# Google Classroom Effectiveness Helping Educandy As Learning Media

**Endang Astuti[1], Sri Lestari[1,2], Farah Erika[1,2]**
[1]Chemical Education Study Program, Faculty of Teacher Training and Education, Mulawarman University, Samarinda, East Kalimantan, Indonesia.
[2]Megister Study Program in Education Management, Faculty of Teacher Training and Education, Mulawarman University, Samarinda, East Kalimantan, Indonesia.
[1]endang09ee@gmail.com

**ABSTRACT**

The current pandemic condition, namely the Covid-19 virus, has resulted in various schools having to implement online learning, therefore one of the efforts to help the online learning process to be more fun and not boring is to use learning media in the learning process. This study aims to determine the effectiveness of Google Classroom assisted by Educandy as a learning medium for students' chemistry learning outcomes. The population and sample in this study were all students of class X MIPA as many as 89 students, the sample was determined using a saturated sampling technique. This research method is descriptive quantitative research design with One Group Pretest Posttest Design. Data was collected by means of learning outcomes tests as the main data, student response questionnaires and observation as support data. The data analysis technique used is the n-gain test and the effect size test. The results of the calculations in this study are the average data for the analysis of N-Gain for learning outcomes is 0.625, which means that it is included in the moderate level of effectiveness. And based on the results of the Effect Size test, it obtained a value of 1,077 which means that the learning media used is included in the category of strong effect. The results showed that the use of Google Classroom assisted by Educandy was effective as a learning medium at SMA Negeri 1 Kembang Janggut.

**Keywords:** Educandy, Effectiveness, Google Classroom, and Learning Outcomes.

## INTRODUCTION

The current pandemic condition, namely the Covid-19 virus, has resulted in various schools having to implement online learning (Ernawati, 2018; K.Y.S. Putri, 2020). This is done in order to break the chain of spread of the Covid-19 virus (K.Y.S. Putri, 2020). Schools need learning media that can help the online learning process run and can make the learning atmosphere not boring (Ernawati, 2018; Fitriati et al., 2021; Harianto et al., 2019).

After making observations at SMA Negeri 1 Kembang Janggut, information was obtained that SMA Negeri 1 Kembang Janggut used Google Classroom as a learning medium during the online learning process. Based on the research of Nirfayanti & Nurbaeti (2019) the use of Google Classroom as a learning media has a very good effect on student learning outcomes. According to research by El Fauziah et al. (2019) explains that there is an influence on the use of Google Classroom learning media on learning motivation, Google Classroom can also help teachers to create and organize class assignments quickly and easily, provide feedback to students, and communicate with students without being limited by space. and time. Google Classroom will

make it easier for teachers to manage learning or manage classes as well as in conveying information precisely and accurately to students (Sabran & Sabara, 2019). According to research by Famukhit (2020) Google Classroom can be used as a place to collect assignments to make it faster and easier.

The use of Google Classroom learning media in this study will be combined with other learning media in the form of game-based media, namely Educandy (Ahmad, Firdausi Nuzula, 2020; Fitriati et al., 2021; Ulya, 2021). Educandy is a website that contains various kinds of educational games in it (Fitriati et al., 2021; Ulya, 2021). Educandy is one way to make learning activities fun, but still educational (Ulya, 2021). Educandy is a web-based application or digital game that has the slogan 'making learning sweeter' (making learning sweeter) (Fitriati et al., 2021; Lestari, 2020; Ulya, 2021). The Educandy display is made with sweet colors so that it gives a cheerful impression (Fitriati et al., 2021). Educandy can be played individually, duel with the computer, or duel with friends (Lestari, 2020). The advantage of Educandy is that it has many types of games that can be played, making it easier for teachers to create varied learning media according to their needs (Ulya, 2021). According to the research of Fitriati et al. (2021) learning using Eucandy is considered more effective in increasing motivation in the learning process.

## METHOD

The research method used is pre-experimental design. The design used in this study is a one group pretest posttest design. The population in this study was class X Mathematics and Natural Sciences at SMA Negeri 1 Kembang Janggut which consisted of 3 classes. Sampling was done by saturated sampling technique. Data collection techniques in this study were learning outcomes tests (pretest and posttest) as the main data, questionnaires (student responses) and observation as support data.

The data analysis technique used is the N-Gain test and the Effect Size test. With the n-gain formula according to Maltzer (2002) as follows:

$$N\text{-}Gain = \frac{Skor\ posttest - skor\ pretest}{Skor\ ideal - skor\ pretest}$$

The results of the N-Gain calculation are then interpreted using the criteria according to Maltzer (2002) in the following table:

**Table 3.3. N-Gain Value Criteria**

| Classification | Criteria |
|---|---|
| *N-gain* ≥ 0,7 | High |
| 0,3 ≤ *N-gain* < 0,7 | Medium |
| *N-gain* < 0,3 | Low |

The Effect Size test in this study uses the Cohen's one group sample method, the following is the formula and effect criteria according to Cohen et al. (2020):

$$Cohen's\ d = \frac{\bar{d}}{s_d}$$

**Table 3.4. One sample effect criteria**

| Classification | Criteria |
|---|---|
| 0 – 0,20 | Weak Effect |
| 0,21 – 0,50 | Simple Effect |
| 0,51 – 1,00 | Medium Effect |
| > 1,00 | Strong Effect |

## RESULT AND DISCUSSION

This study aims to determine the effectiveness of Google Classroom assisted by Educandy as a learning medium. Google Classroom is used as a classroom that is easy to set up, free of charge, can set deadlines for submitting assignments and is easy to use (Famukhit, 2020). Then with the help of Educandy which has many types of games that can be played, it makes it easier for teachers to make learning media that varies according to needs (Ulya, 2021).

This research was conducted in two online meetings. The first meeting, students fill in the absences that are available in Google Classroom. In the first activity, participants took the first test, which was a pretest for 30 minutes. The second activity, students learn the material presented in Google Classroom, namely redox reaction material on the topic of discussion of redox reaction development material and the determination of oxidation numbers. The third activity, students work on Student Worksheets (LKPD) which are available in Google Classroom, this LKPD can help the online learning process by using the steps in the Discovery Learning model in collaboration with the Educandy game in it. The type of Educandy used in this first material is the matchmaking type, because this type is included in the word pairing game that is suitable for use in redox reaction materials on how to determine oxidation numbers and redox development. This type of matchmaking has a variety of games that students can choose, namely naught & cross, crossword, match-up, memory, multiple choice. (see Figure 1).

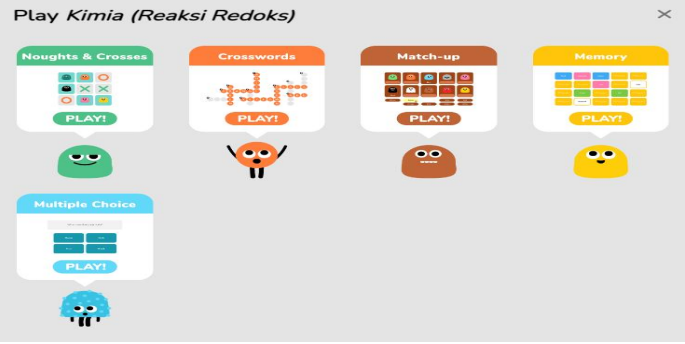


**Figure 1. Educandy Matching Pairs**

The fourth activity, students conduct a question and answer session for 5 minutes before the learning time runs out. In the closing activity, students conclude the material that has been delivered and other students add if there is something they want to add.

The second meeting, students fill in the absences that have been prepared in Google Classroom. The first activity, students learn the material that has been provided in Google Classroom, namely redox reaction material on the topic of discussing oxidizing reaction material, reducing reactions and types of redox. The second activity, students work on the Student Worksheet (LKPD) for 25 minutes. The type of Educandy used in the second meeting material is a quiz question, this is done because the type of game is included in a quiz question that is suitable for the material to determine the oxidizing agent, reducing agent and its type (see Figure 2).

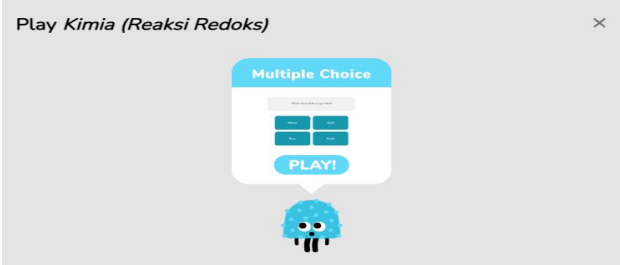


**Figure 2. Quiz Questions**

The third activity, students conduct a question and answer session and provide conclusions for 10 minutes. The fourth activity, students work on the Posttest questions that have been provided in the Goggle Classroom with a time limit of 30 minutes.

The effectiveness of Googgle Classroom assisted by Educandy as a learning medium can be measured from the N-Gain test, Effect Size test and support data such as student response questionnaires and observations. The value of n-gain to see the increase in learning outcomes in students after using learning media. The n-gain results are presented in Table 1.

**Table 1. Analysis of N-Gain**

| | *Pretest* | *posttest* | *n-gain* | Criteria |
|---|---|---|---|---|
| Average | 56,944 | 82,730 | 0,625 | Medium |

Activities that are prioritized while students use Educandy are ways of thinking logically, understanding concepts, reasoning, quickly and precisely. By using these learning media, students are invited to understand the redox reaction material more deeply with the help of various types of games in Educandy. So that it can create feelings of pleasure and motivation during the online learning process. This can be seen from the results of the N-Gain which shows that there is an increase in student learning outcomes after using learning media (see table 1). This means that the use of Google Classroom assisted by Educandy as a learning medium

includes a moderate level of effectiveness. The research is in line with the research of Harianto et al. (2019) which states that the use of learning media on redox reaction materials is effective with a moderate level of effectiveness.

During the learning process, the learning media used is Google Classroom assisted by Educandy. The media is very influential on student learning outcomes. This can be seen from the results of the effect size test which is presented in table 2.

**Table 2. Analysis of Effect Size**

| | d | Sd | Effect Size | Criteria |
|---|---|---|---|---|
| Average | 25,787 | 23,948 | 1,077 | Strong Effect |

Table 2 above shows that Google Classroom assisted by Educandy as a learning medium is included in the category of strong effect or strong influence. The results of this study are relevant to previous research conducted by Nupura et al. (2021) which states that the use of Google Classroom is effective with a moderate level of effectiveness and a strong influence as a learning medium during the online learning process.

The success of this research is in line with the students' responses which show that most of the students gave a very strong response of 79% to the use of Google Classroom assisted by Educandy as a learning medium. This is relevant to Ulya's research (2021) which states that the use of Educandy is effective for reviewing students' understanding. This study is also in line with the research of Fitriati et al. (2021) which states that Educandy can increase students' learning motivation. This is also in line with the results of observations, which show that the use of learning media is used very well by students during the learning process.

## CONCLUSION

The results obtained from this study indicate that the use of Google Classroom assisted by Educandy is effective as a learning medium. The effectiveness of the learning media can be seen from the results of the N-Gain test calculation which obtains a value of 0.625, which means that it is included in the moderate level of effectiveness. And based on the results of the Effect Size test, it obtained a value of 1,077 which means that the learning media used is included in the category of strong effect. This is in line with the response of students who gave a very strong response to the use of learning media. This is also in line with the results of observations, where the learning media is used very well by students during the learning process.

## ACKNOWLEDGEMENT

The researcher expresses his gratitude to the students in class X MIPA and the teachers at SMA Negeri 1 Kembang Janggut. Furthermore, the researcher would also like to thank my

supervisor who continues to support the researcher in terms of research and publication of research results. And the researcher is also grateful to friends who always support and members in terms of research.

**REFERENCES**

Ahmad, Firdausi Nuzula, K. M. (2020). Efektivitas Pembelajaran Daring Dengan Menggunakan Google Classroom Pada Mata Pelajaran Matematika Di Madrasah Aliyah Pelajaran Matematika Di Madrasah Ali Darul Falah Batu Jangkih. *EL-HIKAM: Jurnal Pendidikan Dan Kajian Keislaman*, *XIII*(1), 72.

Cohen, L., Manion, L., & Morrison, K. (2020). Experiments, quasi-experiments, single-case research and meta-analysis. In *Research Methods in Education*. https://doi.org/10.4324/9780203029053-23

El Fauziah, U. N., Suryani, L., & Syahrizal, T. (2019). Penerapan Google Classroom Dalam Pembelajaran Bahasa Inggris Kepada Guru-Guru Bahasa Inggris Smp Di Subang. *Abdimas Siliwangi*, *2*(2), 183. https://doi.org/10.22460/as.v2i2p183-191.3281

Ernawati. (2018). *Prosiding Seminar Nasional Lembaga Penelitian Universitas Negeri Makasar*. Universitas Islam Negeri Syarif Hidayatullah.

Famukhit, M. L. (2020). Google Classroom Sebagai Media Pembelajaran Daring Online Pada Program Studi Pendidikan Informatika Stkip Pgri Pacitan. *Jurnal Penelitian Pendidikan*, *12*(1), 1–9. http://www.ejournal.stkippacitan.ac.id/index.php/jpp/article/view/314

Fitriati, I., Purnamasari, R., Fitrianingsih, N., & Irawati, I. (2021). Implementasi Digital Game Based Learning Menggunakan Aplikasi Educandy Untuk Evaluasi Dan Motivasi Belajar Mahasiswa Bima. *Prosiding Penelitian Dan Pengabdian 2021*, 307–312. http://prosiding.rcipublisher.org/index.php/prosiding/article/view/152

Harianto, A., Suryati, S., & Khery, Y. (2019). Pengembangan Media Pembelajaran Kimia Berbasis Android Untuk Penumbuhan Literasi Sains Siswa Pada Materi Reaksi Redoks Dan Elektrokimia. *Hydrogen: Jurnal Kependidikan Kimia*, *5*(2), 35. https://doi.org/10.33394/hjkk.v5i2.1588

K.Y.S. Putri, W. H. (2020). Efektivitas Komunikasi Google Classroom Sebagai Media Pembelajaran Jarak Jauh Pada Mahasiswa Ilmu Komunikai Universitas Negeri Jakarta Angkatan 2018. *MEDIALOG: Jurnal Ilmu Komunikasi*, *3*(2), 24–35. https://doi.org/10.35326/medialog.v3i2.639

Lestari, S. P. (2020). Asik Dengan Educandy. *BKD Jakarta*.

Maltzer, D. E. (2002). *The Relationship between Mathematics Preparation and Conceptual Learning Gains in Physics : A Possible "'Hidden Variable'" in Diagnostic Pretest Scores*. Association of Physics Teachers.

Nirfayanti, N., & Nurbaeti, N. (2019). Pengaruh Media Pembelajaran Google Classroom Dalam Pembelajaran Analisis Real Terhadap Motivasi Belajar Mahasiswa. *Proximal Jurnal Penelitian Matematika Dan Pendidikan Matematika ISSN 26158132 (Cetak) ISSN 26157667 (Online)*, *2*(1), 50–59. https://e-journal.my.id/proximal/article/view/211

Nupura, M. S., Mursalin, M., & Arbie, A. (2021). Pengaruh Whatsapp Berbasis Google Classroom

Dan Google Meet Dengan Implementasi Model Inquiry Learning Dalam Pembelajaran Fisika Terhadap Hasil Belajar Siswa. *Jambura Physics Journal*, *3*(1), 64–72. https://doi.org/10.34312/jpj.v3i1.9788

Sabran, & Sabara, E. (2019). Keefektifan Google Classroom sebagai media pembelajaran. *PROSIDING SEMINAR NASIONAL LEMBAGA PENELITIAN UNIVERSITAS NEGERI Makasar*, 122–125. https://webcache.googleusercontent.com/search?q=cache:SS_jKM_r2TAJ:https://ojs.unm.ac.id/semnaslemlit/article/download/8256/4767+&cd=2&hl=id&ct=clnk&gl=id

Ulya, M. (2021). *Lingua Rima: Jurnal Pendidikan Bahasa dan Sastra Indonesia Vol. 10 No. 1 Januari 2021 http://jurnal.umt.ac.id/index.php/lgrm*. *10*(1), 55–63.