

SECONDARY TEACHERS' PREPARATION, CHALLENGES, AND COPING MECHANISM IN THE PRE-IMPLEMENTATION OF DISTANCE LEARNING IN THE NEW NORMAL

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ABSTRACT

COVID-19 pandemic has resulted drastic changes in education. Part of it is the shift from face-to-face classes to different learning modalities which include distance learning. Since education is believed to continue despite the circumstances, teachers started to prepare for modular and online distance learning. Teaching is possible, but, has challenges as well. Hence, this phenomenological research explored the lived experiences of secondary teachers in the Division of San Pablo City in the pre-implementation of distance learning in the new normal. The participants were selected through purposive sampling and underwent one-on-one actual in-depth interview through video conference. The documented interviews were transcribed and coded. Categories were clustered; then, emerging themes were derived. Results identified three core themes related to preparation such as gathering resources and establishing practices, profiling learners, and capacity building for continuous learning and development; three core themes related to challenges such as complexity of assessment, difficulty in instructional delivery and digital divide; and five core themes related to coping mechanisms which include positive well-being, time management, openness to change, peer mentoring, and collaboration. Findings revealed that as education migrates to a New Normal, teachers make necessary preparations to equip themselves with distance learning. Though they face challenges which may hamper their work, they still manage to cope with the new normal to continue their tasks. The higher offices and school authorities should work with teachers at the pre-implementation of distance learning to address their needs in resources and training to effectively facilitate the delivery of quality education for students.

Keywords: Phenomenological research, secondary teachers, lived experiences, pre-implementation, distance learning, new normal, Division of San Pablo City

INTRODUCTION

One of the emerging global emergencies in public health is the COVID-19 pandemic caused by a Novel Coronavirus SARS-COV-2. The fight against its threats has received massive global attention on how to eradicate the continual increase of growing infections (Guo, et al., 2020). As the World Health Organization

(WHO) declared that COVID-19 is already a pandemic, the Philippines was placed in a state of calamity under the Presidential Proclamation No. 929 s. 2020. Suspension and temporary closing of companies, enterprises and business operations has taken effect. Movement of people, goods, and services within and across

municipal boundaries was also restricted. The WHO has recommended different measures such as social distancing, wearing of face masks, handwashing, self-isolation, and improved health care system to control the spread of infection and lessen the death rate (WHO, 2020).

Education sector is one of the most affected fields brought about by COVID-19 pandemic. Schools have become the most vulnerable to safety and security. Health concerns of school personnel, students, parents, and other stakeholders are at stake; thus, temporary closure of schools was enforced to contain the spread of the virus and reduce infections (UNESCO, 2020). Community lockdown and quarantine led work from home among teachers and study from home among students through online distance learning (Crawford, et al., 2020). Other schools cut their classes short than expected, which causes serious disruption to more educational opportunities. The opening of cases for the next academic year was delayed, giving more time to schools to prepare continuity plans and manage alternative learning modalities. Teaching and learning which mainly happens inside the classroom becomes the most susceptible to disturbance, so education leaders decided to cope with and adopt the New Normal education.

Globally, many schools have already replaced traditional classroom setups with innovative flexible learning strategies since these are found to improve students' learning outcomes (Kim, 2020). The Philippines' education system, particularly in the basic education, faces challenges related to learning delivery modalities. It is eyed that marginalized learners are expected to have less access to resources causing social disadvantage and digital divide. Thus, flexible learning has been subjected to further evaluations and debates in terms of inclusivity and equity in educational opportunities.

Education shall continue despite the situation so the Department of Education (DepEd) has implemented its Basic Education Learning Continuity Plan (BE-LCP) for the Academic year 2020-2021. BE-LCP is a

package of education interventions that will respond to basic education challenges brought about by COVID-19 (DepEd Order No. 12, 2020). And so, to protect the health, safety, and well-being of learners, teachers, and personnel, and prevent the further transmission of COVID-19, the department will implement the alternative learning delivery modalities such as modular, television-based, radio-based instruction, blended, and online while face-to-face classes still prohibited due to the public health situation. As to the curriculum offering, the learning competencies have been decongested to focus only on the most essential learning competencies (MELC) which are aligned to the achievement of 21st century skills such as critical thinking, collaboration, communication, and creativity.

Consequently, instructional delivery is shifted into a different undertaking in the teaching and learning process. Subject matter has been taught in different ways such as inquiry, hands-on learning, social interaction, and constructivism. However, such pedagogies seem difficult to implement in a distance learning, and teachers do not feel adequately able and prepared to teach the subject remotely (Lichoro, 2015). Teachers who are new to distance learning may feel unprepared to facilitate teaching, thus, need support as to technical, pedagogical, and time management (Dyment, 2013). Instruction heavily relies on technology leaving the teachers not fully prepared and lack of competence (Nilson & Goodson, 2018). In this regard, digital literacy gains recognition as the key tool for lifelong learning and valuable ability for Industry 4.0. However, it has still its downside due to high costs and maintenance, accessibility to online platforms and resources, and incompetence to its use.

Thus, this study was conducted to explore the secondary teachers' lived experiences in the pre-implementation of distance learning in the New Normal. Furthermore, it attempted to investigate the teachers' preparation, challenges, and coping mechanisms.

OBJECTIVES OF THE STUDY

This study was conducted to explore the secondary teachers' lived experiences in the pre-implementation of distance learning in the New Normal. Specifically, it attempted to (1) determine the preparation of teachers in the new normal education; (2) determine the challenges they encounter as they prepare for distance learning; and (3) determine their coping mechanism to address those challenges. Their lived experiences from those objectives were described using the emerging themes.

METHODOLOGY

This study made use of descriptive phenomenological approach as its research design which focused on investigating the lived experiences of secondary teachers in the pre-implementation of distance learning in the new normal. The participants of the study were ten secondary teachers from the public secondary schools in the Division of San Pablo City, who were chosen through purposive sampling. An interview was scheduled based on the participants' availability and convenience. The actual one-on-one, in-depth interview at an average of 30 minutes took place through Zoom video communications. Questions were opened to enable the participants to give answers in their own words. The conversations were recorded upon the participants' approval. The documented interviews were transcribed in verbatim. Cool and warm analyses were employed in the treatment of data. The cool analysis consisted of the participants' statements, phrases, and sentences relevant to the experienced phenomenon. These were the basis in the conduct of warm analysis in which the data were clustered and categorized. Emerging themes were derived from the highlighted terms.

RESULTS AND DISCUSSION

1. Teachers' preparation for distance learning modality

1.1 Gathering resources and establishing practices

Most of the participants believed that preparing the devices and tools for teaching in the new normal is important. Effective command in distance learning requires a range of equipment which include computers, laptops, webcams, and internet modem (Brown, 2020). However, not all participants have complete devices to facilitate teaching in distance learning. Generally, the common devices and tools that the participants are preparing limits only to laptop, desktop, and pocket WIFI. In the current situation, electronic means and digital tools are considered essential to keep the constant communication among students and teachers, distribute educational materials, and access online platforms (Sadeghi, 2019).

"Preparing the tools and devices needed for online teaching and learning such as internet connection, laptop, and hard drive is a must" (P1).

"In terms of technology tools and online resources, fortunately, I have my laptop and other gadgets to support my online teaching. These basics things are necessity in this situation" (P9).

The strategies which were commonly used in face-to-face classes are not applicable in distance learning. Fear comes along as teachers embrace technology. It has given a sense of responsibility to adapt and explore such so they may integrate it into their pedagogy and still perform professional functions (Lie, 2020). Therefore, the participants reframe contextualization to fit in the context of the current modality. At this time of pandemic where learners will learn remotely, teachers should contextualize learning based on the adversity of times, availability of resources at home, and mastering the most essential competencies.

"Contextualized learning is an effective pedagogy in this new normal because I believe that students learn more from their experiences. This shall be learned and

mastered in the delivery of online teaching and learning” (P2).

1.2 Profiling learners

A sole participant shared that preparation is not limited only to single type of online tool, but rather, a variety of selection to choose from to cater the needs of learners. Teachers shall address the different needs of the learners; thus, it is important to know them by having assessment of their needs and determining their demographic profiles such as age, location, socioeconomic status, and parents’ employment status and educational background. Profile serves as valuable tool for effective planning. Understanding students’ demographics and background can assist teachers to make helpful decisions on the applicability and appropriateness of online programs (Colorado & Eberle, 2010).

“I try to explore different online tools that will better suit the needs and capacity of our students. Since not all are capable, it is better to know them first. The online tools shall complement their needs” (P3).

1.3 Capacity building for continuous learning and development

Online distance learning adheres to the use of technology. The participants are continuously familiarizing themselves with different online learning platforms. To equip themselves with the new normal education, the participants attend webinar sessions, watch video tutorials, and are mentored by peers. This allows to widen their knowledge and develop useful skills as they design their instructional plans. Continuous learning provides growth and development of teachers as professionals, making them ready and prepared in embracing changes in the teaching landscape. Teachers play a significant role in improving the quality of education; hence, capacity building of teachers must receive top priority (Aslam, 2014).

“I might consider the integration of online learning platforms like Google Classroom. I watch video tutorials to learn that. Reviewing the MELCs, constructing LEs and crafting activities, and exploring online learning platforms helps me a lot to gain sufficient knowledge to continue my work” (P2).

“I watch videos of some common learning platforms in which students have access too. Our survey showed that most of them are only familiar with Facebook, Zoom, and Messenger. So, I send them videos on how to use other learning platforms” (P5).

“Webinars guide us [on] how to make learning resources and materials possible and how we can adjust to this so-called new normal” (P10).

2.Challenges encountered during preparation stage

2.1 Complexity of assessment

The participants mentioned assessment as major challenge they face in preparing for distance learning. In a study, teachers worried about the equality of assessment between distance learning and face-to-face discussions in ensuring that the students are taking the tests under the same conditions and situations, and students can be able to submit equivalent written works and other indicators of achievement of objectives. (Kearns, 2012). Since teachers were not trained in distance learning during their preservice years, thinking on how to implement different assessment strategies seems tough. Validity and trustworthiness of students’ responses may also become an issue as distance learning cannot provide real-time guidance of teacher-facilitator when giving examinations and making outputs. Giving personalized feedbacks for students’ individual work and formative tests is also relevant as it helps in directing students’ learning, but this seems difficult especially for teachers with roughly 300 students in 6 classes. Summative examinations become prone also to

cheating and plagiarism which defeat the purpose of quality evaluation (Laghigna, 2020).

“It seems difficult to evaluate students’ works and assess their learning especially in ensuring honest and valid works” (P3).

“It will be totally different compared to face-to-face classes where I can easily direct instruction. I am expecting further distractions and other challenges in assessment due to unavailability of students’ resources at home” (P9)

2.2 Difficulty in instructional delivery

Instructional delivery adds up to the major concerns as participants said that they have only limited knowledge and skills when it comes to ICT. This is rooted in the absence of relevant trainings on distance learning. The Department of Education said that only around 40 percent of the 800,000 teachers nationwide were trained for distance learning through the Information and Communication Technology (ICT) unit-facilitated webinar sessions, however, Senator Francis Tolentino questioned the preparedness of the department in conducting online distance learning. *“The figure is just about 40 percent of the total public schools teaching population of more than 800,000. If the 40 percent is ready, how about the other 60 percent?”* Tolentino said (Bordey, 2020).

“We have conducted a learning modality survey and it revealed a low preparedness in digital literacy among teachers” (P5).

“I only have limited knowledge and skills in using online learning tools and manipulating devices” (P4).

Teachers heralded that putting up the most appropriate pedagogy to support the lesson in online distance learning creates another problem. Participants mentioned that doing inquiry-based learning is difficult as it requires guidance in the beginning stages. Inquiry-based education is the cornerstone of experiential learning as it provides activities which let students use their process skills and

stimulate their curiosity. Most teachers claimed that blending the teaching strategy with distance learning modality should be established. Factors should be considered such as appropriateness, adequacy, and availability of resources. Technology supports and connects the two ends between strategy and modality; however, it should not overpower the design and delivery of the lessons. Rather, teachers shall take advantage of technology but not neglect the learning design.

“For the new normal, focusing on student-centered activities using inquiry-based learning is difficult to implement in distance learning. I cannot guide the students in their undertaking.” (P3).

“It is very challenging for me to look for the activities to be given among students where they can apply learning by doing.” (P7).

Every learner comes into the learning spaces with varied needs, knowledge, skills, and personalities. Participants said that designing learning plans poses difficulty in addressing student diversity. This makes differentiation to make individualized lessons difficult for teachers especially when facilitating different classes consisted of many learners (Pappas, 2015). Since students work remotely, teachers will prepare lessons that fit their needs. Some lessons require collaboration, while some need in-depth interaction which seem a challenge in remote learning. Also, it is even worse for struggling students who need further support and assistance. Differentiating lessons require materials and resources to enrich the understanding of concepts, yet learners’ home cannot sustain such for every facet of learning.

“In designing learning, I have to ensure that it would be understood by all types of learners. Direct instruction tends to bore students. That is why we have to give different activities.” (P5).

“The teaching and learning process is ever-changing and dynamic, and so the needs of

the students. We, teachers, must be responsive and adaptive” (P10)

2.3 Digital Divide

ICT is a key factor in online distance learning. In a modern digital world, ICT is not just an option, but a rule (Cosmas & Mbwette, 2009). One participant mentioned that financial constraint hampers the preparation for online distance learning. There are required specifications of mobile phones, laptops, desktops, and other gadgets. And so, the upgrade entails finances. Teachers do not have the most appropriate devices to run an online distance learning since there is no provision for additional budget. Instruction-related challenge in online distance learning is rooted in financial difficulties. This hinders an effective and balanced teaching and learning system (Musingafi, Mapuranga, Chiwanza, & Zebron, 2015). The current situation of the learners is not different since not all have access to online tools and platforms. Financing distance learning poses a problem in any developing countries like the Philippines (Rashid & Muhammad, 2012). The costs are not within the budget capacity of an average Filipino family. Though there are low prices offering, but sustainability falls under another concern.

“Financial matters effect the preparations of lessons in modules, videos and other online learning materials since we are also considering the capacity of our students” (P5).

Stable and fast internet connection supports the instructional delivery in online distance learning. However, the Philippines' fixed average speed as of early this year is only 26.18 Mbps which makes the country ranked 114th in the world for mobile speeds and 108th for fixed broadband speeds (Ookla, LLC, 2020). Teachers rely on internet for communication and utilization, but stability and speed hinder them to do so. The participants mentioned that unstable and slow internet connection impede their duties and works. Signal interruption in different

geographic sites adds up also to the situation which is out of teachers' control. Teachers are not exception by the lagging internet connection which would miss out essential discussions when the internet freezes during synchronous classes (Alvarez, 2020). The success of any online distance learning modality heavily relies on internet connection because a failure can detract the entire online learning experience.

“The stability of internet connection is a big challenge for me. Personally, I experience lags during video conferences and when navigating the world wide web” (P1).

“Constant communication between us, teachers and learners has become a challenge unlike in physical classroom where we can talk to them. Since there are internet connectivity issues, it might affect talking to them and asking their how abouts” (P5).

“One of my problems is the internet connectivity. I only have prepaid WIFI and I am unsure of its performance especially in the actual teaching” (P6).

The participants found difficulty to navigate digital tools and online platforms. They are still on the early stages to familiarize themselves with the use of technology. ICT is found to have vital potential in increasing students' achievement and enriching teachers' skills; however, lack of training, equipment and skill limit its success. Confidence, competence, and accessibility have been critical ingredients to effectively blend ICT into the teaching and learning process (Habibu, Al Mamun, & Clement, 2012). Acquiring the latest devices and integrating ICT into the lesson is not enough. It must be sustained over the long term.

“One of the challenges I identified is the lack of knowledge and skills in using different online learning platforms” (P4).

“Some applications and tools are difficult to navigate, while others like Youtube and Facebook are easier. Guidance and training are needed” (P7).

"It requires effort and time to understand and be equipped with needed skills in the new normal. My heart goes to the older teachers who are not technology-oriented and still used traditional way of teaching. It would be harder for them to cope up with this kind of education" (P9).

3. Coping mechanisms to address the challenges

3.1 Positive well-being

The participants' positive well-being contributes to addressing the challenges of the new normal education. Encouraging outlook, self-confidence gained from encouragement and motivation, healthy lifestyle, and stress reduction allows them to continue performing their duties and responsibilities despite the challenges of these trying times. When teachers create a positive environment and well-being among themselves, it could foster improved academic performance and promote social and emotional progress among students even outside the classroom (Loveless, 2020).

"Boosting self-confidence by encouraging each other" (P4).

"I take vitamins for my health to reduce stress. When I feel tired, I also take a rest for a moment and pray for God's strength" (P7).

"Well, the only thing I have in mind now is positivity. I still believe that above all of these things we are experiencing right now, there will always be ways to educate the learners holistically" (P9).

3.2 Time management

Time management is an important practice to meet the demands of home and work. Participants said that time management helps them to accomplish things on time. This lets them to attend school duties, do household chores, and regain energy through rest. Establishing routines through habits and practices in a set schedule helps them to utilize

time efficiently. Also, taking advantage of tools and technology to be used in performing works like submission of outputs, computation of scores, checking of written works and delivery of instruction provides comfort and convenience (Raines, 2011).

"Even there are a lot of things to do, I still do my best to accomplish those things on time. I give more than enough time to work with the learning materials even late at night. Time management is very important" (P7).

3.3 Openness to change

Nothing in this world is constant. Being flexible and adaptive to changes allows us to survive and still succeed. One participant mentioned that teachers are engaged in never-ending learning, thus, we should be open to learn new things which would help us grow. Flexibility and adaptability are important qualities that every teacher must acquire. Effective teachers can adjust, change, and modify teaching methodologies depending on the students' needs, availability of resources, and context of environment. They value students' achievement, rather than rigid practices (Christenbury, 2011).

"It's a good thing that I'm very open to new learnings and I'm very interested in the new techniques as to the technology tools and online resources are involved" (P9).

"We, teachers, are very adaptive to the changing teaching-learning process because we are said to engage in never-ending learning. Every day we learn new things and these things are helpful for us to cope with the challenges of the new normal" (P10).

3.4 Peer mentoring

The participants mentioned that peer mentoring helps them to collaborate and share best practices. They seek guidance and support from one another when preparing learning resources and ICT tools. Mentoring provides a

strong support system in holistic well-being and development of educators. As teachers embrace change, peer mentoring allows them to build confidence and nurture competence in the new normal. Teachers value the support gained from one another as a beneficial way to stay connected. And when they feel appreciated and respected, they will render quality service through valuable teaching (Linton, 2017).

“Seeking help from my co-teachers since we are dealing with the same pressure in making good outputs. I ask help from my colleagues in studying different computer applications and gathering online resources and references” (P3).

“I ask assistance from those who are experts in using technology so I will be more acquainted in integrating it into my lessons” (P7).

3.5 Collaboration

Since the school cannot provide all needs of teachers due to its limited resources, the gaps are filled through the continuous support through community engagement and partnership with stakeholders. As stipulated in the DepEd Memorandum No. 53 s. 2020 or the Joint Implementing Guidelines on the 2020 Brigada Eskwela and Oplan Balik Eswela Relative to the COVID-19 Situation, and Adopt-a-School program under the Republic Act No. 8525, the school strengthens partnership to support Basic Education Learning Continuity Plan (BE-LCP). Collaboration is a key tool to create a meaningful learning experience for all. Parents understand the needs of their children, thus making them more engaged in extending help and support, and in return, teachers become more responsible in providing quality instruction among its learners. In this case, everyone is involved in designing learning opportunities. When everyone knows their roles and responsibilities, the implementation of learning modality becomes organized and easy (Okai-Ugbaje, Ardzejewska, & Imran, 2020).

“We ask assistance from our barangays in putting computer stations as hubs to gather the digitized materials and putting up boxes for distribution and retrieval of printed modules” (P5).

“We seek help from external stakeholders for the other things we need that our schools cannot provide. This act of partnership is a good avenue for better understanding and responsibility” (P10).

CONCLUSIONS

This phenomenological research aimed to explore the lived experiences of secondary teachers in the pre-implementation of distance learning in the new normal. Emerging themes were derived related to preparation, challenges, and coping mechanisms. Based on the findings, the following conclusions were hereby drawn:

1. Three core themes related to preparation were obtained. These include gathering resources and establishing practices, profiling learners, and capacity building for continuous learning and development. Preparation helps teachers to plan relevant course of actions prior to the implementation of distance learning. This manages teachers to equip themselves with sufficient knowledge and skills, attending the needs and understanding the status of learners, and acquiring relevant materials and resources.

2. Three core themes related to challenges were identified. These include the complexity of assessment, difficulty in instructional delivery due to lack of training, selecting the appropriate pedagogy, and differentiated instruction, and digital divide brought by financial constraint and ICT incompetence. As teachers migrate to new normal and prepare for distance learning, they face challenges which may hinder the success implementation of learning modality. These challenges should be recognized and addressed to help teachers mitigate the problems and continue their tasks.

3. Five core themes related to coping mechanisms were named. These include



positive well-being, time management, openness to change, peer mentoring, and collaboration. Though barriers surfaced during the pre-implementation stage of distance learning, teachers have ways to overcome it to cope with the challenges of the new normal. These help them meet the demands of new learning modality and being able to perform their duties and responsibilities as facilitators of learning.

RECOMMENDATIONS

While the core themes are found essential to the teachers' lived experiences in the pre-implementation of distance learning in the new normal, the following points are given for future considerations:

1. Teachers should formulate appropriate plans and implement adequate strategies to meet the demands of teaching and learning process in the new normal. They should have a growth mindset towards the situation, embrace changes, and explore possibilities by getting out of their comfort zones.

2. The higher offices and school authorities may work with the teachers in addressing the challenges they face as they migrate to the new normal teaching practices. Necessary resources and relevant training should be provided among teachers to successfully deliver quality education.

REFERENCES

Alvarez, A. G. (2020, June 29). Teaching in the new normal. Publishing Inc.: <https://www.sunstar.com.ph/article/1861856/Davao/Lifestyle/Teaching-in-the-new-normal>

Aslam, M. (2014). Capacity building of teachers needs top priority. Digital Learning Network. <https://digitallearning.eletsonline.com/2014/11/capacity-building-of-teachers-needs-top-priority/>

Bordey, H. (2020, June 25). 40% of DepEd teachers trained for distance learning.

<https://tribune.net.ph/index.php/2020/06/25/40-of-deped-teachers-trained-for-distance-learning/>

Brown. (2020, July 31). Advantages and disadvantages of distance learning. <https://www.eztalks.com/elearning/advantages-and-disadvantages-of-distance-learning.html>

Christenbury, L. (2011, January). The Flexible Teacher. <http://www.ascd.org/publications/educational-leadership/dec10/vol68/num04/The-Flexible-Teacher.aspx>

Colorado, J.T., & Eberle, J. (2010). Student demographics and success in online learning environments. *Emporia States Research Studies*, Vol. 46, no. 1, p. 4-10.

Cosmas, M., & Mbwette, T. (2009). Open and distance learning in developing countries: The past, the present and the future. Dar es salaam: Open University of Tanzania.

Crawford, J., Butler-Henderson, K., Rudolph, J., Malkawi, B., Glowatz, M., Burton, R., Magni, P.A., Lam, S. (2020). COVID-19: 20 countries' higher education intra-period digital pedagogy responses. *Journal of Applied Learning and Teaching*, 3(1), <https://doi.org/10.37074/jalt.2020.3.1.7>.

DepEd Memorandum No. 53, s. 2020. (2020, May 28). Joint implementing guidelines on the 2020 brigada eskwela and oplan balik eskwela relative to the COVID-19 situation (Amending thereby DepEd Memorandum No. 032, s. 2020 titled 2020 Brigada eskwela program implementing guidelines, and DepEd Memorandum No. 014, s. 2020 titled 2020 Oplan Balik Eskwela). https://www.deped.gov.ph/wp-content/uploads/2020/05/DM_s2020_053.pdf

DepEd Order No. 12, s. 2020 (2020, June 19). The basic education learning continuity plan. www.deped.gov.ph/wp-content/uploads/2020/06/DO_s2020_012.pdf

Downing, J. J., & Dyment, J. E. (2013). Teacher educators' readiness, preparation, and perceptions of preparing Preservice teachers in a fully online environment: An exploratory study. *The Teacher Educator*, 48(2), 96-



109. <https://doi.org/10.1080/08878730.2012.760023>
- Guo, Y.-R., Cao, Q.-D., Hong, Z.-S., Tan, Y.-Y., Chen, S.-D., Jin, H.-J., . . . Yan, Y. (2020). The origin, transmission and clinical therapies on coronavirus disease 2019 (COVID-19) outbreak – an update on the status. *Military Medical Research*, 7(11), <https://doi.org/10.1186/s40779-020-00240-0>.
- Habibu, T., Al Mamun, M. A., & Clement, C. K. (2012). Difficulties faced by teachers in using ICT in teaching-learning at Technical and Higher Educational Institutions of Uganda. *International Journal of Engineering Research & Technology* 1(7), 1-9.
- Kearns, L. R. (2012). Student assessment in online learning: Challenges and effective practices. *MERLOT Journal of Online Learning and Teaching* 8(3), 199-208.
- Kim, J. (2020, April 1). Teaching and learning after COVID-19. <https://www.insidehighered.com/digital-learning/blogs/learning-innovation/teaching-and-learning-after-covid-19>
- Laghigna, A. (2020, April 4). Distance learning: challenges and opportunities. <https://www.schooleducationgateway.eu/en/pub/latest/news/distance-learning-challenges.htm>
- Lichoro, D. M. (2015). Faculty readiness for transition to teaching online courses in the Iowa. Iowa State Univeristy Digital Repository: Graduate Thesis and Dissertations: <https://lib.dr.iastate.edu/etd/14376/>
- Lie. (2020, June 20). The new normal in education. <https://www.thejakartapost.com/academia/2020/06/20/the-new-normal-in-education.html>
- Linton, J. N. (2017). Institutional factors for supporting electronic learning communities. *Online Learning Journal* 21(1), 238-256.
- Loveless, E. (2020, July 31). Strategies for Building a Productive and Positive Learning Environment. <https://www.educationcorner.com/building-a-positive-learning-environment.html>
- Musingafi, M., Mapuranga, B., Chiwanza, K., & Zebron, S. (2015). Challenges for open and distance learning (ODL) students: *Journal of Education and Practice* 6(8), 59-66.
- Nilson, L. B., & Goodson, L. A. (2018). In online teaching at its best: Merging instructional design with teaching and learning research. *Journal of Public Affairs Education*, 264.
- Okai-Ugbaje, S., Ardzejewska, K., & Imran, A. (2020). Readiness, roles, and responsibilities of stakeholders for sustainable mobile learning adoption in higher education. *Education Sciences* 10(3), 49.
- Ookla, LLC. (2020, June). Speedtest Global Index. <https://www.speedtest.net/global-index/philippines>
- Pappas, C. (2015, July 6). Differentiated instruction in eLearning: What eLearning professionals should know. <https://elearningindustry.com/differentiated-instruction-in-elearning-what-elearning->
- Presidential Proclamation No. 929 s. 2020. (2020, March 16). Declaring a state of calamity throughout the Philippines due to corona virus Disease 2019. <https://www.officialgazette.gov.ph/2020/03/16/p-roclamation-no-929-s-2020/>
- Raines, D. A. (2011, January 24). Be Efficient, not busy: Time management strategies for online teaching. <https://www.facultyfocus.com/articles/online-education/be-efficient-not-busy-time-management-strategies-for-online-teaching/>
- Rashid, N., & Muhammad, R. (2012). Issues and problems in distance education. *Turkish Online Journal of Distance Education*, 20-26.
- Sadeghi, M. (2019). A Shift from classroom to distance learning: Advantages and limitations. *International Journal of Research English Education*, 4 (1). <https://doi:10.29252/ijree.4.1.80>.
- UNESCO. (2020). Education: From disruption to recovery. <https://en.unesco.org/covid19/educationresponse>

WHO. (2020). Coronavirus disease 2019 (COVID-19) Situation Report - 51. https://www.who.int/docs/default-source/coronaviruse/situation-reports/20200311-sitrep-51-covid-19.pdf?sfvrsn=1ba62e57_10

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related activities on science investigatory projects, action research, pedagogy, and content.

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