

# Level of Challenges in the Implementation of Online Learning Classes among the Teachers in the Select Private Schools of Butuan City, Philippines

Trixie E. Cubillas<sup>1</sup>, Ariel U. Cubillas<sup>2</sup>, Claire Joy M. Amor<sup>3</sup>, Janin B. Comon<sup>4</sup>, Maria Cindy Grace A. Jamorol<sup>5</sup>

<sup>1</sup>Caraga State University, Butuan City, Philippines, [tecubillas@carsu.edu.ph](mailto:tecubillas@carsu.edu.ph)

<sup>2</sup>Caraga State University, Butuan City, Philippines, [aucubillas@carsu.edu.ph](mailto:aucubillas@carsu.edu.ph)

<sup>3</sup>Caraga State University, Butuan City, Philippines, [clairejoy.amor@carsu.edu.ph](mailto:clairejoy.amor@carsu.edu.ph)

<sup>4</sup>Caraga State University, Butuan City, Philippines, [janin.comon@carsu.edu.ph](mailto:janin.comon@carsu.edu.ph)

<sup>5</sup>Caraga State University, Butuan City, Philippines, [mariacindygrace.jamorol@carsu.edu.ph](mailto:mariacindygrace.jamorol@carsu.edu.ph)

**Abstract:** *The paper's main intent is to identify the challenges in implementing online learning classes among the teachers in the elite private schools of Butuan City, Philippines, related to technology access, assessing students' progress, and preparing content for online learning. The study also ascertained whether or not there is a significant difference in the participants' level of challenges when grouped according to participants' profiles. The study's result served as the foundation for developing a localized training design. This study utilized a quantitative research design and collected data through online survey questionnaires for the data analysis. The results revealed that the participants' level of challenges related to technology access, assessing students' progress, and preparing content for online learning is moderately high. In addition, the participants, as grouped according to school taught and sex, showed no significant difference in their level of challenges. It is recommended that addressing and taking action to address the teachers' concerns about the challenges they have experienced in implementing online learning classes is vital to improving the quality of education.*

**Keywords**—challenges, online learning, private schools, teachers

## Research Locale

The study was conducted in Timber City Academy and CFC-School of the Morning Star. The Timber City Academy is located at Montilla Boulevard, nearby to PLDT Cruztelco and close to Prince Hotel Butuan City, Philippines. On the other hand, the CFC-School of the Morning Star is a Catholic Educational Institution located at Villa Kanangga Road, Butuan City, Philippines. The distance is 100 meters away from the back of Butuan City Capitol. Both schools are implementing online classes during the pandemic.

## Participants of the Study

This study involved the select private elementary schools in Butuan City which include the Timber City Academy and CFC-School of Morning Star. The study used complete enumeration which means that all teachers in both schools are involved in the study.

## Sampling Design

The researchers used non-probability sampling which is a complete enumeration in determining the actual number of participants of the study. The study considered 100% of the total population of private elementary school teachers in the previously-mentioned schools in Butuan City, Philippines as participants of the study.

## Research Instrument

This study assessed the level of challenges in the select private elementary schools in Butuan City, Philippines. To have convenient access of survey questionnaires, the researchers

## 1. INTRODUCTION

The paper's main intent is to identify the challenges in implementing online learning classes among the teachers in the elite private schools of Butuan City, Philippines, related to technology access, assessing students' progress, and preparing content for online learning. The study also ascertained whether or not there is a significant difference in the participants' level of challenges when grouped according to participants' profiles. The study's result served as the foundation for developing a localized training design. This study utilized a quantitative research design and collected data through online survey questionnaires for the data analysis. The results revealed that the participants' level of challenges related to technology access, assessing students' progress, and preparing content for online learning is moderately high. In addition, the participants, as grouped according to school taught and sex, showed no significant difference in their level of challenges. It is recommended that addressing and taking action to address the teachers' concerns about the challenges they have experienced in implementing online learning classes is vital to improving the quality of education.

## II. Method

### Research Design

The design used in the study is the quantitative research method to collect and analyze the data from the participants through survey-questionnaires. For the purpose of this study, the researchers used online survey method. This study utilized a descriptive method for it described the participants' level of challenges in the implementation of online learning.

utilized an online-generated survey questionnaire using Google Forms. The first part of the survey is about the demographic profile of the teachers which concerns their school where they are employed and sex. The questionnaire used is consist of two parts. First is the demographic profile and the second part contained ten (15) items which is divided according to the following domains: challenges related to technology access (5 items), assessing students' progress (5 items), and preparing content for online learning (5 items). Each domain is rated on a four-point Likert scale. The four-point scale is rated as follows: Strongly Agree-4, Agree-3, Disagree-2, and Strongly Disagree-1 point.

### Validity and Reliability of the Research Instrument

The researchers used a survey design which goal is to develop a scale to measure the teachers' level of challenges in the implementation of online learning. The research instrument was modified to suit the objectives of this study and the content underwent a validation process by three (3) identified research experts. For the reliability of the questionnaire, the instrument was piloted to fifteen (15) teachers of Enfant Cheri Study Centre, Inc., a private school located at P-1A, Upper Doongan, Butuan City, Philippines. The responses of the participants gathered in the pilot testing were statistically treated. The alpha coefficient for the fifteen (15) items is .955 which means that the items have relatively high internal consistency, hence the questionnaire is considered highly reliable.

### Data Gathering Procedure

The researchers sent two (2) separate letters addressed to the school principals of the selected private schools to ask permission to allow them to conduct a survey. The researchers gathered the data through an online generated survey via Google Forms with an attached consent. To address the participants' convenience, the link to the form was shared through Facebook Messenger. The researchers assured participants that they maintained the confidentiality of the participants' data.

### Scoring and Quantification of Data

The answers of the participants on the level of challenges in each item specification: challenges related to technology access, assessing student's progress, and preparing content for online learning's subscale were administered using the proceeding scale of statistical mean, range, value and its descriptive equivalent that is shown below:

Response	Scale	Range	Interpretation
Strongly Agree	4	3.50 – 4.00	The level of challenge is very high
Agree	3	2.50 – 3.49	The level of challenge is moderately high
Disagree	2	1.50 – 2.49	The level of challenge is fairly high
Strongly Disagree	1	1.00 – 1.49	The level of challenge is very minimal

### Statistical Treatment

Frequency Counts and Percentages was used in describing the profile of the participants. Also, weighted mean was utilized to measure the central location of the responses of the participants and determined the overall remarks of their responses.

Independent T-Test was utilized to get the significant difference in the participant's responses when grouped according to profile; school taught and sex and One Way Analysis of Variance (ANOVA) was applied to identify whether or not there is a significance difference in the participant's responses when grouped according to school taught and sex.

## III. Results and Discussion

What is the demographic profile of the teachers in terms of school and sex?

### 1.1 school

The participants' profile in terms of school taught is presented in figure 3.

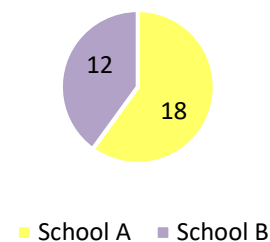


Figure 3. Graphical Representation of the Participants' School

It is shown in figure 3, that there are 18 participants in School A which is 60% of the total number of participants. On the other hand, there are 12 participants in School B which is 40% of the total number of all the participants. Majority of the participants are from School A.

### 1.2 sex

The participants' profile in terms of sex is presented in figure 4.

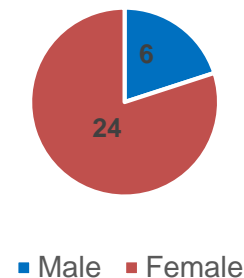


Figure 4. Graphical Representation of the Participants' Sex

The figure indicates that six (6) of the participants are male which is 20% of the total number of all the participants, while twenty-four (24) of the participants are female which is 80% of the total number of all the participants. This means that majority of the participants are female.

What is the level of challenges in the implementation of the online learning in the new normal experienced by the participants in terms of challenges related to technology access, challenges related to assessing students' progress, and challenges related to preparing content for online learning?

Table 1 presents the level of challenges related to technology access among the participants.

Table 1  
Mean Distribution of the Level of Challenges in the Implementation of Online Learning Classes Experienced by the Participants in terms of Challenges Related to Technology Access

	Indicators Technology Access	Level of Challenges		Interpretation
		Mean	Description	
1	I do not have confidence in integrating technology in class.	2.13	Disagree	The level of challenge is fairly high
2	I am not familiar with online learning tools (e.g. Zoom, Google Meet, & Google Classroom)	2.00	Disagree	The level of challenge is fairly high
3	I have internet connection problems during online learning classes.	3.17	Agree	The level of challenge is moderately high
4	I cannot manage the class well if some of my pupils are experiencing internet connection problems during online classes.	2.90	Agree	The level of challenge is moderately high
5	I am not familiar with the copyright laws that govern the acceptable use of technology. (Including using material from the Internet)	2.50	Agree	The level of challenge is moderately high
<b>Overall Weighted Mean</b>		<b>2.54</b>	<b>Agree</b>	<b>The level of challenge is moderately high</b>

Range of means: 3.50-4.00 Strongly Agree; 2.50-3.49 Agree; 1.50-2.49 Disagree; 1.00-1.49 Strongly Disagree

As shown in the table, indicator number three (3) stating that I have internet connection problems during online learning classes gained the highest mean of 3.17. This means that the participants agreed that the level of challenge they experienced is moderately high. On the other hand, indicator number two (2) which indicates that I am not familiar with online learning tools (e.g. Zoom, Google Meet & Google Classroom) gained the

lowest mean of 2.00 which means that the participants' level of challenge is fairly high. The overall weighted mean on the challenges related to technology access is 2.54 or agree which is interpreted as moderately high.

The data suggest that the participants' level of challenge related to technology access is moderately high. This further means that the participants are challenged in terms of the technology access particularly on the internet connectivity. Evidently, they experienced internet connection problems during online learning classes.

According to the study of Clarin and Baluyos (2022), poor internet connection was considered the main problem for both teachers and students in conducting online classes. If teachers or students fail to connect, classes are jeopardized because there can be no teaching and learning if there are no teachers and students' connections.

Moreover, this was one of the challenges that teachers face which is beyond their control. The absence or the poor internet connections greatly affect continuity of lessons and poor attendance of students because they used internet connectivity as an excuse for their inability to work with their school works.

Also, Zhang et al., (2020) and Akbulut et al. (2020) reported access to technology as the most prevalent challenge that arose in their respective study. Internet availability and stability, as well as internet-connected devices such as laptops and smartphones, are the two most crucial elements in online. Thus, without proper internet and devices, the lesson cannot take place.

## 2.2 Challenges Related to Assessing Students' Progress

Table 2 displays the level of challenges related to assessing students' progress among the participants.

As reflected in the table, indicator number three (3) stating that it is a struggle whenever there is electricity and internet connectivity interruption garnered the highest mean of 3.40 which described as agree and interpreted as moderately high. However, it is shown in the indicator number one (1) that exhibits the difficulty in using the computer in designing assessment gained the lowest mean of 2.17 which is interpreted as fairly high. The overall weighted mean is 2.7 which indicates that the level of challenges in terms of assessing students' progress is moderately high.

The data suggest that the participants' experience a moderately high level of challenges related to assessing students' progress. This further conveys that the teachers may have difficulty assessing their learners' performance using online platform. Honesty and integrity in answering the exams is a challenged for most of the online teachers.

According to Lansangan (2020) some barriers that he experienced having the virtual classroom is navigating the LMS caused by the slow internet connectivity. This also caused inhibitions of some students to recite and engage in the class. Also, according to Herman (2013), assessment plays an important role in determining the effectiveness of the teaching and learning process. Its importance is widely documented as for the student to achieve high standards in their academic subjects.

Table 2

Mean Distribution of the Level of Challenges in the Implementation of the Online Learning Classes Experienced by the Participants in terms of Challenges Related to Assessing Students Progress

	Indicators Assessing Students' Progress	Level of Challenges		Interpretation
		Mean	Description	
1	I find it difficult to use computer in designing assessment.	2.17	Disagree	The level of challenge is fairly high
2	I find it difficult using assessment tools from the internet.	2.27	Disagree	The level of challenge is fairly high
3	I am struggling when there is electricity and internet connectivity interruption in the middle of online class (e.g during oral recitation, slow internet when accessing the test online).	3.40	Agree	The level of challenge is moderately high
4	I find it difficult to assess my student who is enactive during online class	3.17	Agree	The level of challenge is moderately high
5	I am having a hard time keeping my student motivated to learn,	2.33	Disagree	The level of challenge is fairly high
Overall Weighted Mean		2.67	Agree	The level of challenge is moderately high

Range of means: 3.50-4.00 Strongly Agree; 2.50-3.49 Agree; 1.50-2.49 Disagree; 1.00-1.49 Strongly Disagree

Also, it is a real struggle if the student is usually enactive in the online class with or without excuses. As the lessons are connected mostly, if the student fail to comply in a specific lesson then the students will most likely to fail the next lesson. For other instances, parents also play an important role in the studies of their child as what Wicakson (2016) highlighted on their study. The lack of teacher, student and parent knowledge on the use of technology is one of the major reasons of ineffectiveness of the material to the learner. Parents' lack of knowledge in navigating the computer is also one of the contributing factors in the teachers' difficulty in assessing the students' progress. In addition, teachers' struggle during the

implementation of online assessment is something that is expected due to insufficient assessment engagement, lack of assessment exposure and limited training opportunities (Sheehan, 2017).

### 2.3 Challenges Related to Preparing Content for Online Learning

Table 3 shows the level of challenges related to preparing content for online learning among the participants.

Table 3

Mean Distribution of the Level of Challenges in the Implementation of the Online Learning Classes Experienced by the Participants in terms of Challenges related to Preparing Content for Online Learning

	Indicators Preparing Content for Online Learning	Level of Challenges		Interpretation
		Mean	Description	
1	I find it hard to download information online for content due to poor internet connectivity.	2.60	Agree	The level of challenge is moderately high
2	I am struggling in making a creative content using online resources.	2.53	Agree	The level of challenge is moderately high
3	I have limited resources for content creation.	2.53	Agree	The level of challenge is moderately high
4	I find it hard to prepare content for online learning as it takes a lot of time and effort.	2.63	Agree	The level of challenge is moderately high
5	I have difficulty in finding a reliable source for content.	2.30	Disagree	The level of challenge is fairly high
Overall Weighted Mean		2.52	Agree	The level of challenge is moderately high

Range of means: 3.50-4.00 Strongly Agree; 2.50-3.49 Agree; 1.50-2.49 Disagree; 1.00-1.49 Strongly Disagree

As shown in the table, indicator number four (4) states that I find it hard to prepare content for online learning as it takes a lot of time and effort gained the highest mean of 2.63 and which is interpreted as moderately high. Meanwhile, indicator number five (5) which indicates that I have difficulty in finding a reliable source for content got the lowest mean of 2.30 which tells that the participants' level of challenge is fairly high.

The overall weighted mean on the challenges related to preparing content for online learning is 2.52 and which is interpreted that the level of challenge is moderately high. The results imply that the participants is having difficulty when it

comes to preparing a content for online learning due to factors such as poor internet connectivity, inequality of opportunity such as technology, and other resources to create creative content, lack of time and effort.

In this study, poor internet connectivity is still one of the major challenges in the online distance learning. Mailizar et al. (2020) revealed in their research that the lack of knowledge, skills, and devices, internet connection, irrelevance and issues with system access were among the challenges experienced by teachers and students in the implementation of online learning amidst pandemic. They were live course connection problems, file upload problems, system log.in problems, video problems. These problem may have arose from the devices used by the teachers, internet speed and capacity of system-related current moods.

Fauzi et al. (2020) revealed that teachers experience a variety problems during Covid-19 pandemic such as lack of opportunities in online learning applications, network and internet use, teacher's planning, evaluation, implementation and collaboration with parents. The experience of participants in the process were lack of internet, limited or poor internet connectivity, lack of computer, unsuitable smartphone for the courses, and inequality of opportunity. This means that the participants were unprepared in the implementation of online learning and had to participate with limited knowledge about technology and limited opportunities. In addition, some participants in the select private school were live in the center some tried to participate from the village with various internet problems. Similarly, Apriyanti (2020) stated that the lack of internet access and digital tools in villages or rural areas was a barrier to online courses.

#### Is there a significant difference between the teachers' level of challenges when they are grouped according to profile?

##### 3.1 school

Table 4 shows the significant difference in the participants' level of challenges when grouped according to their schools.

Table 4  
Significant Difference between the Participants' Level of Challenges when grouped According to School Taught

Participants	P value	Remarks	Decision
School A and School B	.274	Not Significant	Do Not Reject Ho

\*tested at 0.05 level of significance

The table shows that there is no significant difference in the level of challenges between groups having significant values which are higher than 0.05 levels of significance tested for analysis. Thus, the null hypothesis is not rejected. The data means that the participants have similar level of challenges in

the implementation of online learning classes regardless of the schools where they are affiliated with.

##### 3.2 sex

Table 5 presents the significant difference in the participants' level of challenges when grouped according to sex.

The results show that there is no significant difference between the teachers' level of challenges when grouped according to sex. This was verified by a p value of 0.217 that is higher than the 0.05 level of significance set for analysis. Thus, the null hypothesis is not to be rejected.

Table 5  
Significant Difference on the Participants' Level of Challenges when grouped According to Sex

Participants	P value	Remarks	Decision
Male and Female	.217	Not Significant	Do Not Reject Ho

\*tested at 0.05 level of significance

The data entails that the participants have similar level of challenges in the implementation of online learning classes regardless of their sex.

#### IV. Conclusions

In terms of assessing students' progress, technology access and preparing online content, most of the teachers in the select private schools agreed that it is difficult for them to integrate technology in class when internet connectivity is poor. When there is a barrier between the student and teachers during online class, teachers have difficulty in using the ICT for their online class, they have a hard time giving assessments to learners to monitor their progress, and they also have difficulty in designing their lessons or content via the online platform.

The study further reveals the challenges experienced by the teachers may be caused by the abrupt implementation of an online class. Teachers are still adjusting and learning how to integrate technology in the teaching and learning process. Hence, teachers should exert some more effort to learn how to integrate e-learning tools and try to explore and not just stick to the basics as it will give students also a sense of excitement having to meet a different kind of assessment while browsing the lesson on the web. Also, the teachers is having difficulty when it comes to preparing content for online learning due to poor connectivity, inequality of opportunities such as technology, and other resources to create creative content.

During this Covid-19 pandemic, people can realize the difficulties faced by the teachers and students and create a humanizing pedagogy approach that is inclusive and sensitive for both teachers' and students' needs. It is important and



necessary to support the enhancement of technological knowledge and skills of teachers in order to make them more equipped and to remove barriers to online teaching and learning.

## V. Recommendations

Based on the results of this study, the following recommendations are forwarded: (1) the school may initiate and fund a seminar-workshop for ICT integration in online learning for teachers every quarter of the School Year for them to learn ICT integration while also teaching a class; (2) the school administrators may use the training design developed in this study as their guide in honing their teachers' skills in integrating ICT in teaching and learning process. They may give emphasis on the importance of ICT literacy skills by providing and allowing students to use schools' computer units with free internet services; (3) teachers may allocate an effort to learn how to integrate computer and internet tools and try to explore and not just stick to the basics as it gives student also a sense of excitement having to meet different kinds of assessments while browsing the lesson on the web; (4) teachers and pre-service teachers may also benefit from using the training design as their guide. They are highly encouraged to participate in such training related in ICT integration for them to be more equipped with appropriate knowledge and skills on online teaching and learning; (5) parents could be the source of motivation for the learners to do well in class and they could teach their children how to operate the computer. Parents may act as facilitators during a virtual classroom and it would be a great advantage if they could give their full support; (6) Department of Education may focus on producing quality and globally competitive teachers; ones that are competent to maneuver ICT tools; and (7) future researchers who wished to address the challenges and needs of the online teachers, are encouraged to consider increasing the scope as well the number of participants in their future study. The result of this study may differ from others, thus, the researchers highly encouraged the future researchers to explore other ways where they could get authentic responses from the participants.

## V. REFERENCES

- [1] Akbulut, M., Şahin, U., & Esen, A. C. (2020). More than a virus: How COVID 19 infected education in Turkey? *Journal of Social Science Education*. Retrieved from: <https://doi.org/10.4119/jsse-3490> on March 15, 2022.
- [2] Assylzhanova, D., Seisenbek, N., Uzakbaeva, S., & Kapalbek, B. (2022). The effect of ICTenhanced blended learning on elementary school students' achievement in English and attitudes towards English lesson. *International Journal of Education in Mathematics, Science, and Technology (IJEMST)*, 10(3), 632-649. <https://doi.org/10.46328/ijemst.2463>
- [3] Apriyanti, C. (2020). Distance learning and obstacles during Covid-19 outbreak. Retrieved from: <https://www.researchgate.net/publication/343192148> on March 16, 2022.
- [4] Arif, Istyadi, M., and Syahmani. (2018). Implementasi Problem Based Learning Berbantuan Diskusi Daring terhadap Kemampuan Pemecahan Larutan Penyangga. *JCAE, Journal of Chemistry and Education*, 1(3), 237-244 Google Scholar. Retrieved from: [https://www.researchgate.net/publication/325138641\\_Factors\\_affecting\\_student\\_use\\_of\\_UTATUT\\_in\\_the\\_Pakistani\\_context](https://www.researchgate.net/publication/325138641_Factors_affecting_student_use_of_UTATUT_in_the_Pakistani_context) on March 16, 2022.
- [5] Bailey et. al, (2015). Student perspectives of assessment strategies in online courses. Retrieved from *Journal of Interactive learning in 2018*.
- [6] Barak, M. (2017). Science teacher education in the twenty-first century: a pedagogical framework for technology-integrated social constructivism. Retrieved from: doi:10.1007/s11165-015-9501-y on March 15, 2022.
- [7] Beach, P. (2018). Examining elementary teachers' use of online learning environments: an exploratory study. *Journal of Research on Technology in Education*, 50(1), 34-47. Retrieved from: <https://doi.org/10.1080/15391523.2017.1383216> on March 16, 2022.
- [8] Burden, K., & Hopkins, P. (2016). Barriers and challenges facing pre-service teachers use of mobile technologies for teaching and learning. *International Journal of Mobile and Blended Learning*. Retrieved from: doi:10.4018/IJMBL.2016040101 on March 15, 2022.
- [9] Cao, Y., Lin, C.-Y., & Wang, B. (2010). Question and answer search. U.S. Retrieved from Patent Application 12/403,506.
- [10] Cardullo et. al, (2021) K-12 teachers' remote teaching self-efficacy during the pandemic. Retrieved from: [https://www.emerald.com/insight/content/doi/10.1108/JRIT-10-2020\\_0055/full/html](https://www.emerald.com/insight/content/doi/10.1108/JRIT-10-2020_0055/full/html) on March 16, 2022.
- [11] Clarin, A. and Baluyos, E., (2022). Challenges encountered in the implementation of online distance leaning. Retrieved from: <https://files.eric.ed.gov/fulltext/ED613639.pdf> on June 8, 2022.
- [12] Clark and Mayer, (2016). E-learning and the science of instruction. Retrieved from: <https://www.scribd.com/book/300079854/e-Learning-and-the-Science-of-Instruction-Proven-Guidelines-for-Consumers-and-Designers-of-Multimedia> on March 16, 2022.
- [13] Cleaver, S. (2014). Technology in the classroom: helpful or harmful? Retrieved from: <http://www.education.com/magazine/article/effective-technology-teaching-child/> on March 15, 2022.
- [14] Elstad, E., & Christophersen, K. (2017). Perceptions of digital competency among student teachers: contributing to the development of student teachers' instructional self-efficacy in technology-rich classrooms. *Education Sciences*. Retrieved from: doi:10.3390/educsci7010027 on March 15, 2022.

- [15] European Survey (2020). Survey on online and distance learning. Retrieved from: <https://www.schooleducationgateway.eu/en/pub/viewpoints/surveys/survey-on-online-teaching.htm> on March 16, 2022.
- [16] Farmer et al., (2019) Exploring the Concerns of Online K-12 Teachers. Retrieved from: <https://files.eric.ed.gov/fulltext/EJ1208818.pdf> on March 15, 2022.
- [17] Fauzi, I. (2020). Teachers' elementary school in online learning of Covid-19 pandemic conditions. Retrieved from: [https://www.researchgate.net/publication/342100923\\_Teachers'\\_Elementary\\_School\\_in\\_Online\\_Learning\\_of\\_COVID-19\\_Pandemic\\_Conditions](https://www.researchgate.net/publication/342100923_Teachers'_Elementary_School_in_Online_Learning_of_COVID-19_Pandemic_Conditions) on March 15, 2022.
- [18] Gallardo-Echenique, E. E., de Oliveira, M. J., Marqués-Molias, L., & Esteve-Mon, F. (2015). Digital competence in the knowledge society. MERLOT Journal of Online Learning and Teaching. Retrieved from: [https://jolt.merlot.org/vol11no1/Gallardo-Echenique\\_0315](https://jolt.merlot.org/vol11no1/Gallardo-Echenique_0315) on March 15, 2022.
- [19] Garba, S. A., Byabazaire, Y., & Busthami, A. H. (2015). Toward the use of 21st-century teaching-learning approaches: the trend of development in Malaysian schools within the context of Asia Pacific. International Journal of Emerging Technologies in Learning, 10(4), 72–79. Retrieved from: <http://dx.doi.org/10.3991/ijet.v10i4.4717%0A> on March 15, 2022.
- [20] Goldstein & Behuniak (2012). Can assessment drive instruction? understanding the impact of one state's alternate assessment. Retrieved from: <https://journals.sagepub.com/doi/10.2511/027494812804153589> on March 16, 2022.
- [21] Heritage, M. (2012) Formative assessment and next-generation assessment systems: are we losing an opportunity? Retrieved from: <https://files.eric.ed.gov/fulltext/ED543063.pdf> on March 16, 2022.
- [22] Herman, J. (2013) Formative Assessment for Next Generation Science Standards: A Proposed Model. Retrieved from: <https://www.ets.org/Media/Research/pdf/herman.pdf> on March 15, 2022.
- [23] Helfaya, A. & O'Neill, J. (2019). Staff reflections on using E-assessment feedback in the digital age in Advances Chapter 16 in Higher Education and Professional Development. Retrieved from: [www.igi-global.com/chapter/staff-reflections-on-using-e-assessment-feedback-in-the-digital-age](http://www.igi-global.com/chapter/staff-reflections-on-using-e-assessment-feedback-in-the-digital-age) on March 16, 2022.
- [24] Hylton, K., Levy, Y., & Dringus, L. P. (2016) Utilizing webcam-based proctoring to deter misconduct in online exams. Retrieved from: <https://doi.org/10.1016/j.compedu.2015.10.002> on March 17, 2022.
- [25] Izhar, N. A., Al-dheleai Y. M., & Na, K. S. (2021). Teaching in the time of Covid-19: the challenges faced by teachers in initiating online class sessions. International Journal of Academic Research in Business and Social Sciences, 11(2), 1294-1306. Retrieved from: <https://doi.org/10.6007/ijarbss/v11-i2/9205> on March 16, 2022.
- [26] Johnson, A. M., Jacovina, M. E., Russell, D. E., & Soto, C. M. (2016). Challenges and solutions when using technologies in the classroom. In S. A. Crossley & D. S. McNamara (Eds.) Adaptive educational technologies for literacy instruction (pp. 13-29). New York: Taylor & Francis. Published with acknowledgment of federal support. Retrieved from: <https://files.eric.ed.gov/fulltext/ED577147> on March 15, 2022.
- [27] Kanwal, F., & Rehman, M. (2017). Factors affecting e-learning adoption in developing countries—Empirical evidence from Pakistan's higher education sector. IEEE Access, 5, 10968–10978. Retrieved from: <https://doi.org/10.1109/access.2017.2714379> on March 15, 2022.
- [28] Karim, M. N., Kaminsky, S. E., & Behrend, T. S. (2014). Cheating, reactions, and performance in remotely proctored testing: An exploratory experimental study. Retrieved from: Journal of Business and Psychology, 29(4), 555-572 on March 17, 2022.
- [29] Killen, C., Beetham, H., & Knight, S. (2017) Developing organisational approaches to digital capability. JISC. Retrieved from: <https://www.jisc.ac.uk/guides/> on March 17, 2022.
- [30] Lansangan, R. (2020) Teaching junior high school chemistry during the Covid-19 community quarantine season: lessons, challenges, and opportunities. Retrieved from: <https://kimika.pfcs.org.ph/index.php/kimika/article/view/290> on March 17, 2022.
- [31] Mailizar, Almanthari, A., Maulina, S., & Bruce, S. (2020). Secondary school mathematics teachers' views on e-learning implementation barriers during the Covid-19 pandemic: The case of Indonesia. Eurasia Journal of Mathematics, Science and Technology Education, 16(7), em1860. Retrieved from: <https://doi.org/10.29333/ejmste/8240> on June 9, 2022.
- [32] Malipot, M. (2020) DepEd: Most students prefer 'modular' learning over online. Retrieved from: <https://mb.com.ph/2020/07/03/deped-most-students-prefer-modular-learning-over-online/> on March 15, 2022.
- [33] Martin, F., Budhrani, K., Kumar, S., & Ritzhaupt, A. (2019). Award-winning faculty online teaching practices: roles and competencies. Online Learning Journal, 23(1), 184–205. Retrieved from: <https://doi.org/10.24059/olj.v23i1.1329> on March 17, 2022.
- [34] Mishra, P., & Mehta, R. (2017). What we educators get wrong about 21st-century learning: results of a survey. Journal of Digital Learning in Teacher Education, 33(1), 6–19. Retrieved from: <https://doi.org/10.1080/21532974.2016.1242392> on March 15, 2022.
- [35] Mynbayeva, A., Sadvakossova, Z., & Akshalova, B. (2017). Pedagogy of the twenty-first century: innovative

- teaching methods. In O. B. Cavero & N. Llevot-Calvet (Eds.), *New Pedagogical Challenges in the 21st Century - Contributions of Research in Education*. IntechOpen. Retrieved from: <https://doi.org/http://dx.doi.org/10.5772/57353> on March 15, 2022.
- [36] Ozamiz-Etxebarria, N, et. al, (2020). The psychological state of teachers during the Covid-19 crisis: the challenge of returning to face-to-face teaching. Retrieved from: <https://www.frontiersin.org/articles/10.3389/fpsyg.2020.620718/full> on March 16, 2022.
- [37] Özüdoğru, G. (2021) Problems faced in distance education during Covid-19 pandemic. Retrieved from: <https://files.eric.ed.gov/fulltext/EJ1300914.pdf> on March 17, 2022.
- [38] Peterson, A. et, al. (2018). Understanding innovative pedagogies: key themes to analyse new approaches to teaching and learning.. Retrieved from <https://doi.org/10.1787/9f843a6e-en> on March 17, 2022.
- [39] Plakans and Gebril (2016) Writing assessment literacy: Surveying second language teachers' knowledge, beliefs, and practices. Retrieved from: [https://www.researchgate.net/publication/300423652\\_Writing\\_assessment\\_literacy\\_Surveying\\_second\\_language\\_teachers\\_knowledge\\_beliefs\\_and\\_practices](https://www.researchgate.net/publication/300423652_Writing_assessment_literacy_Surveying_second_language_teachers_knowledge_beliefs_and_practices) on March 15, 2022.
- [40] Rasheed, R. A., Kamsin, A., & Abdullah, N. A. (2020). Challenges in the online component of blended learning: a systematic review. *Computers and Education*, 144(March 2019), 103701. Retrieved from: <https://doi.org/10.1016/j.compedu.2019.103701> on March 15, 2022.
- [41] Rasmitadila, R. et, al. (2020). The perceptions of primary school teachers of online learning during the Covid-19 pandemic period: a case study in Indonesia. Retrieved from: <https://files.eric.ed.gov/fulltext/ED606349.pdf> on March 17, 2022.
- [42] Reimers, F., & Schleicher, A. (2020). A framework to guide an education response to the COVID-19 pandemic of 2020. *Organisation for Economic Co-Operation and Development (OECD)*, 227–2268. Retrieved from: <https://doi.org/10.3102/00346543066003227> on March 15, 2022.
- [43] Restuati, M., Nasution, M. Y., Pulungan, A. S. S., Pratiwi, N., & Safirah, B. (2021). Improvement efforts for student learning outcomes and motivation using Edmodo during the COVID-19 pandemic. *International Journal of Education in Mathematics, Science, and Technology (IJEMST)*, 9(4), 614-624. <https://doi.org/10.46328/ijemst.1974>
- [44] Robosa, et, al (2021) The experiences and challenges faced of the public school teachers amidst the Covid-19 pandemic: a phenomenological study in the Philippines. Retrieved from: [https://www.researchgate.net/publication/349310396\\_The\\_Experiences\\_and\\_Challenges\\_Faced\\_of\\_the\\_Public\\_School\\_Teachers\\_Amidst\\_the\\_COVID-19\\_Pandemic\\_A\\_Phenomenological\\_Study\\_in\\_the\\_Philippines](https://www.researchgate.net/publication/349310396_The_Experiences_and_Challenges_Faced_of_the_Public_School_Teachers_Amidst_the_COVID-19_Pandemic_A_Phenomenological_Study_in_the_Philippines) on March 16, 2022.
- [45] Rosalina, Elsa, Nasrullah Nasrullah, and Eka Puteri Elyani. 2020. Teacher's challenges towards online learning in pandemic era. *LET: Linguistics, Literature and English Teaching Journal* 10 (2): 71. Retrieved from: <https://doi.org/10.18592/let.v10i2.4118> on March 17, 2022
- [46] Sadeghi, M. (2019). A shift from classroom to distance learning: advantages and limitations. *International Journal of Research in English (IJREE)*, 4(1), 80–88. Retrieved from: <http://ijreeonline.com/article-1-132-en.html> on March 15, 2022.
- [47] Sharafeeva, L. (2022). The study of teaching staff motivation to use mobile technologies in teaching mathematics. *International Journal of Education in Mathematics, Science, and Technology (IJEMST)*, 10(3), 604-617. <https://doi.org/10.46328/ijemst.2364>
- [48] Slavin, R.E. (2012). *Educational psychology: theory and practice* (10th ed.). Retrieved from: <https://www.pearson.com/us/higher-education/product/Slavin-Educational-Psychology-Theory-and-Practice-10th-Edition/9780137034352.html> on March 17, 2022.
- [49] Sheehan, S. (2019) What does language assessment literacy mean to teachers? Retrieved from: [https://www.researchgate.net/publication/331787626\\_What\\_does\\_language\\_assessment\\_literacy\\_mean\\_to\\_teachers](https://www.researchgate.net/publication/331787626_What_does_language_assessment_literacy_mean_to_teachers) on March 17, 2022.
- [50] The Manila Times. (2018). PH's economic competitiveness: is slow internet a factor?. Retrieved from: <https://www.manilatimes.net/2018/06/03/business/phs-economic> on March 17, 2022.
- [51] Venkatesh, V., & Davis, F. D. (2000). A theoretical extension of the technology acceptance model: Four longitudinal field studies. *Management Science*, 46, 186–204. Retrieved from [http://www.vvenkatesh.com/it/organizations/Theoretical\\_Models.asp#Constructs](http://www.vvenkatesh.com/it/organizations/Theoretical_Models.asp#Constructs) on March 18, 2022
- [52] Wibowo, F. (2021) An analysis of online assessment in teaching English. Retrieved from: [https://www.researchgate.net/publication/351521084\\_An\\_Analysis\\_of\\_Online\\_Assessment\\_in\\_Teaching\\_English](https://www.researchgate.net/publication/351521084_An_Analysis_of_Online_Assessment_in_Teaching_English) on March 17, 2022.
- [53] Witherspoon, M., Maldonado, N., & Lacey, C. H. (2012). Undergraduates and academic dishonesty. *International Journal of Business and Social Science*. Retrieved from: <https://eric.ed.gov/?id=ED518485> on March 15, 2022.
- [54] Zhang, W., Wang, Y., Yang, L., & Wang, C. (2020). Suspending classes without stopping learning: China's education emergency management policy in the COVID-19 outbreak. *Journal of Risk and Financial Management*, 13(3), 1-6. Retrieved from: <https://doi.org/10.3390/jrfm13030055> on March 16, 2022
- [55] Zhou, L., Wu, S., Zhou, M., & Li, F. (2020). School's out, but the class' on', the largest online education in the world today: taking China's practical exploration during the covid-19 epidemic prevention and control as an example. *Best Evidence Chinese Education*, 4(2), 501–519.



Retrieved from: <https://doi.org/10.2139/ssrn.3555520> on  
March 17, 2022.