

PEDAGOGY

for Online Learning

Theory and Practice

Rodrigo M. Velasco
Ruel F. Ancheta
Chinaza Solomon Ironsi
editors



Disclaimer

This book is a collection of research articles written by different authors. The authenticity of the data and information is the sole responsibility of the authors. Furthermore, the standpoint and perspective of the authors as expressed in their research articles do not necessarily reflect the stance of the publisher.

Copyright ©2022

Institute of Industry and Academic Research Incorporated

ISBN - 978-621-96514-1-7

All rights reserved. No part of this book may be reproduced or used in any manner without the prior written permission of the copyright owner, except for the use of brief quotations.

To request permissions, contact the publisher at publications@iiari.org.

Published by:

Institute of Industry and Academic Research Incorporated



South Spring Village, Bukal Sur

Candelaria, Quezon, Philippines

Postal Code 4323

Contact Numbers: (042) 785-0694 • (+63) 916 387 3537

Visit the website <https://iiari.org>

Preface

During this unprecedented time, almost all educational institutions have shifted from traditional learning to online learning. When the COVID-19 hit the world, online teaching was no longer an option but a necessity. Due to government restrictions and other related protocols, schools, colleges, and universities opted to deliver academic instructions into online to ensure that students still receive quality learning they deserve. Online learning is a tool in which teaching and learning process still become student-centered, innovative and flexible. However, online learning can also become a disadvantage as there are many challenges associated with online teaching and learning. This e-book offers the different perspectives on online learning: framework, learning experiences both on students and teachers and its associated future management.

The introductory part of this book gives an overview and framework of online learning. It provides technical discussions of learning management systems and teaching and learning modalities used in online learning. It serves as guide in the development of the appropriate learning management system and modality relevant to the capacity and necessity of the academic institutions. The authors shared their actual experiences in the development and management of the systems and programs in online learning.

Part 2 of the book contains the efficacy of online learning experience as per the students' perspective. It highlights the attitude of students towards distance learning at the peak of

the pandemic termed as ‘behavioral Coronaphobia.’ This part also highlights the expectations of high school and higher education students on online learning and teacher-created videos as a tool in the online learning. The authors shared the results of their studies on the actual experience of their students which unveiled the various positive and negative facets of online learning.

In part 3, the efficacy of online learning as per teachers’ perspective is presented. This part highlights the experience of the rural science teachers and the school administrator during the new normal in education. Recommendations outlined on this part serve as bases for further analysis in terms of online teaching-learning implementation. Meanwhile, the future of online learning is outlined in part 4, which can be a basis for further review. The model contained in the paper can be particularly applied in higher education where online platform may be adapted for long in the post-pandemic new normal.

This e-book offers major research results on the conduct and implementation of online teaching and learning in the context of COVID-19 pandemic. It provides a unique perspective on the research issues regarding the effects of online learning from many experts in this field.

Let us learn from the various personal experiences and perspectives of the researchers from various fields of specialization!

About the editors

Dr. Rodrigo M. Velasco has a multi-cultural perspective of education and research having worked as a professor and administrator in the Philippines, CNMI, USA and Sultanate of Oman. His orientation on multiculturalism and diversity trained him to cope with different cultural and geographical settings. He is currently an assistant professor of business management and accounting at Gulf College, Sultanate of Oman. As an academician, he has professional qualifications such as Doctor of Business Administration, Diploma in Strategic Management and Leadership from School of Business London, and Certified Human Resource Professional and Certified Marketing Professional from Qualifi, United Kingdom. As a researcher, he is the founding president of the Institute of Industry and Academic Research Incorporated as a platform for open access publications.



Dr. Ruel F. Ancheta is currently an Assistant Professor in Gulf College with more than 2 decades of teaching experience in the graduate and undergraduate levels. Coupled with his teaching, he has massed industry experience in the field of Human Resource Management and Training and Development. He is a motivated lecturer who strives to make each student feel heard and cared for. He is dedicated to his profession and committed to the development of his students. His field of interests are English Language Teaching, Educational Management and Leadership, and Human Resource Management and Development. He is currently a member of

the Research Council- Oman (TRC). He has written and published various researches in the field of education and English Language Teaching.



Dr. Chinaza Solomon Ironsi is a language instructor at the Department of English Language Teaching, Faculty of Educational Sciences, Near East University in Cyprus. He currently teaches English language at Rauf Denktas University. He is a member of TESOL Africa and editorial board member of international journal of TESOL studies. He has published numerous articles and presented papers in national/international conferences. His research interests are in all areas of language teaching and education. He is happily married to Sarah Ironsi and has two kids Blyss and Apryl.

Featured authors:

Dr. Salvacion M. Domingo

Dr. Salvacion Domingo is currently an assistant professor in the Faculty of Computing Studies at Gulf College, Sultanate of Oman. She is a graduate of Doctor in Information Technology, Master of Science in Computer Science, and Bachelor of Science in Computer Science from AMA University in the Philippines. She has over 16 years of teaching experience in the Philippines and abroad. She has authored and co-authored a number of research and projects in IT. She is a member of the Philippine Society of IT Educators in the Philippines (PSITE) and Computer Science Teachers Association (CSTA). In addition, she is a peer reviewer of The Research Council (TRC) in the Sultanate of Oman.

Marco Paulo J. Burgos

Marco Paulo J. Burgos finished Master of Science in Information Technology at Rizal Technological University, Mandaluyong City. He finished Bachelor of Science in Information as his undergraduate course in Philippine Women's University CDCEC-Calamba and a two-year diploma course in Electro-Mechanics Technology at Dualtech Training Center in Canlubang, Calamba City, Laguna. He is currently working as a lecturer, member of software development committee, and research adviser in the Department of Computing and Informatics at the City College of Calamba. He has various certifications such as National Certificate II in Computer Systems Servicing, Trainers Methodology Certificate 1, National TVET Trainer Certificate and Accredited Competency Assessor for Computer Systems Servicing Certificate.

Helen Bancod-Ancheta

Helen Bancod-Ancheta is currently a School Principal of St. Vincent Blessed School of Manila with 28 years teaching experiences. She has been a Pre-elementary School Directress of Villagers Montessori School in Quezon City for 12 years and a School Principal of St. Gabriel School of Norzagaray in Bulacan for almost five years. As an academician, her field of interest is language teaching, educational management, and developmental reading.

Associate Professor Hiroko Kanoh

Hiroko Kanoh is an associate professor in the Institute of Arts and Sciences National University Corporation Yamagata University, Yamagata prefecture in Japan. Her areas of specialization are educational technology, cyber psychology and ICT education. She has more than 20 international and 100 national publications and 30 authored books. She was awarded the Culture, Sports, Science and Technology Minister's Commendation of the field of science and technology in 2010. She graduated from the master's program Tokyo Gakugei University, Tokyo in Japan through the doctoral program at Waseda University, Tokyo in Japan.

Angela L. Reginaldo

Angela L. Reginaldo is presently the Director for Extension and Training Services of the Laguna State Polytechnic University. Has been in the teaching profession for 31 years, handling various mathematics and computer subjects. Has finished BS Applied Mathematics, major in Operations Research at the University of the Philippines at Los Banos, and has finished Master of Arts in Education, with specialization in Administration and Supervision. An active member and incumbent Vice President for Tertiary Level of the Mathematics Teachers Association of the Philippines – San Pablo City Chapter. A Board Member of the Mathematics Mentors of San Pablo City.

Dr. Delon A. Ching

Dr. Delon A. Ching is the Chairperson for Research and Development Office and Mathematics Instructor in the College of Teacher Education of Laguna State Polytechnic University, San Pablo City Campus. He teaches Mathematics and professional subjects in the undergraduate program, statistics and methods of research in the graduate program. He served as panel expert and thesis adviser to students majoring Mathematics and Educational Management. He earned his Bachelor's degree in Manuel S. Enverga University Foundation, Master's degree in Southern Luzon State University and Doctorate degree in Laguna State Polytechnic University.

Prof. Rekha Mahajan

Prof. Rekha Mahajan is the Principal at Jagannath Institute of Education, JEMTEC, Greater Noida, India. She is a post graduate in Physics and Education with Doctorate in Education. She was awarded with the Prestigious Excellence in Teaching Award for her outstanding contribution in the field of Education during the International Conference at Maharana Pratap University, Udaipur, Rajasthan, India in December 2017. She has over three decades of teaching and administrative experience at various renowned academic institutions. She is the founder Principal of two schools located in Haryana. She has authored and presented several research papers at National and International conferences and has delivered several expert talks on relevant topics.

Jahfet N. Nabayra

Jahfet N. Nabayra is currently a college instructor and the chairperson of the Quality Assurance unit of the Aklan State University - College of Teacher Education where he graduated with a Bachelor of Secondary Education major in Mathematics degree as Magna Cum Laude last 2016. He is currently pursuing his Doctor of Philosophy in Science Education major in Mathematics at the West Visayas State University. He has ongoing and completed researches in the fields of mathematics education, instructional material development, ethnomathematics, and flexible learning modalities in the new normal. In addition, he has published some of his completed researches in local and international refereed journals.

Juliet C. San Luis

Juliet C. San Luis is currently a fourth-year college education student at Calayan Educational Foundation Incorporated under the Bachelor of Secondary Education program major in Science. She is a 23-year-old aspiring teacher from Lucena City, Quezon, Province. She has been consistently an honor student leading her class academically with humility. She serves as a leader, being the Vice President for Internal Affairs of Young Educators' Circle in CEFI. She shows great interest in research events and conferences, particularly in the field of education, intending to raise awareness and empower others through knowledge that academic writing can provide.

Michael Jere' D. Abiol

Michael Jere' D. Abiol is currently the Business Administration Program Head at St. Peter's College in Iligan City. He is now pursuing a Doctor of Management at Capitol University in Cagayan De Oro City. His research interests include business administration, business education, management, finance, innovation, and design thinking. Mr. Abiol pursued and completed BS Business Administration (2013) and Master of Business Administration (2015). In addition, he also earned units of the Doctorate in Business Administration (2019). The author's extensive expertise in academia and the business world established his credibility of business education in higher education.

Wai Wai Than

Wai Wai Than is a former lecturer at Department of Educational Psychology in Sagaing University of Education. From that university, she got her bachelor's degree (BEd) in 2008 and Master's degree (MEd) specializing in Advanced Educational Guidance and Counselling in 2012. At present, she is also studying as a fourth year PhD student at Yangon University of Education. Her PhD dissertation focuses on student satisfaction in the field of higher education. She has delivered lectures on educational psychology to undergraduate and post-graduate students, conducting her PhD dissertation, and supervising MEd theses.

Table of Contents

Part 1 – The Framework of Online Learning

Learning Management System for Data Structures and Algorithm <i>Marco Paulo J. Burgos</i>	2
Collaborative Interaction Management System (CIMS) for Higher Educational Institutions <i>Dr. Salvacion M. Domingo</i>	16
The Teaching and Learning Modality in the ‘New Normal’ <i>Helen B. Ancheta</i>	42

Part 2 – The Efficacy of Online Learning Experience – Students’ Perspectives

The Japanese Students’ Behavioral Coronaphobia <i>Hiroko Kanoh</i>	57
The On-line Teaching during ‘COVID-19’ Pandemic <i>Prof. Rekha Mahajan</i>	72
Online Learning Expectations among Engineering Students <i>Angela L. Reginaldo & Delon A. Ching</i>	82
Learning Mathematics in the New Normal through Teacher-Created Videos <i>Jahfet N. Nabayra</i>	102

Part 3 – The Efficacy of Online Learning Experience – Educators’ Perspectives

Looking Through the Lens of Rural Science Teachers in the New Normal Setting <i>Juliet C. San Luis</i>	114
--	-----

This is an original copy of the book chapter.

The Administrative Challenge of the ‘New Normal’
in Education
Ruel F. Ancheta129

Balanced Scorecard: A Design Thinking Assessment
of Higher Education’s Organizational Performance
Michael Jere’ D. Abiol138

Part 4 – The Future of Online Learning

Future Management of Online Learning in Higher Education
Wai Wai Than150

The Teaching and Learning Modality in the ‘New Normal’

Helen B. Ancheta

Introduction

The COVID-19 pandemic has resulted to lockdowns of academic institutions all over the world. The closure has drastically changed the teaching and learning process that opened the way to e-learning wherein teaching is undertaken remotely through digital platforms. With this sudden shift away from the classroom, the educational system has developed plans to continue the teaching and learning process away from the classroom. The teaching and learning in times of crisis assumed different strategies. Most academic institutions have identified various means to continue the teaching-learning activities. One of the emerging reality is the adaptation of online learning modalities to lessen the risks of having face to face classroom interaction.

Considering the connectivity issues, the perception of flexible learning has emerged as an option for an online learning particularly in the higher education sectors in the Philippines. The flexible learning gives an option for the students as to the pace, place, and mode of learning (Gordon, 2014). On the other hand, in terms of flexibility, since face to face modality is restricted, teachers may consider flexible distance learning options particularly in the public schools in the Philippines. This flexible learning includes: module-based learning, project based, and television broadcast. For those with internet connection, a synchronous and asynchronous online learning may be considered.

This article evaluates the various teaching and learning modalities used in the Philippines. It presents the advantages and disadvantages of the modalities. In addition, the different aspects of the teaching and learning are given lights in order to successfully implement any teaching and learning modality.

Discussion

Teaching and Learning Modality

This is a clear statement on the flow of the learning delivery mode in the new normal. Private basic education institutions have an option on the teaching and learning modality. Since distance learning education (DLE) is encouraged, the online teaching is the most feasible option. However, not all academic institutions are prepared and have the resources to adopt the online teaching. Thus, the blended approach, a combination of synchronous and asynchronous teaching and learning modality, is the option of most of the private basic education institutions. Lawless (2019) describes blended approach as a learning modality that combines online learning where there is an interaction between teachers and students using specific platform and offline learning wherein students are given time to work on various performance tasks at their own pace.

a. *Asynchronous Learning*

This type of learning is known as an independent learning where students learn at their own pace. Its premise is learning in different times and spaces (Finol, 2020). The students are provided with learning materials like modules, workbook, worksheet and textbook that aid in their independent learning process. Students in this learning modality have one common communication channel either email, learning management system (LMS), Moodle or any other social media platforms that give students access to the learning materials. This modality is based on constructivism theory where students are actively constructing their own knowledge through their own experiences (Elliott, 2000, p. 256). According to Gardiner (2020), this mode is specifically helpful for students with difficulty attending specific time schedules. It also allows peer collaboration through group assignments where students can work and review tasks together. Ultimately, this aids to those with no full access to the internet.

For academic institutions with their own LMS, management of the learning materials is easy for both the teachers and the students. All

quizzes, class works and other performance tasks including quarterly assessments can be made readily available. The user administrators can also create email accounts for students using Microsoft Office 365 for easy communication. However, schools with insufficient funds and resources make full use of the modular approach. If no available platform for the upload of the learning materials, parents can claim materials from the school observing proper protocols. In reality, this allows teachers to work at home while students learn at home at their own pace. However, a serious issue is on the online assessments. Online examinations through a ‘trial and error’ approach lead to uncertainty. Interruptions and internet glitches affect students’ performance that might lead to increased failures. Results might not be favorable for both the teachers and the students. Gardiner (2020) shares best practices for asynchronous learning. One powerful way is through a record of any components of the syllabus. It is mandatory also to communicate with the students and provide specific instructions either through email or a discussion thread in a portal.

b. *Synchronous Learning*

This is a real time online learning with live interaction between teacher and students using specific online platforms. The learners and teachers are in the same place online at the same time for learning to take place (Finol, 2020). It includes video conferencing, live-streaming lectures and chatting using Google classroom, Google meet, Zoom, MS Teams, and other platforms (The Best School, 2018). This allows similar face to face classes through a virtual room. For most of the learners, it gives opportunity for online interactions (Simonson et al., 2012), allows immediate question and answer session (Hrastinski, 2008) and offers personalized learning opportunities (Lorenzo & Ittelson, 2005). For example, in a study conducted by Park and Bonk (2007) in a synchronous graduate class found that there was no difference between the online and in-class students in terms of learning strategies for synchronous discussions. However, the case is very much different for the school children.

Hrastinski (2008) provided a clear view as to when, why and how to use asynchronous and synchronous e-learning as provided in table 1.

Table 1

When, Why, and How to Use Asynchronous vs. Synchronous E-Learning

	Asynchronous E-Learning	Synchronous E-Learning
When?	Reflecting on complex issues When synchronous meetings cannot be scheduled because of work, family, and other commitments	Discussing less complex issues Getting acquainted Planning tasks
Why?	Students have more time to reflect because the sender does not expect an immediate answer.	Students become more committed and motivated because a quick response is expected.
How?	Use asynchronous means such as e-mail, discussion boards, and blogs.	Use synchronous means such as videoconferencing, instant messaging and chat, and complement with face-to-face meetings.
Examples	Students expected to reflect individually on course topics may be asked to maintain a blog.	Students expected to work in groups may be advised to use instant messaging as support for getting to know each other,

Students expected to share reflections regarding course topics and critically assess their peers' ideas may be asked to participate in online discussions on a discussion board.

exchanging ideas, and planning tasks. A teacher who wants to present concepts from the literature in a simplified way might give an online lecture by videoconferencing.

Source: Stefan Hrastinski (2008)

c. Blended Learning

A survey has to be carried out prior to the selection of learning modality to be used. Taking the current situation in the country as rank 104 among 160 countries in internet connectivity, Salac and Kim (2020) admit that the internet infrastructures are behind the developing countries in Asia. It is also a fact that not all students have access to internet and technology. Since the learning modality entails the use of internet connection, situation presses for a blended approach, a combination of asynchronous (offline) and synchronous (online).

For Shank (2020), the use of synchronous sessions can be recorded as part of the asynchronous model. This allows students to access the recordings at any time during their independent learning hours. In a study conducted by Perveen (2016) in Pakistan among 1025 undergraduate students, it was found that the asynchronous learning was quite beneficial for second language learners with scaffolding by synchronous sessions. The author suggests for a blended approach as an ideal model for e-learning.

Curriculum Contents

The curriculum contents in the distance learning is based on the revised Most Essential Learning Competencies (MELCs) set by Department of Education. A clear statement of the quarter

calendar showing the learning areas to be covered each quarter is required to be stated in the Learning Continuity Plan (LCP). All private basic education institutions need to clearly present a statement indicating the learning areas students need to undertake for the whole year. Course requirements are indicated to ensure that the intended learning outcomes are met after every quarter. In the case of blended approach, a sample copy of prepared workbook and/or worksheet are presented or attached as part of the annexes.

To address the impact of Covid-19 in the Philippines, DepEd affirms its commitment on the delivery of quality education relevant to the basic education services anchored on its slogan “Sulong Edukalidad” framework (Pascua, 2020). It was also pointed out that the revised MELCs are part of the DepEd’s response to develop resilient education system especially during emergencies to be rolled out for SY 2020 - 2021. Thus, the private basic education institutions are required to follow the MELCs to continuously produce holistic Filipino learners acquiring the 21st century skills despite the use of blended or distance learning.

Assessments

Learning outcomes in the form of knowledge, skills, attitudes, and values are the major measures of the teaching and learning in the basic education. This part needs a clear statement that the assessments are still in compliance with the DepEd’s standard indicating the required percentage in each of the components including written work, performance task, and quarterly assessments. According to the DepEd Order No. 8, (2015), classroom assessment is an integral part on the implementation of the curriculum. It becomes the bases for measuring the performance and progression of the students. This also acts as parameter for the necessary adjustments on the teaching strategies as set in the policy guidelines.

According to Russell (2001), there is no difference in the achievement of learning outcomes as measure in grades or exams between the face to face and e-learning modality. The same was

the results of the study conducted by Francescucci and Rohani (2018) on the 698 undergraduate students in North America. The specific statistical comparison between the face to face and the virtual, interactive, real-time, instructor-led (VIRI) showed same level of students performance in both methods. Given the results of the previous studies, the adaption of the e-learning at the current state may not be similar in the outcomes. There are various considerations such as the attention span of the children, the assessment mode, monitoring and supervision during assessment and other social and environmental factors.

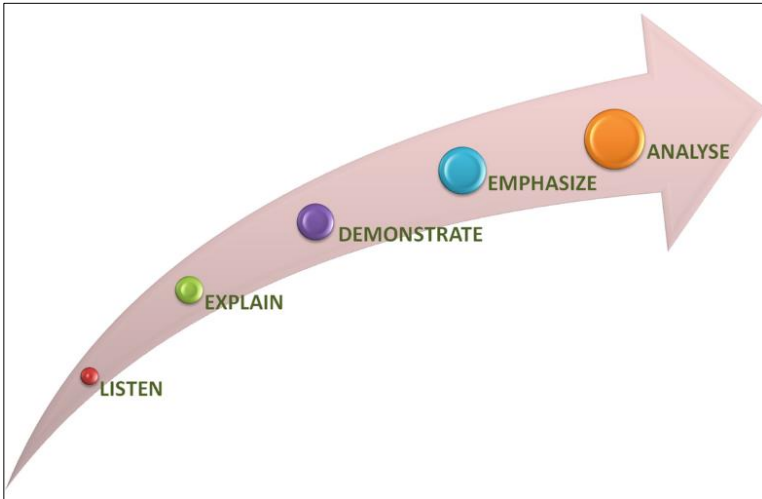
Teacher's Role

The role of the teacher in the new normal plays a big part on the teaching and learning process using the chosen modality. The role is expanded as compared to the normal classroom setup. In the new normal, the teachers must be available at all times even though they are working at home. Although a bit burden for the teachers, they need to be available online at all times in case of queries from the students and parents. As Tarek (2016) emphasized that since distance learning entails high level of interaction between the teacher and students, the teacher must treat learning problems that students might encounter taking into account the individual needs of the students in terms of their learning styles. Teachers must initiate virtual learning activities such as collaborative work to motivate students to learn. They should be more creative, motivate their students to actively participate in the virtual learning and engage the students to a deeper learning so that the desired learning outcomes are met (Tuscano, 2020).

Saxena and Saxena (2020) developed a framework as to the role of teachers during the pandemic as shown in Figure 1. It highlights the teaching levels for effective learning which enable to unfold the fears and mysteries of immature learners.

Figure 1

Teaching levels for effective learning



Source: Saxena & Saxena (2020). Available at https://media.springernature.com/original/springer-static/image/chp%3A10.1007%2F978-981-15-4814-7_15/MediaObjects/498571_1_En_15_Fig4_HTML.png

As the children have different nature and learning styles, teachers need to develop different teaching levels suitable to the students. Aside from the different teaching strategies, Warden et al. (2013) disclosed the result of the nine-year action research on 3630 students that the main source of problem in the synchronous learning is behavior. Thus, the virtual classroom management is a measure of success in the new normal of teaching. On the other hand, Bower et al. (2013) found that the main challenge in blended learning were communication and split attention. Given the current situation worldwide, it is the prime responsibility of the teacher to ease the fears and anxieties of the children. In reality, it will not be easy to educate the children something beyond their grasps such as the pandemic. For this, training of teachers on the facilitation of the new normal teaching and learning is indeed necessary requirement. Certification and training programs on the use of various platforms is required as well as preparation of modules and workbooks.

Learner's Role

In the new normal, learning on the part of the students is a drastic change be it online class using a platform or offline classes through independent learning. Since students are used to face interaction with the teacher, it will be quite difficult for them to suddenly adjust to the new system. It requires proper orientation and familiarization of the new normal. The learners need to be encouraged to adapt the new learning modality and understand the lessons at their own pace with the assistance of their parents and or guardian.

Parents' Role

The parents play a big role in the academic performance of their child in the new normal of teaching and learning. Their critical role is addressed at the beginning through a consultative session in the adaption of the learning modality. According to Kuruville (2020), the role of parents in the virtual learning is important. Since students are home-schooled, they have to monitor the development and performance of their child on their day-to-day activities during the independent learning hours. Without the help of the parents, teachers will not be able to meet the desired learning outcomes at the end of the day.

According to Rich (2020) parents should cast their children's fears of the situation. The stress and anxiety level of the children increase due to the challenging times. Their role intensifies as their children are home-schooled. They should be keen on the problematic reactions of their children as it increases their stress level. It is advisable to have reasonable distractions while doing independent learning. Saxena and Saxena (2020) suggest that parents control their anxiety first and be in stable mental health condition before facing their children. The support of the parents is critical to the learning development of the children in the absence of the teachers.

Communication Plan

Communication plays an important role in the implementation of the new teaching and learning modality. Haythornthwaite (2002) suggests the three types of communication in sustaining e-learning communities: content-related communication, planning of tasks and social support. It serves as a road map on how teachers, learners and parents connect with each other. To be transparent with the stakeholders, a statement on the medium to be used need to be stated clearly. There is a clear process on how important information, announcements and other updates reach the stakeholders. Everitt (2020) emphasizes that transparency to stakeholders is very important to maintain the two-way communication about the status of the newly implemented program.

Continuance

The school pledges that teachers have continuous learning and enhancement program on the use of technology and other platforms. For this, an explicit statement is needed in the LCP to ensure quality in the teaching and learning process. In addition, the school certifies the statement through a plan of continuous improvement of its quality services in terms of training and seminars before, during and after the delivery of the new modality. According to teacher.org (2020), professional development for teachers is very important as education is an ever growing and changing field. This means that teachers must be updated of the current trends in educational practice. However, teachers in the private schools cannot afford professional development due to high cost of the training programs. Much more depressing is that schools cannot finance their own teachers' professional development. As a solution, schools only give free in-house training for their teachers sponsored by some publishing book companies.

Monitoring and Evaluation

Under the new normal, efficacy of the monitoring and evaluation process is necessary. For example, learners who were given the learning resources need to be evaluated and monitored both for the learning process and the applicability of the learning modality. Support system is established for monitoring. In this case, feedbacks from students and parents are necessary to identify major gaps in the implementation and provide inputs for the improvement of the chosen platform. According to Kamalludeen (2020), alternative means of evaluation have to be used to monitor the students' progress and achievement. The evaluation must focus on the results of students' performance to measure the achievement of the learning outcomes.

Conclusion

To ensure teaching and learning continuity, it is concluded that academic institutions have to shift to a flexible teaching and learning modality and readjust the curriculum, train the faculty members to adapt the challenges of the new normal, upgrade the schools' infrastructures, and implement a strategic monitoring and assessment of the new approaches in teaching and learning. Teaching and learning modality during the pandemic needs to have thorough evaluation and analysis from its stakeholders to ensure better improvement.

The role of technology played is vital during the pandemic. It provides an innovative solutions to the problems faced by academic institutions during the school lockdown. It does not only help people to communicate and work virtually but also help our students to continue their education despite of the pandemic without the need of face to face classroom interaction. However, challenges and problems technologically are always the main issue in the conduct and implementation of the online teaching and learning especially for the academic institutions that opted to have online teaching-learning modality.

References

- Bower, M., Dalgarno, M.J. & Kennedy, G.E. (2013). *Blended Synchronous Learning: Patterns And Principles For Simultaneously Engaging Co-Located And Distributed Learners*. 30th ascilite Conference 2013 Proceedings, pp 92 – 102
- DepEd Order No. 8 (2015). *Classroom Assessment guidelines*. Available online at www.deped.gov.ph, Date Accessed, 15 August 2020.
- Elliott, S.N. et. al., (2000) *Educational Psychology: Effective teaching and learning*, 3rd edition, Boston, MA: McGraw-Hill College .
- Everitt, J (2020). *How to Get Stakeholders on Your Side With Campaign Transparency*, Available online at www.wrike.com, Date Access, 16 August 2020.
- Finol, M.O. (2020). *Asynchronous vs. Synchronous Learning: A Quick Overview*. Available online at: <https://www.brynmawr.edu/blendedlearning/asynchronous-vs-synchronous-learning-quick-overview>. Date Accessed, 28 July 2020.
- Francescucci, A. & Rohani, L. (2018). *Exclusively Synchronous Online (VIRI) Learning: The Impact on Student Performance and Engagement Outcomes*. Journal of Marketing Education. Volume: 41 issue: 1, page(s): 60-69. DOI: <https://doi.org/10.1177/0273475318818864>
- Gardiner, E. (2020). *Remote Teaching: When and How to Use Synchronous vs. Asynchronous Methods*. Available online at: <https://tophat.com/blog/remote-teaching-when-and-how-to-use-synchronous-vs-asynchronous-methods/>. Date Accessed, 28 July 2020.
- Haythornthwaite, C. (2002). *Building Social Networks via Computer Networks: Creating and Sustaining Distributed Learning Communities*, in *Building Virtual Communities: Learning and Change in Cyberspace*, K. Ann Renninger and Wesley Schumar, eds. Cambridge: Cambridge University Press, pp. 159–190.
- Hrastinski, S. (2008). *Asynchronous & Synchronous e-learning*. Educause Quarterly. Number 4 2008, pp 51 – 55

- Kamalludeen, R. (2020). *Transitioning to the new normal in education*, Available online at www.thestar.com.my, Date Accessed, 16 August 2020.
- Kuruvilla, A (2020). *Virtual Learning: The 'New Normal' in Imparting Lessons to the Students*, Available online at www.indianexpress.com, Date Accessed, 16 August 2020.
- Lawles, C. (2019). *What is Blended Learning?* Available online at www.learnupon.com, Date Accessed, 15 August 2020.
- Park, Y.J. & Bonk, C.J. (2007). *Synchronous Learning Experiences: Distance and Residential Learners' Perspectives in a Blended Graduate Course*. Journal of Interactive Online Learning. Volume 6, Number 3, pp 245 – 264
- Pascua, A. (2020). *K to 12 Most Essential Learning Competencies*. Available online at www.deped.gov.ph, Date Accessed, 15 August 2020.
- Perveen, A. (2016). *Synchronous and Asynchronous E-Language Learning: A Case Study of Virtual University of Pakistan*. Open Praxis, Vol. 8 issue 1, January–March 2016, pp. 21–39
- Rich, M. (2020). *6 ways parents can support their kids through the coronavirus disease (COVID-19) outbreak*. Available online at: <https://www.unicef.org/coronavirus>. Date Accessed, 28 July 2020.
- Salac, R.A. & Kim, Y.S. (2016). *A Study on The Internet Connectivity in The Philippines*. Asia Pacific Journal of Business Review 1(1):67-88. DOI: 10.20522/APJBR.2016.1.1.67
- Saxena R., Saxena S.K. (2020). *Preparing Children for Pandemics*. In: Saxena S. (eds) *Coronavirus Disease 2019 (COVID-19). Medical Virology: From Pathogenesis to Disease Control*. Springer, Singapore. https://doi.org/10.1007/978-981-15-4814-7_15
- Shank, P. (2020). *(The Right) Learning Modalities to Deliver Digital Learning: Part 4*. Available online at: <https://elearningindustry.com/create-synchronous->

- [learning-digital-modalities-part-4](#). Date Accessed, 28 July 2020.
- Simon Burgess, Hans Henrick Sieversten (2020). *Schools, skills, and learning: The impact of COVID-19 on education*, Available online at www.voxeu.org, Date Accessed 24 June 2020.
- Tarek, S. (2016). *Distance Learning: The Role of the Teacher*, Available online at www.docuri.com, Date Accessed, 15 August 2015.
- The Best School (2018). *Synchronous Learning Vs. Asynchronous Learning in Online Education*, Available online at www.thebestschools.org, Date Accessed, 26 July 2020.
- Tuscano, F. (2020). *It's not about Online Learning: A Reflection on the "New Normal" in Education*, Available online at www.francisjimtuscano.com, Date Accessed 16 August 2020.

