

Challenges and Strategies Using Application in Teaching Online Classroom During Pandemic Covid-19

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ABSTRACT

This paper aimed to find out (1) the teacher's challenges using the application in teaching online classrooms during pandemic COVID-19, and (2) the strategies used by teachers in teaching using the application. The participants of the research were the English teachers at SMA/SMK/MA in Yogyakarta, Gunungkidul, Magelang, and Kebumen. A qualitative method was employed in this research and using interview via WhatsApp as data collection. The findings showed that teachers had the challenges such as (1) operating the application during online learning, (2) developing the material, assessment, and evaluation in teaching, (3) developing the teaching method, (4) combining the material and application, and (5) motivating the students and parents. The strategies used by the teacher when using the application in teaching such as (1) watching the video tutorial, (2) choosing a suitable application for teaching, (3) arranging the new learning schedule, (4) developing the creativity in designing the material, and (5) giving the simple material and task for the students.

Keywords: Application; Challenges; Online Classroom; Teaching Strategies

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INTRODUCTION

As we know that in the situation of pandemic COVID-19, every people should make a social distance to avoid the spread of COVID-19. The government should temporarily close the schools, universities, and all public places to avoid the COVID-19 (Bhamani et al., 2020). The normal classroom teaching could not be carried out. The COVID-19 has made all the entire school system shocks (Johnson et al., 2020). The change of the learning system forces the system school should apply the distance education or online learning (Rasmitadila et al., 2020). All schools in the world are announcing about what teacher's expectations, the schools should close their door (Nasr, 2020). In the normal classroom, the teachers pass the knowledge to students, and the students learn from the teacher's

instruction, the teachers are responsible to complete the task for each lesson, and the students should complete the learning task based on the instruction (Cheng, 2020), but now because of the pandemic of COVID-19, the teaching activity at school should be move from offline to online, and the teachers should use the internet for carrying out the online teaching. All teachers are expected to guide their students for learning and give them opportunities for learning by themselves (CiĖercĭ, 2020). If the online learning conducted until the end of the year, it will become the challenges for teachers and students (Atmojo & Nugroho, 2020). The environment of teaching online is very different than in the face to face classroom. The formative feedback between a teacher and a student is lost because there are no opportunities for spontaneous. Students are more asked to read the instruction for the task rather than hear the instructions directly from their teachers like in the normal classroom (Martin, 2019).

Affected by the pandemic of COVID-19, the schools should know how to make sure the quality of their student's learning activities during the online classroom, and at the same time, also know how to develop the student's physical and mental in learning during the pandemic (Zhao et al., 2020). The teachers are difficult to know the student's individual during the online classroom, and it makes them not feel confident in their ability to teach in the online classroom (Haverback, 2020). So, from this pandemic situation, each teacher should have other strategies for applying his or her teaching through an online classroom. The teachers can not meet the students, as usual, so the teachers should quickly adopt the new teaching method (Yao et al., 2020). On the other side, Teachers also should provide feedback in the manner and amount that students can learn most effectively from whilst following up on its effects on their progress and engagement with the subject (Canals & Robbins, 2017). The feedback from the students is based on the evidence of teaching practices (Byrne & Donlan, 2020). Commonly the online environment can be controlled but without effective feedback, it makes the learning becomes more difficult (Steele & Holbeck, 2018). Each teacher is pushed to more improve themselves in learning and teaching using technology.

The educational system needs to collaborate with technology in education and increase the teacher's awareness of the application in teaching (Al-Takhneh, 2018). Technology in education is not a stranger. Technology has grown so widely across the world. Many technologies have been developed to assist the students in education as reference materials and tools such as courseware, e-learning, web-based learning, mobile application, blended learning, and so on. So, this technology has also taken numerous innovations to add value to education and evaluate digital reference materials (Samsudin et al., 2017). The advent of ICT comes with its attendance to student's accessibility to information. Information and communication technology whose development is so fast indirectly requires humans to use

in all their activities, one of which is in the world of education (Ibrahim & Kadiri, 2018). The use of apps can be integrated into educational objectives, it is challenging to the educators and students and also prompting innovations in the teaching and learning process. The app-building is the way for mediating the learning. Teachers and students may gradually find ways to use applications. However, simply using the applications is not sufficient for supporting educational goals. It needs to formulate the pedagogical strategies which can integrate the elements involved in the teaching and learning process to promote the quality of education (Zaheer et al., 2018). As an educator, the teacher should adapt to the new norm of technology and can enhance the course in teaching. Technology has grown and offered the many tools to help the teachers to teach in the online classroom (Wilson, 2018). Besides teaching using the technology, the teacher should consider the role of the internet, the World Wide Web, and the other social media in educating the students in learning (Topacio, 2018). The technology becomes special attention particularly in the situation of pandemic COVID-19 (Ali, 2020).

Responding to prepare the online teaching in a COVID-19 situation, The roles, characteristics, competencies, and skills that one requires to be a competent and successful online instructor should be identified and highlighted by educational institutions, online learning organizations and authorities, and online learning theorists (Albrahim, 2020). The teachers try to do their best such as figuring out how to effectively respond and support the students on their own. The teachers have an important role in designing the classroom, besides having a good internet connection (Welch et al., 2015). Although, they do not have to continue to work alone (Tracey Hodges, Cailin Kerch, 2020). On the other side, some of the teachers have their problem in teaching the students using the application in an online classroom during the pandemic COVID-19 situation. The ability of teachers in teaching using technology requires the teacher more than understanding the material (Niess & Roschelle, 2018). The bad connection can annoy the communication of the classroom. The teacher cannot give clear instructions or explain the material to the students. Some teachers also have problems in operating the application when starting to teach the students. Assessing online learning and instruction is one of the challenges also in online learning (Song, 2016).

Therefore, finding the best strategy to solve the problem during teaching the students should be created by the teacher. The teacher should make sure each of his or her students have good learning during the online classroom. If the effectiveness of the online environment is the same one which considered to be effective to the normal classroom (face-face classroom), it includes the use of the multiple pedagogies and learning resources to support student learning needs (S. Lockman & R. Schirmer, 2020), the teacher education period is also important in creating effectiveness of education system in this situation

(Ergunay & Adiguzel, 2019). Teachers also focus on the opportunities to increase the learner's knowledge. Many factors should be noticed by the teacher during the online learning program (Berry, 2019). The advance of technology, the speed of connection, and the availability of tools will also help the teacher to improve the online collaboration (Robinson et al., 2017). Teachers should use the internet effectively to improve themselves, because it has become their obligation (Gültekin et al., 2020) and design the good course to overcome the online teaching challenges (Cross & Polk, 2018).

At senior high school (SMK/SMK/MA), some English teachers have tried to use the application in teaching their students during the learning from home. The teachers usually use Edmodo, WhatsApp, Google classroom, and other applications in teaching their students in the online classroom. But sometimes the teachers still have a problem with operating the current applications because it is not their field. Teaching using the applications during learning from home, it pushes the teachers to think more about how to design the material and find a suitable application in his or her class. The expectation of high performance, the respect of learning preference, learning techniques, time management task are necessary for supporting the student's engagement in the class (Tanis, 2020), and for developing the teaching method the teacher should make sure that the set of activities can support the virtual environment (Fernando Batista et al., 2020). Online learning will be effective if there are an appropriate learning strategy and method provided by the teachers to teach their students (Silalahi & Hutauruk, 2020). So, from the explanation above, this paper the research aims at investigating the following research questions: 1) What are the challenges using the applications in teaching online classroom during pandemic COVID 19? and 2) What are the strategies used by the teachers to solve their problems in teaching online classroom?

METHOD

The research design

To describe the results of the challenges and strategies using the application in teaching online classroom during pandemic COVID-19, the researcher used the qualitative method. The researcher collected the data through the interview via WhatsApp. The researcher prepared some questions and then gave them to the teachers through WhatsApp. This research aimed to know what kinds of challenges faced by the teachers during using the application in teaching online classrooms, and what the strategies used by the teachers to solve the problem itself. After collecting the data, the researcher concluded the result.

Participants of the research

The participants of the research were the English teachers from senior high school (SMA/SMK/MA). The research chose five teachers from different schools and regions. They were from Yogyakarta, Kebumen, Magelang, and Gunung Kidul in the 2020/2020 academic year. From the five teachers, the researcher would like to find out their challenges using the application in teaching online classrooms during pandemic COVID-19, and what their strategies to solve their problem.

Instrument and collection of data

The researcher used the interview as the data collection instrument. Some questions were provided by the researcher. The researcher interviewed the teachers via WhatsApp. The researcher asked some questions and then got the teacher's answer. There were some questions used by the researcher for interviewing the teacher. It can be seen as follows:

Table 1. List of questions of the interview

No	Questions
1	Have you ever using the application for teaching before the pandemic of COVID-19?
2	What the applications that ever use in teaching during learning from home?
3	Are there difficult things in teaching the students through the application?
4	What are your challenges in using the application in teaching online classroom?
5	What kind of strategies that you use to solve your problem in teaching using the application?

Data analysis

The manual analysis of the data was done. The researcher explained the result of the interview via WhatsApp. The data were divided and explained related to the challenges in teaching using the application and the strategies used by the teacher to solve their teaching problem, and then concluded the results of the research.

FINDINGS

In this section, the results of the data from the interview are presented. The data are divided into two types, the challenges using the application in teaching online classrooms and the strategies used by the teacher to solve their problem.

A. The challenges using the application in teaching online classroom during pandemic COVID-19

The findings show that there are some challenges faced by the teacher in using the application in teaching online classroom during pandemic COVID-19. The findings are divided into some types, each describing the challenges found in the research. They are :

1) Operating the application during online learning

It can be explained that the teachers still have some problems during teaching the students using applications. Some teachers do not know how to operate the current application, some students do not understand how to operate the application well, and on the other side, some of his students did not join the class based on the schedule because they have not their handphones. Sometimes, the internet signal becomes a big problem when the teacher explains the material, and when the data internet runs out can annoy the learning process.

Researcher: (Question)	<i>What are your challenges in using the application in teaching?</i>
Interviewee: (Teacher's answer)	<i>The problem that happens in my teaching such as students did not understand well about how to use those apps, some of them don't use their phone, usually use their parents' phone so students could not join the class as a schedule, Sometimes the apps did not work smoothly during the learning, and Technical problem like internet signal, out of date phone, economical issue</i>

On the other side, the teacher should guide the students to operate the application before the class started.

Interviewee: (Teacher's answer)	<i>I need more time to guide the students on how to use the application instead of focusing on the purpose of the teaching. Sometimes, I lost my student's work because of the error system, and I don't know how to fix it because it is not my field.</i>
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From the teacher's answer above, it shows that there are still many challenges and problems faced by the teachers during operating the application in teaching online classroom.

2) Developing the material, assessment, and evaluation for teaching the students using the application.

During teaching the online classroom using the application, the teachers still have some problems, especially how to developing the material to make the students can easier understand the material during the online learning through the application.

Researcher:	<i>What are your challenges in using the application</i>
(Question)	<i>in teaching?</i>
Interviewee:	<i>The challenges in teaching using applications are</i>
(Teacher's answer)	<i>how to developing the material into the simplest one, developing the best assessment and evaluation for the learning.</i>

From the teacher's answer above, it tells us clearly that in designing the material, assessment, and evaluation during teaching online classrooms, it still becomes a challenge for each teacher. Teaching in an online classroom, the teachers are pushed to find out more the best way to how can design their materials in teaching, and how to design a good assessment and evaluation for their students.

3) Developing the teaching method in teaching to get the students interested during online learning.

The teachers mentioned that they have some problems when getting his students do not understand the material during doing the online class using the application. And it is right, some of the students can not understand the material clearly during the class running on, and some of the others do not enjoy the online classroom.

Researcher:	<i>What are your challenges in using the application</i>
(Question)	<i>in teaching?</i>
Interviewee:	<i>The challenges are to develop the method of</i>
(Teacher's answer)	<i>teaching to get students' interest during online learning.</i>

When getting their students can not understand the material well during the online class, it makes the teachers should rethink to find the method in teaching the students.

4) Combining the material and the suitable application

During online teaching classrooms using the application, sometimes the teachers are still confused to find out the best way how to combine the

material with a suitable application. The teacher should find the appropriate applications which can support his or her teaching in the online classroom.

Researcher: *What are your challenges in using the application in teaching?*

Interviewee: *I should find the best way to combine teaching (Teacher's answer) English and suitable application.*

Another teacher also has the same idea,

Interviewee: *The challenges in teaching online are how to (Teacher's answer) Preparation the material and tools.*

Many applications can be used in online teaching, but not all of them can support the learning goal itself. The teachers should know which the better one of the applications that can support their classes and make the students are easier to learn the material through the application that is suggested by their teachers at home.

5) Motivating the students and parents

Teaching the students using the application during the online classroom, the teachers have the challenges in how to motivate the students to learn and make the parents understand the situation right now.

Researcher: *What are your challenges in using the application in teaching?*

Interviewee: *Motivate me as a teacher, the students to focus, (Teacher's answer) and also a parent's mindset.*

All of the teachers realize that the situation right now does not support the class face to face. In an online classroom, sometimes it makes the students are bored when learning with the application. The teachers have the responsibility to motivate their students to learn from home and convince the student's parents to always support their children in learning during the online classroom. During online learning, teacher and parent have an important role in controlling the students in learning and doing their assessment.

B. The strategies in teaching online classroom using the application during pandemic COVID-19

Findings show that there are some strategies used by the teachers in teaching online classroom using the application during pandemic COVID-19. Strategies such as:

1) Watching the video tutorial

When getting the problems during the online classroom, the teachers try to watch the video tutorial for understanding how to operate the applications rightly, and because it is not their field, some teachers still have difficulty in operating the current applications.

Researcher: *Is there a difficult thing in teaching the students through the application?*

Interviewee: *There are several difficulties in teaching English using the current application.*

Because having a difficulty in operating the applications, so they need another guiding to solve their problem.

Researcher: *What kind of strategies that you use to solve your problem in teaching using the application?*

Interviewee: *I use the reading-mode, searching the tutorial, and sharing with another person who mastering in that field.*

When watching the video tutorial, the teachers can try to find out their solution in online teaching. When they know how to operate the applications, the teachers can apply the application in their online classroom. Besides watching the tutorial, the teachers also ask their friends or other people who mastering with technology.

2) Choosing suitable applications for teaching

The strategies to help the students in learning using the application in the online classroom, the teachers try to find out the suitable applications that can be easier to operate and it also is cheaper.

Researcher: *What kind of strategies that you use to solve your problem in teaching using the application?*

Interviewee: *I use an application that is simple, cheap, and easy to be operated by students. That's why I never used video-based apps.*

The answer above shows that choosing suitable applications for teaching is important. Not all applications can support the material. The teachers should find out the good applications which can help them to deliver the knowledge well to their students during the running of the class.

3) Arranging the new learning schedule

During teaching the online classroom using the application, the teachers should arrange the new learning schedule for their classes. It can

help the students to remember the schedule and can remind the student's parents to control and help their children in learning from home.

Researcher: (Question)	<i>What kind of strategies that you use to solve your problem in teaching using the application?</i>
Interviewee: (Teacher's answer)	<i>The strategies in teaching are time management such as learning schedules. Open my WhatsApp 24/7 so students can contact me anytime they want to discuss the subjects. Giving a special time for the student that used parents phone. Usually, they could not join the class but they could contact me in the evening after their parents back home from work.</i>

Besides, the teacher should prepare time management, the teacher also provides more time for the students who want to consult about the material after the class.

4) **Developing creativity in designing the material**

Teaching using the application forces the teacher to more creative in designing the material based on the situation right now. To make the students are not bored with the online classroom, the teacher should create more fun activities to make the learning class can run effectively.

Researcher: (Question)	<i>What kind of strategies that you use to solve your problem in teaching using the application?</i>
Interviewee: (teacher's answer)	<i>The strategies I used such as developing the creativity in designing the materials, quizzes, games, discussion, so students will not note joining the class. Giving the task that students do not feel difficult to do it. Keep the mindset to learn more about methods that appropriate to apply in the learning. Adapt to the condition.</i>

Another teacher also mentions that:

Interviewee: (Teacher's answer)	<i>My strategies in teaching using google classroom are to give simple material using video or PowerPoint which I made by myself, give simple assignments related to their environment, and give long collecting of the assignment until the night after the learning process in the morning.</i>
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Besides developing the creativity in designing the material, the teacher also opens a discussion session with the student to know how far their understanding of the material, and also what are their difficult things during the online learning. The teacher also tries to design the games for their students and gives some quizzes, it aims to make the students are not bored in learning.

5) Giving the simple material and task to the students

The teachers try to solve their problems during teaching online classroom using the application. They try to limit the assignment to the students.

Researcher: (Question)	<i>What kind of strategies that you use to solve your problem in teaching using the application?</i>
Interviewee: (Teacher's answer)	<i>The strategy I use to solve my problem in my online learning is that I do not burden my students with so many homework, I give my students the material and the task as simple as possible so that we can pass this online learning in this pandemic situation comfortably.</i>

When students have much homework, they can get bored with learning. The teachers can give simple material and tasks that can easier to understand and done by the students. Teachers are hoped to give the best way to teaching online classrooms through the application. They are the best way that the teachers can do in their online classroom.

DISCUSSION

From the findings above, it clearly shows that the teachers still have the challenges in teaching online during pandemic COVID-19. Some teachers still have the challenges in teaching online classroom using the application such as, firstly operating the application during the online classroom. Most of the teachers are familiar with the application, but some of the others still have difficulty with it. During the online classroom, the teacher should make sure that all of the students are ready for joining the class or not yet. The teachers should prepare more times before starting the online class for guiding their students to join the class through the application. During the online class, the internet connection and data phone also have an impact on the learning process. It can become a big problem for the teachers when having a bad connection or out of data phone during the class is running on. So, the success of the online learning process depends on the

teachers, and how the teachers can adapt to the situation of the class itself and control their students in the learning process.

Secondly, developing the material for teaching, developing the assessment, and evaluation. In teaching online classrooms, the teachers still have the challenges to develop the material for the teaching, assessment, and evaluation of the class. Most of the teachers say that they should prepare more time to develop the material that they will teach to the students. Learning through the applications, sometimes it makes the class does not run effectively. And the teachers know about it. When giving the task after the end of the class, the teacher should make sure that the task can be done by the students or not. The teachers can not guide their students directly, so they should contact the student's parents for always controlling their children in learning and finishing the task. Evaluation of the learning process also determines the class runs effectively or not. The teachers have an important role in class. So, they are the challenges for the teacher in teaching through the application in an online classroom.

Thirdly, developing the teaching method for online teaching. The teachers should more creative in developing their teaching methods in their online classroom. As we know that the normal classroom is very different from the online classroom. The teachers can not see their students and control them directly. That is why the teachers should provide the other method that can support their teaching in the online classroom. When the students are getting bored during the class, it is difficult for the teachers to controlling the class well.

Fourthly, combining the material and application. It is a challenge for the teacher because combining the material with the application, the teachers should know that this application can support their teaching materials or not. And when combining the material with the application, the students can easy to understand the material or not. Is there any knowledge that the students can learn or not. In teaching listening, speaking, reading, and writing, the teachers have different strategies for each subject.

Fifth, motivating teachers themselves, students, and parents. Most teachers realize that teaching through applications sometimes make them feel so tired and bored. Preparing the many tools for learning, finding the teaching method, creating the material, assessment, and evaluation, sometimes it makes the teachers are stress. Sometimes the teachers say that they have difficulty motivating themselves for teaching in the online classroom and push themselves to adapt to the situation right now. On the other side, teachers should always control the learning process of their students during an online classroom. It is a challenge for the teachers because they should always monitor their students. Each student has a different motivation in learning the material. So, the teachers should keep on the student's motivation in learning. Because the student's parents also have an important role during

learning from home, the teachers should also have a good relationship with the student's parents. Sometimes the students' parents can understand the situation right now and can control their children in learning, but some of the others are difficult for it. The teachers should motivate the parents to always guiding their children in learning.

Teaching using the application for online learning is the best choice for this situation. The teacher should rearrange the new learning schedule and method to teach their students in an online classroom. Not all of the teachers can cover their online teaching through the application. Teachers should think about how to prepare themselves for finding their students in the online classroom. Because the teacher can not control the students directly, it is hard for them to make sure how far their understanding of the material. Some of the students are easy to learn when they are guided by their teacher during online learning, but some of the others need more attention. The strategies and material which are designed by teachers have an impact on the online learning process.

From the challenges and problems above, teachers should find the best way to solve their problems during teaching the online classroom. The strategies used by the teacher during teaching online classroom using the application such as, firstly watching the video tutorial. Watching the video is one of the ways to help the teacher know how to operate the application rightly, choosing a suitable application for their material, rearrange the new schedule for their class, and designing the material and task to the simple one. Those are the strategies chosen by the teachers as the solution to solve their problem during teaching online classroom using the application. Teachers should design the material to the simple one, it aims to help the students are easier to understand the material. The students can learn by themselves beside their parent's guiding.

CONCLUSION

Using the application in teaching online classroom is the best choice in this pandemic situation because the normal classroom can not be carried out. Each teacher should redesign their strategies and methods for teaching their students in the online classroom. The result of the research shows that some of the teachers are familiar with the application for teaching, but some of the others do not. They still need a guide to learn the application. The strategies used by the teachers to solve their problems in using the application for teaching online classrooms such as watch the video tutorial and discuss their problems with their friends especially for how to apply the application in their online classroom. The applications are usually used by the teachers in online teachings such as WhatsApp, Instagram, Google classroom, Quizzes, Aegisub, Zoom, Webex, and others. The impact of this situation, the teachers should improve themselves to learn more about the technology and find their teaching solution itself. The teachers should rearrange the

new schedule, and it can help them to teach effectively. Teaching and learning in this situation have challenges for the teachers, but when the teachers want to open themselves for learning the technology, of course, they can develop themselves and create their online classroom well. The teachers have an important role in their class and students. Learning with other people is also the best way to find out the answer to our question during getting the problem. The teachers should change their way of teaching and provide more interesting learning for their students.

SUGGESTIONS

- a) For the teachers, designing the material to the simple one, it can help the students are easy to understand what they learn.
- b) Many new current applications can be used by the teacher in online teaching. It depends on how far the teachers want to learn it and know the role of each application.
- c) Finding the appropriate applications for the material is very important. The teachers should make sure that the application can support their learning process or not.
- d) All the applications have strengths and weaknesses, so the teachers should be wise to combine the material with an application in their class.
- e) The school system should support online learning by providing supporting facilities and media.

REFERENCES

- Albrahim, F. A. (2020). Online Teaching Skills and Competencies. *The Turkish Online Journal of Educational Technology*, 19(1), 12.
- Ali, W. (2020). Online and Remote Learning in Higher Education Institutes: A Necessity in light of COVID-19 Pandemic. *Higher Education Studies*, 10(3), 16. <https://doi.org/10.5539/hes.v10n3p16>
- Al-Takhynch, B. (2018). *Attitudes towards Using Mobile Applications in Teaching Mathematics in Open Learning Systems*. 33, 16.
- Atmojo, A. E. P., & Nugroho, A. (2020). EFL Classes Must Go Online! Teaching Activities and Challenges during COVID-19 Pandemic in Indonesia. *Register Journal*, 13(1), 49–76. <https://doi.org/10.18326/rgt.v13i1.49-76>
- Berry, S. (2019). Teaching to Connect: Community-Building Strategies for the Virtual Classroom. *Online Learning*, 23(1). <https://doi.org/10.24059/olj.v23i1.1425>

- Bhamani, S., Makhdoom, A. Z., Bharuchi, V., Ali, N., Kaleem, S., & Ahmed, D. (2020). Home Learning in Times of COVID: Experiences of Parents. *Journal of Education and Educational Development*, 7(1), 9. <https://doi.org/10.22555/joeed.v7i1.3260>
- Byrne, V. L., & Donlan, A. E. (2020). Presenting a Validated Mid-Semester Evaluation of College Teaching to Improve Online Teaching. *Online Learning*, 24(2). <https://doi.org/10.24059/olj.v24i2.2126>
- Canals, L., & Robbins, J. (2017). An exploratory study of feedback practices for written and oral tasks in an online English course. In K. Borthwick, L. Bradley, & S. Thoučsny (Eds.), *CALL in a climate of change: Adapting to turbulent global conditions – short papers from EUROCALL 2017* (pp. 62–66). Research-publishing.net. <https://doi.org/10.14705/rpnet.2017.eurocall2017.690>
- Cheng, X. (2020). Challenges of “School’s Out, But Class’s On” to School Education: Practical Exploration of Chinese Schools during the COVID-19 Pandemic. *Science Insights Education Frontiers*, 5(2), 501–516. <https://doi.org/10.15354/sief.20.ar043>
- CiĜerci, F. M. (2020). *Slowmation Experiences of Pre-Service Teachers Via Distance Education During The Covid-19 Pandemic Disease*. 9(1), 17.
- Cross, T., & Polk, L. (2018). Burn Bright, Not Out: Tips for Managing Online Teaching. *Journal of Educators Online*, 15(3). <https://doi.org/10.9743/jeo.2018.15.3.1>
- Ergunay, O., & Adiguzel, O. C. (2019). The First Year in Teaching: Changes in Beginning Teachers’ Visions and Their Challenges. *Qualitative Research in Education*, 8(3), 276. <https://doi.org/10.17583/qre.2019.4016>
- Fernando Batista, A., Thiry, M., Queiroz Gonçalves, R., & Fernandes, A. (2020). Using Technologies as Virtual Environments for Computer Teaching: A Systematic Review. *Informatics in Education*, 201–221. <https://doi.org/10.15388/infedu.2020.10>
- Gültekin, O., Erkaplan, S., Uzun, H., & Güney, E. (2020). Investigation of Academic Staff’s Self-Efficacy Using the Educational Internet. *Higher Education Studies*, 10(3), 26. <https://doi.org/10.5539/hes.v10n3p26>
- Haverback, H. R. (2020). *Middle Level Teachers Quarantine, Teach, and Increase Self-Efficacy Beliefs: Using Theory to Build Practice During COVID-19*. 6, 7.
- Ibrahim, A. A., & Kadiri, G. C. (2018). Integrating Mobile Phones in Teaching Auditory and Visual Learners in an English Classroom. *English Language Teaching*, 11(12), 1. <https://doi.org/10.5539/elt.v11n12p1>
- Johnson, N., Veletsianos, G., & Seaman, J. (2020). U.S. Faculty and Administrators’ Experiences and Approaches in the Early Weeks of the COVID-19 Pandemic. *Online Learning*, 24(2). <https://doi.org/10.24059/olj.v24i2.2285>

- Martin, J. (2019). Building Relationships and Increasing Engagement in The Virtual Classroom: Practical Tools For The Online Instructor. *Journal of Educators Online*, 16, 8.
- Nasr, N. (2020). *Teachers as Students: Adapting to Online Methods of Instruction and Assessment in the Age of COVID-19*. 4.
- Niess, M. L., & Roschelle, J. (2018). Transforming Teachers' Knowledge for Teaching Mathematics with Technologies Through Online Knowledge-Building Communities. *G. J.*, 19.
- Rasmitadila, R., Aliyyah, R. R., Rachmadtullah, R., Samsudin, A., Syaodih, E., Nurtanto, M., & Tambunan, A. R. S. (2020). The Perceptions of Primary School Teachers of Online Learning during the COVID-19 Pandemic Period: A Case Study in Indonesia. *Journal of Ethnic and Cultural Studies*, 7(2), 90. <https://doi.org/10.29333/ejecs/388>
- Robinson, H. A., Kilgore, W., & Warren, S. J. (2017). Care, Communication, Support: Core for Designing Meaningful Online Collaborative Learning. *Online Learning*, 21(4). <https://doi.org/10.24059/olj.v21i4.1240>
- S. Lockman, A., & R. Schirmer, B. (2020). Online Instruction in Higher Education: Promising, Research-based, and Evidence-based Practices. *Journal of Education and E-Learning Research*, 7(2), 130–152. <https://doi.org/10.20448/journal.509.2020.72.130.152>
- Samsudin, M. R., Guan, T. T., Mohd, A., & Yaacob, M. F. C. (2017). *A Review of Mobile Application Characteristics Based on Teaching and Learning Theory for Mute and Deaf Students*. 1, 6.
- Silalahi, T. F., & Hutaauruk, A. F. (2020). *The Application of Cooperative Learning Model during Online Learning in the Pandemic Period*. 3, 9. <https://doi.org/10.33258/birci.v3i3.1100>
- Song, L. (2016). *What Online Success Means to Online Instructors: A Grounded Theory Investigation*. 10.
- Steele, J., & Holbeck, R. (2018). Five Elements that Impact Quality Feedback in the Online Asynchronous Classroom. *Journal of Educators Online*, 15(3). <https://doi.org/10.9743/jeo.2018.15.3.10>
- Tanis, C. J. (2020). The seven principles of online learning: Feedback from faculty and alumni on its importance for teaching and learning. *Research in Learning Technology*, 28(0). <https://doi.org/10.25304/rlt.v28.2319>
- Topacio, K. N. M. (2018). *Exploring the Use of Online Educational Platform in Teaching Writing Among ESL Students*. 16.
- Tracey Hodges, Cailin Kerch, M. F. (2020). *Teacher Education in the Time of COVID-19: Creating Digital Networks as University-School-Family Partnerships*. 6(2).

- Welch, A. G., Orso, D., Doolittle, J., & Areepattamannil, S. (2015). *Matching Student Expectations with Instructors' Dispositions: Insight into Quality of Online Teaching*. 15, 15.
- Wilson, S. D. (2018). Leading Edge Online Classroom Education: Incorporating Best Practices Beyond Technology. *American Journal of Business Education (AJBE)*, 11(3), 41–48. <https://doi.org/10.19030/ajbe.v11i3.10187>
- Yao, J., Rao, J., & Xiong, C. (2020). What Role Should Teachers Play in Online Teaching during the COVID-19 Pandemic? Evidence from China. *Science Insights Education Frontiers*, 5(2), 517–524. <https://doi.org/10.15354/sief.20.ar035>
- Zaheer, S., Butt, S. M., Anatolyevna, G. V., & Salmani, H. (2018). Do Mobile Technology in the Classroom Really Improve Learning Outcomes? *International Journal of Evaluation and Research in Education (IJERE)*, 7(3), 188. <https://doi.org/10.11591/ijere.v7i3.13426>
- Zhao, N., Zhou, X., & Liu, W. (2020). Guiding Teaching Strategies with the Education Platform during the COVID-19 Epidemic: Taking Guiyang No. 1 Middle School Teaching Practice as an Example. *Science Insights Education Frontiers*, 5(2), 531–539. <https://doi.org/10.15354/sief.20.rp005>

