frequency, amplitude, and other characteristics of sound (Ramelan, 2003).

Phonetic articulation is the study of how to produce language sounds using human speech organs, it studies how speakers produce sounds using speech organs (Zahid & Omar, 2006). In the Articulation Phonetic study, the organ of speech used is very important to learn. There are several organs used for speech, including Lips, Teeth, Tongue, Alveolar ridge, Hard palate, Soft palate, Uvula, Vocal cords (Carr, 2013)

In relation to English phonetics, there are two kinds of sounds namely Consonants and Vowels. To be able to say the sound, we must be able to know the articulation or how to sound it through the human speech organ (Kelly, 2001). Consonant is sound in which some breath is obstructed by teeth, lips, or tongue. There are 21 consonant letters in English letters and 24 consonant symbols in English. Consonants are usually produced together with vocal sounds (Christianti & Roberta, 2016)

Vowels are produced with little restriction of airflow from the lungs out of the mouth and/or nose. Vowel quality depends on the shape of the vocal canal when air passes. Different parts of the tongue may be high or low in the mouth; lips can spread or contract; velum can be raised or lowered (Fromkin et al., 2018)

Google Classroom

One of the online learning implementation that is currently popular and easy to use (user-friendly) is using Google Classroom. Google classroom is an application specifically for online learning media or the term is online class so it can make it easier for teachers or instructors to create, share, and collect all assignments without using paper anymore (Soni et al., 2018).

Google Classroom is a Learning Management System provided by Google for Teachers. This application provides a central service for communicating with students, making questions, and making assignments. In addition, this application provides activities to create classes, create class themes, add titles, descriptions, and location of rooms, add learning resources from files, Youtube Videos, and Websites, and can add teaching assistants in learning (Zhang, 2016).

In the implementation of the learning process in the classroom, Google classroom, it makes the learning process easier. To get it, teachers and students can download this application for free on smartphone devices in PlayStore for Android-based smartphones or Appstore for iOS-based smartphones (Rozak & Albantani, 2018). In addition, google classroom can also be used via a Laptop or Personal Computer (PC) by visiting the website https://classroom.google.com.

If we use a laptop or computer (PC), the following are the steps in using Google classroom: (a) Open any browser whether it's Mozilla Firefox, Google Chrome, Opera and others. Then we open the link https://classroom.google.com/h.;(b) Lecturers and students must have a Google account or Gmail account. If you want to use Google Classroom but do not have an account, Teachers and students cannot enter Google Classroom. If you already have an account, visit the site classroom.google.com the next step is to sign in. The teacher chooses to take a class if students choose to join the class; (c) The teacher or lecturer invites students through Gmail if the teacher already has a list of Gmail addresses of students or students. Teachers can also share class code with students so students can join independently, but this code is confidential so that no intruders enter it. The student Google or Gmail account that will be used must use a real name; (d) Lecturers can disseminate discussion information through the assignment page or discussion page available in google classroom. Then the lecturer gives group and individual assignments. Groups and individual tasks that have been collected will be saved to the Google Drive folder automatically; (e) Lecturers can also provide material in the form of text, video, and website in accordance with the course they teach on the Google Classroom page; (f) Students can discuss and ask the lecturer, if there is something unclear about the material presented by the lecturer.(Rozak & Albantani, 2018)

METHOD

This research used a classroom action research (CAR). Class action research is action research conducted by a teacher who is also a researcher and collaborates with others (collaboration) to carry out the stages of planning, implementing actions, observing, and reflecting collaborative actions. CAR has the goal of improving the quality of the learning process in its class through certain actions in several cycles (Kunandar, 2012).This study uses a class action research design adopted by the Kemmis and McTaggart designs, as quoted by Anne Burns. The purpose of the classroom action research carried out is to improve the ability of students and fix the problems in previous learning. This action research is carried out in several cycles, each cycle consisting of planning, action, observation, and reflection.(Burns, 1999).

The researcher conducted tests to find out the improvement in learning outcomes using Google Classroom. From these tests, the score will be obtained in the form of numbers. In the implementation of this activity, the researcher used descriptive statistical analysis, which is looking for the average score and the percentage of learning success. To get data in the learning process, we must be able to dig information from observation sheets and various actions taken by lecturers and students during the teaching and learning process. Then the data is summarized descriptively (Suharsimi, 2006).

FINDINGS
The Description of Cycle 1
 a. **Planning**
At this stage, the researcher makes a lesson plan, teaching materials, create classes in Google Classroom, and Quiz for exercise.
 b. **Acting**
The first meeting was held on August 15, 2019. At this meeting, researchers conducted a pre-test. The researcher explained the way the pre-test was carried out online through Google classroom. The questions consist of 25 words that must be pronounced correctly by students. Students record the vocabulary pronunciation, then send it through Google classroom.

The second meeting was used as the implementation of the main activity in cycle 1. The second meeting was held on Monday, August 19, 2019. The researcher explained the pronunciation skills and gave students the text of the material. The researcher read some vocabulary with the correct pronunciation. Then the researcher asked students to follow to read these words together.

The third meeting was held on August 26, 2019. At this meeting, the researcher conducted a post-test 1. The researcher explained the way the post-test was carried out online through Google classroom. The questions consist of 25 words that must be pronounced correctly by students. Students record the vocabulary pronunciation, then send it through Google classroom.
 c. **Observing**
In the observation activity, the Collaborator conducts observation in one meeting in cycle 1 of. At that time, the researcher gave the material to the students but the students still faced difficulties in saying the words. Then the researcher directed students to learn to use Google classroom
 d. **Reflecting**
At the end of cycle 1, the researcher and collaborators conduct joint reflections. Based on the data entered, reflection in cycle 1 is still found in deficiencies that occur in cycle 1. The deficiencies in the first cycle are students not yet familiar with the phonetic transcription symbol and do not know how to sound it.

The Description of Cycle 2
 a. **Planning**
At this stage, the researcher conducted several activities: 1) The researcher gave the material on how to pronounce English through phonetic transcription both consonants, vowels, and diphthongs; 2) The Researcher share videos on how to pronounce English from native speakers through Google classroom.
 b. **Acting**
This meeting was held on Monday, September 2, 2019, for 100 minutes. The first 40 minutes are done face-to-face and 60 minutes using Google classroom. In face-to-face activities, the researcher explained the material on how to pronounce consonants, vowels, and diphthongs.

Then in the e-learning session, students are asked to open google classroom. Students are asked to watch an English pronunciation video from native speaker. Besides watching, students were also asked to imitate the pronunciation. The researcher also shared videos of pronunciation of consonants that were often pronounced wrongly by students such as $/ \theta /$, $/ \eth /$, $/ \int /$, $/ \mathbf{3} /$, and $/ d\mathbf{3} /$.

The second meeting in the second cycle was held on Monday, September 9, 2019. This meeting was used for post-test 2 at the end of cycle 2. The researcher gave a post-test to students through Google classroom. Students are asked to pronounce 25 English Vocabularies, the pronunciations are recorded and then uploaded to Google Drive and the link is shared with Google classroom assignments.
 c. **Observing**
From observation in cycle 2, most students are interested in taking lessons, most students can practice well and correctly, and most students are active during the

teaching and learning process.

d. **Reflecting**

The researcher assumes that teaching using Google classroom can improve student pronunciation skills. By using Google classroom, students can learn pronunciation skills more easily because students can practice pronunciation more easily and effectively.

The Result of Test

a. **The Result of Pre Test**

The researcher conducted a pre-test to find out the pronunciation skills of students before applying treatments. That was done on Thursday, August 15, 2019. From the results of the pre-test, it was seen that most students had difficulty doing the test. Based on table 1, the average student score is 60.3, this shows that most students have not completed in achieving the minimum standard criteria of 70. At this stage, only 8 out of 32 students graduated from the minimum standard criteria.

b. **The Result of post-test 1**

In this stage, the researcher wanted to know the pronunciation skills of students after applying to learn with Google classroom, this research conducted a post-test 1. It was conducted on Monday, August 26, 2019. The average student was 64.5, this shows that most students have not completed in achieving the minimum standard criteria 70. At this stage, there are 10 out of 32 students passed from the minimum standard criteria. It can be seen that most students fail to achieve the material.

c. **The Result of post-test 2**

This research conducted a post-test 2 to determine the pronunciation skills of students after implementing Google classroom. It was conducted on Monday, September 9, 2019. It can be seen that the average student is 75.8. This shows that most students have completed in achieving the minimum standard criteria (70). At this stage, 27 out of 32 students passed the minimum standard criteria. It can be seen that most students graduate in achieving the material.
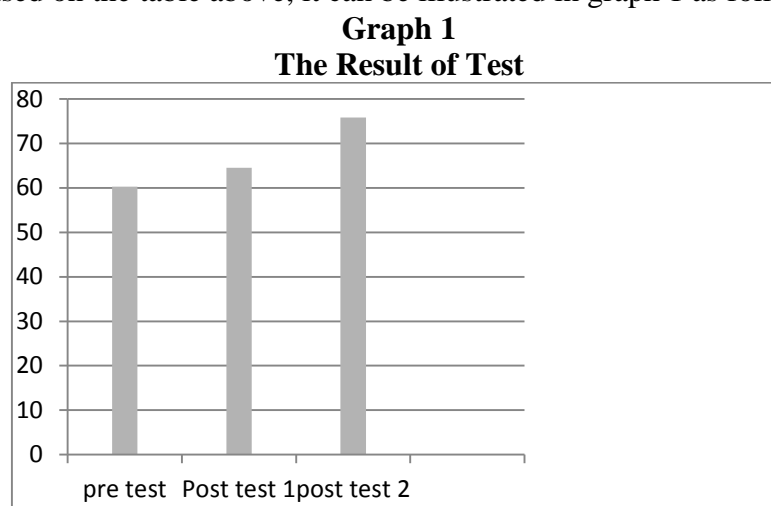
d. **Comparison of pre-test and post-test**

Post-test 1 in cycle 1 and post-test 2 in cycle 2 have improved students' pronunciation skills. Their average score increased from 64.5 to 75.8. From the table, we know that in post-test 2 there were 5 students who scored below the target or under the minimum target criteria, and 27 students scored above the criteria minimum standard. So, based on the results of the post-test 1 and post-test 2, it can be seen that the teaching target based on the minimum criteria has been reached and also means that using Google classroom can improve students' pronunciation skills.

Table 1
The Result of Test

	Test		
	Pre Test	Cycle 1 Post-test 1)	Cycle 2 Post-test 2)
Total	1930	2065	2425
Average	60.3	64.5	75.8

Based on the table above, it can be illustrated in graph 1 as follows:

Graph 1
The Result of Test

Based on the table and graph above, in cycle 1 from pre-test to post-test 1 has an average increased score from 60.3 to 64.5. There was an increase of about 4.2 points. Then from cycle 2 has an average increased score of 64.5 to 75.8, there was an increase of about 11.3 points.

The results of observations on student activities

Based on the observation, from cycle 1 to cycle 2 has an average score of progress in every aspect of student activities. There was an increase of about 31.2% in student activities paying attention to teacher explanations, from cycle 1 to cycle 2 had an average score of progress from 53.1% to 84.3%. Then from cycle 1 to cycle 2 in activities students understand how to pronounce words correctly has an average score of progress from 37.5% to 81.2%, there is an increase of 43.7%. Then there was an increase of about 40.6% in student performance activities, from cycle 1 to cycle 2 had an average score of progress from 43.7% to 84.35. In these activities students doing the correct pronunciation exercises from cycle 1 to cycle 2 had an average score of progress from 56.2% to 90.6, there was an increase of 34.4%.

Table 2
The results of observations on student activities

No.	pect	Cycle 1	Cycle 2	provement
1	ying attention	53.1 %	84.3 %	31.2 %
2	derstand	37.5 %	81.2 %	43.7 %
3	rformance	43.7 %	84.3 %	40.6 %
4	ercise	56.2 %	90.6 %	34.4 %

DISCUSSION

In this study, the pre-test was carried out individually. It aims to determine the ability of students before and after undergoing treatment. From the results of the pre-test and post-test in cycle 1, we know that there is an increase in the score of student results. This can be seen from an average of 60.3 to 64.5. This means that the increase in pre-test and post-test is 4.2%. The results of the post-test in cycle 1 and the post-test in cycle 2 indicate that google classroom has improved students' pronunciation skills. Their average score increased from 64.5 to 75.8.

Based on the above analysis, there are 84.3% of students passing the minimum standard criteria that means students can reach the target. The target is 75% of students get a score of 70. This means the research is considered complete.

From teaching and learning activities, the researcher and collaborator found that in learning activities students were more active and they were enjoyed learning English using Google classroom. The use of Google classroom can give motivation to the students in learning English.

The use of Google classroom is implemented with blended learning techniques, which combines face-to-face meetings and e-learning. Research on Google classroom has also been conducted by other researchers whose results also show that the use of Google classroom has a positive impact on learning.(Agustin, 2019)

The use of videos that have been integrated with Google Classroom also has a good impact on learning activities, because with videos students become more enthusiastic in learning.(Prastiyo et al., 2018)

Digital technology has influenced all aspects of human life. Education is no exception, understanding the use of technology at the level of pedagogical involvement will give us valuable insights about their relationship with teaching and learning. Pedagogy is about various forms of interaction between three aspects namely the relationship between teacher, student and the domain of knowledge.(Osman, 2017)

Pronunciation skills will be easier to teach when supported by good learning media, because lessons will be more concrete for students and students must improve their understanding. During the study, the researcher observed that students were interested in learning by using Google classroom. They are enthusiastic about the learning process.

The reseach conclude that teaching using Google classroom can improve students' ability in Articulation Phonetics. By using Google classroom, students can learn pronunciation skills more easily because students can practice English articulation more easily and effectively.

CONCLUSION

Based on the results of the research analysis, it can be seen that in the first cycle the average score of the pre-test was 60.3 and the average post-test in cycle 1 was 64.5. In the post-test in cycle 2, the average score was 75.8. There have been some advances after giving an action using Google classroom. The students are very interested in doing assignments given by researchers. The conclusion is the use of Google classroom can improve students' ability in Articulation Phonetics.

English teachers can use Google classroom in learning English because this media is very effective to improve students' ability in English. The teacher must be able to provide interesting material posted on Google classroom. The next research is expected to develop English materials on Google classroom that can be used to English students.

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