Readiness of Public Elementary School Teachers on Online Teaching

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Abstract— In this study, the researcher assessed how ready the public-school elementary teachers are to teach online. It is measured by self-efficacy of public elementary teachers on online teaching in terms of capability to organize and capability to execute, readiness of public elementary teachers to teach online, and the challenges faced by the public elementary teachers on online teaching. This study used descriptive-survey research design since a questionnaire was utilized to gather the primary data from the respondents. The primary sources of data were the 248 public elementary teachers in Bulan District of SDO-Sorsogon. Unstructured interview was used for the validation of the responses of the teachers.

Keywords— Elementary, Online Teaching, Pandemic, Public School Teachers.

I. INTRODUCTION

The global outbreak of the highly contagious new strain of coronavirus known as COVID-19 continues to pose unprecedented challenges. At this point, the biggest impact of COVID-19 arises from the need to practice stringent social or physical distancing to prevent or mitigate its spread. The World Health Organization disclosed that children under the age of eighteen, older people, and those with underlying medical problems are at higher risk and more vulnerable to this virus. Likewise, they disclosed that in deciding to close, partially open or reopen schools fully should be guided by a risk-based approach, to maximize the educational, well-being and health benefit for students, teachers, staff, and the wider community, and help prevent a new outbreak of COVID-19 in the community. Thus, as pandemic hits, the use of internet connectivity became a necessity worldwide and its resilience was also a virtual lifeline in all walks of life. Hence, online teaching was one of the introduced pedagogical approaches used by teachers all over the world.

The 2017 national survey of online learning in Canadian post-secondary education of Bates (2018) disclosed that the major benefit of online learning as perceived by respondents was that it results in greater access and more flexibility for students. It is also an avenue for innovative teaching. However, he noted that lack of adequate resources and specialist staff, lack of training, and resistance from instructors, were barriers or challenges to online learning.

Martin, Budhrani, and Wang (2019) measured faculty attitudes on the importance of online teaching competencies and the faculty's perception of their ability to confidently teach online. They asserted that studies of online teaching competencies are important, as they provide information about how online faculty might be trained and supported by professional development initiatives in higher education institutions.

Similarly, when online teaching professional development programs are designed, it is important to cover aspects of competencies, such as course design, course communication, technical, and time management, and specific attention should be given to competencies that faculty rated low in terms of importance and their perception of their own ability.

The results of their study have implications for (1) faculty who are teaching online or getting prepared to teach online, (2) instructional designers who assist faculty in their preparation to teach online, and (3) administrators who can provide support for the faculty to prepare for online teaching. It is important for the faculty to be prepared in all four areas of online teaching: course design, course communication, time management, and technical.

During the pre-course phase, online instructor e-readiness had a moderate impact on both technical (ELS quality and service quality) and non-technical (information quality) aspects of the ELS. During course delivery, its influence decreased with the technical aspect (ELS use) but increased with the non-technical aspect of the course (instructor satisfaction). At course completion, the main benefit was enhanced teaching skills, while a lack of contact with others was the main challenge.

As the COVID-19 Pandemic runs its course, many governments are implementing measures that limit the number of people congregating in public places. Such measures have disrupted the normal functioning of schools and universities. Because the duration of such measures has been extensive – and is likely to continue in some countries for a certain time until a vaccine becomes readily available to all – leaders of public and

private education institutions have put in place alternative methods for students and teachers to continue with their lessons when attending school is not possible and are working on methods that will make schools fit for working in a safe environment (OECD, 2020).

In addition, to prepare our teachers and school leaders for multiple learning delivery modalities, they shall be capacitated to implement the learning delivery system, consistent with DepEd's professional development framework and professional standards, and the transformation of the National Educators Academy of the Philippines (NEAP). They will be introduced to learning delivery modalities that they can readily utilize depending on community context and be provided with tools and mechanisms to inform their decision-making (NEAP, 2020).

More so, to ensure the seamless transition of learning activities into formats appropriate to platforms and learning delivery modalities they will adopt, capacity building will be implemented beginning in June until July 2020. Support mechanisms shall also be established to provide teachers and school leaders access to on demand technical and administrative advice and guidance (DepEd, 2020).

The dilemma in which the education sectors including the Province of Sorsogon are now facing is also unprecedented. The Schools Division of Sorsogon particularly the Bulan Districts are being caught in a pandemic caused by the Corona Virus Disease (COVID) – 19. This pandemic is like a war that the teachers are not prepared for how they will fight the enemy. Although they are being taught how to fight the battle and win the war, the art of warfare is as old as time.

In the same manner, the implementation of the Modified General Community Quarantine (MGCQ) in the province and the extension is a national effort to curb the spread of this pandemic. The educational institutions, including academics, school administrators, government officials, and community partners, must work together to assure that what needs to happen does happen. In effect, the teachers were put into a situation of adjusting the teaching-learning process from the usual face-to-face classes to modular instruction and few to blended learning. Also, the modular instruction posed a challenge of insufficient supply of logistics for the reproduction of modules that is why an option of trying the online teaching.

II. METHODOLOGY

This study used the descriptive-survey research design since a questionnaire was utilized to gather the primary data from the respondents. Unstructured interview was used for the validation of the responses of the teachers.

The primary sources of data were the 248 public elementary teachers in Bulan District. The number of respondents was determined using the Slovin's formula and were chosen using the stratified random sampling method since there are four districts. The stratified random sampling method was used because there were four districts in which the respondents were randomly chosen. The results were analyzed and interpreted with the use of appropriate statistical tools such as frequency, percentage, weighted mean, and ranking.

It was shown on the table on the right that of the 248 respondents for the Bulan Districts, 62 (25%) teachers from District 1 and 68 (27%) from District 2. Also, there were 54 (22%) teachers assigned to District 3 and 64 (26%) teachers assigned to District 4.

Table 1: Respondents for the Bulan Districts

Districts	Frequency	Percentage
Bulan 1	62	25
Bulan 2	68	27
Bulan 3	54	22
Bulan 4	64	26
Total	248	100

The researcher drafted the questionnaire in order to deal with the various issues covered and the problems in this current study. It consisted of three parts in which Part I included the self-efficacy of the teachers in terms of capability to organize and capability to execute. Part II covered the readiness of the teachers to teach online. Then, Part III included the challenges faced by the teachers in teaching online.

After the instrument was subjected to validation and finality, it was readied for reproduction and administration. Prior to that activity, a letter of request was addressed to the Superintendent of Schools Division of Sorsogon and was given personally by the researcher. Upon granting of the approval, the researcher then asked prepared a letter seeking permission from the school principals for the actual conduct of the study.

With the approval given by the school principals of the respective teachers, the questionnaires were personally distributed by the researcher to the identified respondents for them to accomplish and the others were handed to the school heads for their teachers to fill-out. Then, after almost three weeks the researcher retrieved the distributed questionnaires and was able to obtain a 100 percent retrieval rate of the given instruments. The data that were gathered from the respondents were

collated, tallied, and analyzed for statistical interpretation.

The data gathered from the respondents were subjected to various statistical data analysis. The use of the statistical tool depends on the nature of the data.

The frequency and ranking were used to present the status of the public elementary teachers along pedagogical approaches and access to technology. Then, the weighted mean was utilized in presenting the self-efficacy of the teachers in terms of capability to organize and capability to execute. The scale was adapted from Bandura (1994) which is used to measure the self-efficacy.

Then, the weighted mean was utilized in describing the readiness of teachers to teach online. In order to interpret the value obtained, the scale below was used:

- 1.00-1.49   Lack of readiness
- 1.50-2.49   Quite ready
- 2.50-3.49   Much ready
- 3.50-4.00   Very much ready

The frequency and ranking were used to present the difficulties encountered by the teachers in conducting online teaching.
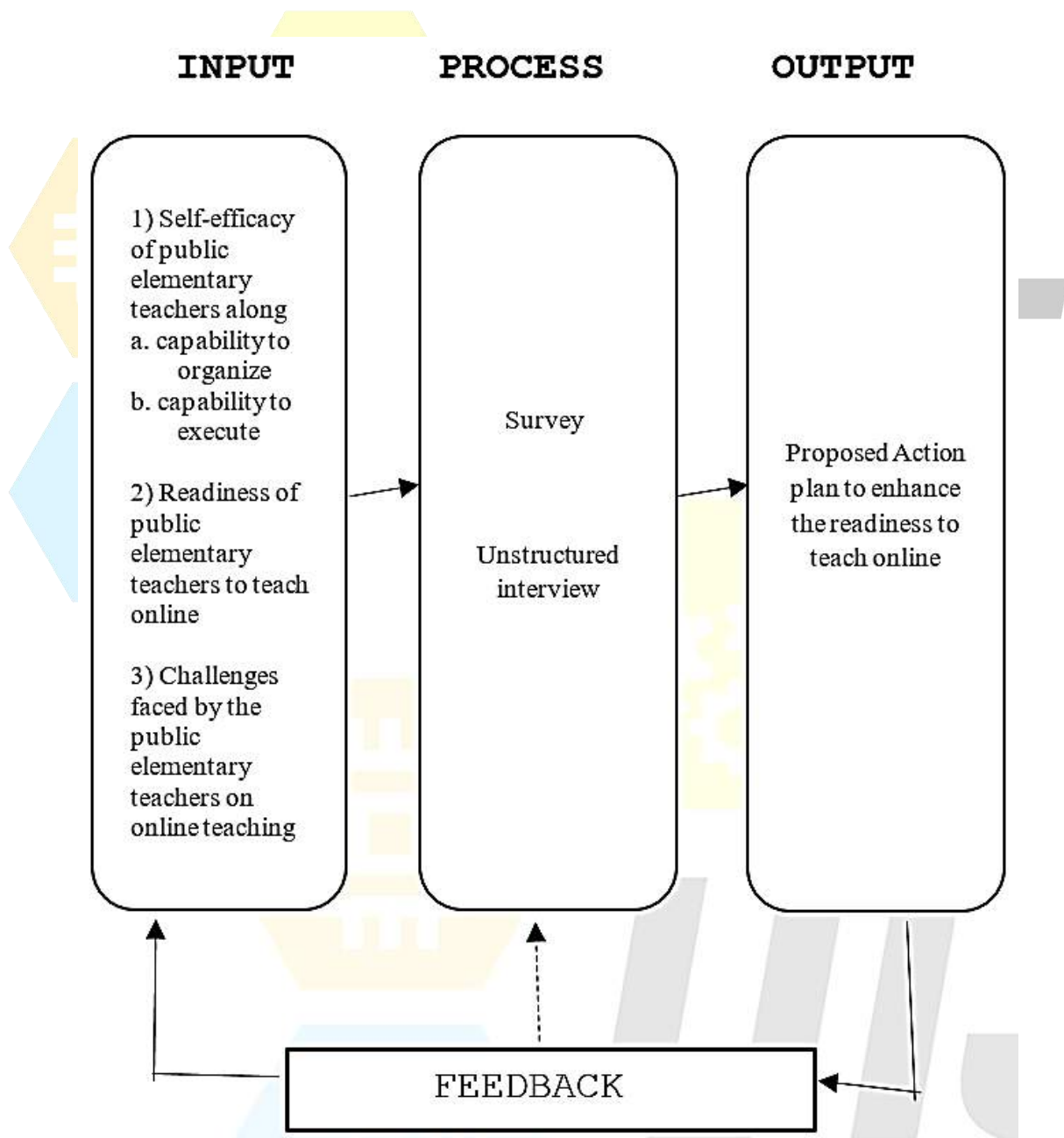
The input contains the self-efficacy of public elementary teachers along capability to organize and capability to execute. The readiness of public elementary teachers to trach online. Also, the challenges faced by the public elementary teachers in online teaching.

The process box shows how the research questions were answered. The researcher conducted unstructured interviews and survey. The output box contained the output of the study which is an action plan aimed on enhancing the readiness of the public elementary teachers to conduct an online teaching. The feedback arrow shows the interrelatedness of the variables.

III. RESULTS

This study used the descriptive-survey research design since a questionnaire was utilized to gather the primary data from the respondents. The respondents were the 248 public elementary teachers in the Bulan District which were determined using the Slovin's formula. The stratified random sampling method was utilized in the distribution of the questionnaires to the selected respondents. The data obtained were organized, analyzed, and interpreted with the use of appropriate statistical tools such as frequency, percentage, weighted mean, and ranking.

Based on the data collected, the following are the findings of the study:

1. In general, the teachers are certain in organizing the online teaching with an overall weighted of 7.61. The investment of time in professional development to continue learning new online teaching and/or technical skills in the future emerged as the highest weighted mean of 8.38, which is described as certain. However, the upgrading a computer equipment or purchase new software if needed and accessing to a computer and Internet connection at home and/or at work got the lowest weighted means of 6.77 and 6.80, respectively, interpreted as certain. All the other indicators are certain that the teachers can do with weighted mean ranging from 7.15 to 8.23.

Relative to capability to execute, the teachers are certain that the giving of individual attention to students who may need extra help with the highest weighted mean of 8.82. Then, the giving to the students the option as to what format to assignments or projects with the weighted mean of 8.45. On the other hand, the dedication of the teacher to a significant number of hours per week (any time during the day or night) to participate in the online teaching process and compensating for the lack of physical presence in the virtual classroom by creating a supportive environment where all students feel comfortable participating got the lowest weighted means of 7.36 and 7.59, respectively, described as certain. The other indicators have weighted means ranging from 7.71 to 8.16 which are interpreted as certain. In general, the teachers are certain with the execution of online teaching.

2. The readiness of the teachers to online teaching relative to knowledge, they are very much ready in motivating themselves in utilizing the features of an online learning environment with weighted mean of 3.52. However, the teachers are much ready in the familiarization of with the advantages and disadvantages of e-learning and equipping themselves with the required knowledge in conducting and participating the online classes with weighted mean of 3.26.

Relative to skills, the teachers are much ready in using the available device such as smartphones, laptops, tablets, and others with weighted mean of 3.49. Similarly, they are much ready with effectively using any of the available learning management system or resources such as Google meet with weighted mean of 3.48. Then, the teachers are much ready in managing time in the conduct and participation to online classes with weighted mean of 3.45.

In relation to technology, teachers are very much ready in the preparation and/or submission of the requirements and/or outputs for online teaching with the highest weighted mean of 3.59. Also, they are much ready in providing themselves with computer and stable internet access needed for online classes with weighted mean of 3.15. Likewise, the valuing and practicing the social responsibility and legal use of ICT tools and resources was assessed with weighted mean of 3.14 which is described as much ready.

3. The five most critical challenges faced by public elementary teachers in conducting online classes are poor and unstable internet connectivity with frequency of 220 in rank 1 followed by limited broadband mobile data with frequency of 201 in rank 2.

In addition, there are 150 teachers who are unfamiliar with the online resources in rank 3 and 129 teachers who lack the skills in navigating the available technology in rank 4. Then, in rank 5 is the insufficient seminar and training on online teaching with frequency of 128.

4. The proposed action plan may be developed in order to capacitate the public elementary teachers in teaching online.

IV. DISCUSSION

The presentation of the data includes the following topic: 1) self-efficacy of public elementary teachers on online teaching in terms of capability to organize and capability to execute; 2) readiness of public elementary teachers to teach online in terms of knowledge, skills, and technology; 3) challenges faced by the public elementary teachers on online teaching; and 4) proposed action plan.

Self-efficacy of public elementary teachers on online teaching in terms of capability to organize and capability to execute.

Capability to organize. The answers of the respondents to the questionnaire presents the weighted mean and description of the self-efficacy of public elementary teachers on teaching in terms of capability to organize. Generally, the teachers can certainly do the organization of the online class with composite mean of 7.61. All the ten indicators have weighted mean ranging from 6.77 to 8.38 which interpreted as certain.

It can be gleaned that generally the teachers can certainly do the organization of online teaching with composite mean of 7.61. The investment of time in professional development to continue learning new online teaching and/or technical skills in the future emerged as the highest weighted mean of 8.38 which is described as certain. However, the upgrading a computer equipment or purchase new software if needed and accessing to a computer and Internet connection at home and/or at work got the lowest weighted means of 6.77 and 6.80, respectively, interpreted as certain. All the other indicators are certainly can do by the teachers with weighted mean ranging from 7.15 to 8.23.

From the responses, it would mean that the teachers can certainly do the organization of the online learning since they want to put more time on the lifelong learning on this new delivery modality, specifically the required technical skills.

The conduct of online teaching needs the communication skills, technological literacy, time management skills, assessment and evaluation skills, and teaching student to apply the concept which are certainly that the teachers can do as reflected in the results.

This would imply that the teachers have the capability to organize the lessons to be delivered online using the internet technology. With the experience of teachers in using the technology in their daily activities such as preparing the lessons, making the tests, recording the scores, and computing the grades utilizing the laptop or desktop computer then the more that they are capable for online teaching. The need to organize the content of the virtual classroom will be the area that has to be improved.

Capability to execute. The data showed that relative to capability to execute the online teaching, the teachers certainly can do the giving of individual attention to students who may need extra help with the highest weighted mean of 8.82.

Then, the giving to the students the option as to what format to assignments or projects with the weighted mean of 8.45. On the other hand, the dedication of the teacher to a significant number of hours per week (any time during the day or night) to participate in the online teaching process and compensating for the lack of physical presence in the virtual classroom by creating a supportive environment where all students feel comfortable participating got the lowest weighted means of 7.36 and 7.59, respectively, described as certain. The other indicators have weighted means ranging from 7.71 to 8.16 which are interpreted as certain. In general, the teachers certainly can do the execution of online teaching.

It means that the teachers are certainly capable of executing the online teaching with the giving the students the preference the format to be used submitting either the assignment or project as the predominant skill. The results are already an indication that the teachers have the self-efficacy in conducting the virtual classroom. This would imply that the teachers have the alternative modality of delivering their instructions that instead of modular distance learning only they have now the online teaching. Thus, they are not limited to modules but other distance learning delivery modalities.

This result is in consonance with directives of Department of Education (2020) that online learning shall be applicable in schools where both the teachers and learners have access to digital devices, such as laptops, tablets, smartphones, and desktop computers, with available online resources and Internet connectivity. Where feasible, learners may also be provided with printed copies of SLMs in consideration of the allowable screen time by key stage or as a support

should there be a power interruption. Online activities shall be complemented with locomotion, motor-sensory, and audio tools which will support subjects related to performing arts and clubs. Learners shall be provided with activity sheets and be given performance-based tasks to accomplish.

Readiness of public elementary teachers to teach online.

Knowledge. Generally, the teachers are much ready with the required knowledge in conducting online classes with an overall weighted mean of 3.35. The data revealed that the readiness of the teachers to online teaching relative to knowledge, they are very much ready in motivating themselves in utilizing the features of an online learning environment with weighted mean of 3.52. However, the teachers are much ready in the familiarization of with the advantages and disadvantages of e-learning and equipping themselves with the required knowledge in conducting and participating the online classes with weighted mean of 3.26.

This means that the teachers have the required knowledge in handling online classes. It can be the knowledge about e-learning and the learning environment attached to it or the knowledge of technical aspect of utilizing the learning management system appropriate for the learner's background. It would imply that online teaching is also driven by the pedagogical competency rather than the technological concerns. It seems that in an online environment, the teachers' mastery in the content area is important, but their ability organize and present content information to students is more important.

Skills. Generally, the teachers are much ready with the needed skills in the conduct of online teaching. It was found out that relative to skills, the teachers are much ready in using the available device such as smartphones, laptops, tablets, and others with weighted mean of 3.49. Similarly, they are much ready with effectively using any of the available learning management system or resources such as Google meet with weighted mean of 3.48. Then, the teachers are much ready in managing time in the conduct and participation to online classes with weighted mean of 3.45.

It means that the teachers are always using the device in their daily school activities that is why they have developed the readiness and acquired the needed skills in holding online classes. This would imply that with the

suspension of face-to-face classes and the shift to modular instruction, the teachers may have the option to either make use of blended learning or solely online teaching.

With the survey and informal interview conducted with the teachers, there are 231 teachers who have access to laptops, 178 teachers have access to smartphone, and 162 teachers have access to desktop personal computers. Similarly, the access to internet via mobile data was accessed by 155 teachers, the tablet is accessed by 124 teachers, and only 73 teachers have access to internet via stable provider.

Technology. Generally, the teachers are much ready with the use of technology in holding online classes. It can be observed that the teachers are very much ready in the preparation and/or submission of the requirements and/or outputs for online teaching with the highest weighted mean of 3.59. Also, they are much ready in providing themselves with computer and stable internet access needed for online classes with weighted mean of 3.15. Likewise, the valuing and practicing the social responsibility and legal use of ICT tools and resources was assessed with weighted mean of 3.14 which is described as much ready.

This means that the teachers possess the readiness to teach online. The reality of teaching online courses may get teachers most involved with the operation and use of the learning management system. Within the context of this study, teacher's readiness refers to their willingness, their preparation for basic technical and communication skills and training new teaching methodology for online learning.

It would imply that the success of online teaching depends on the preparation for the readiness of faculty members in the process of transferring from conventional to cyber learning environment as they are the major driving force connecting the administrators and the students to help carry out the school mission.

The computer and internet self-efficacy are a concept proposed by Hung et al. (2010), by combining computer self-efficacy (Compeau & Higgins, 1995) and internet self-efficacy (Eastin & LaRose, 2000).

This concept relates to teachers' technology-related knowledge, skills, attitudes, and competencies in utilizing technologies to comply the educational aims and expectations in higher education (Hong & Kim, 2018).

Challenges faced by the public elementary teachers on online teaching

The table on the next page includes the frequency rank of the challenges faced by the public elementary teachers on online teaching. The data showed that the five most critical challenges faced by public elementary teachers in conducting online classes are poor and unstable internet connectivity with frequency of 220 in rank 1 followed by limited broadband mobile data with frequency of 201 in rank 2. In addition, there are 150 teachers who are unfamiliar with the online resources in rank 3 and 129 teachers who lack the skills in navigating

the available technology in rank 4. Then, in rank 5 is the insufficient seminar and training on online teaching with frequency of 128.

It means that the foremost problems encountered by the teachers is the poor and unstable internet connectivity and the limited broadband mobile data. As mentioned by teachers in the unstructured interview made that the Internet connectivity problems are beyond its control and some teachers and students encountered Internet connection problems for their online classes as one of the alternative learning modalities under distance learning.

Table 2: Challenges faced by teachers on online teaching

Challenges	Frequency	Rank
1. Poor and unstable internet connectivity.	220	1
2. Limited broadband mobile data.	201	2
3. Lack of skills in navigating the available technology.	129	4
4. Inadequate knowledge with internet technology.	98	10
5. Unfamiliar with the online resources.	150	3
6. Lack of capability in using various online teaching methods.	111	7
7. Insufficient seminar and training on online teaching	128	5
8. Limited know-how on the use of different virtual learning environment.	122	6
9. Lack of support from the Department of Education as to supply of computers.	106	8
10. Use of internet technology incurs too much cost.	105	9

Likewise, the teachers did not consider anymore the supply of computers from the DepEd because every school has been given the computerization package. This means that there is always an availability of computers in the school, and this can be accessed in the computer laboratory. Also, there are teachers who were recipients of the donated laptops by the different non-government organizations and stakeholders.

In addition, the teachers may have thought that utilizing internet is already a necessity which must be included in the monthly budget. They did not consider this as a challenge anymore because everything has to be done online and requirement for internet connectivity becomes a must. With the informal interview conducted, majority of the teachers have internet connection at home via stable provider that is why this becomes not a challenge for them.

Furthermore, the inadequate knowledge with internet technology was not a challenge for some because they have been accustomed in using it especially in encoding to the DepEd website the Learner's Information System. Also, they used the internet in downloading the weekly modules from the DepEd commons for reproduction. The internet technology has been self-learned by the

teachers although for sometimes the speed of the connectivity becomes a difficulty since their subscription depends on the internet speed and its respective cost.

This would imply that the online teaching delivery will be affected if the internet speed is slow or no connectivity at all. Then, the slow or unreliable internet can restrict a teacher delivering a lesson, students completing online testing and can even execute an innovation in the virtual classroom.

Proposed Action plan to enhance the readiness of teachers in conducting online teaching

To complement reform initiatives on teacher quality, the Philippine Professional Standards for Teachers (PPST) has been developed and nationally validated. This was signed into policy by Department of Education (DepEd) Secretary Maria Leonor Briones through DepEd Order No. 42, s. 2017.

In the implementation of these guidelines, it is important to take into consideration the different topics such as pedagogical approaches in the new normal, self-efficacy and readiness to teach online. As reflected in the result,

it came out that the teachers lack readiness in certain areas of virtual classroom and limited skills in internet technology. The outcome of this intervention would somehow improve the delivery of instruction as to the distance learning delivery modalities. Based on the findings, there is a need to enhance the implementation knowing that there were weak areas that need to be taken into consideration to promote quality learning among the pupils.

GENERAL OBJECTIVE

The main objective of the plan of action is to enhance the readiness to conduct online teaching of the public elementary teachers through a 3-day In-Service Training.

Specific Objectives

1. To increase the knowledge by discussing the challenges of online teaching and advice on how to prepare your students for success outside of the classroom.
2. To create effective lesson plans for online teaching and think about learning design considerations.
3. To develop a strong online community by connecting with others and learn how to create engagement through interaction.
4. To explain how to build an effective student learning environment from home.
5. To select and design different approaches aimed at engaging students.
6. To make an effective assessment and feedback system.

CONCLUSION

1. Based on the findings of the study, the researcher arrived at the following conclusions:
2. The teachers are certain that they have the dcapability to organize and execute the conduct of the online teaching.
3. The public elementary teachers are much ready to teach online in terms of knowledge, skill, and technology.
4. The poor and unstable internet connectivity and limited broadband mobile data emerged as the most challenges faced by the teachers in conducting online teaching.
5. The proposed action plan was developed to capacitate the public elementary teachers in teaching online.

RECCOMENDATION

In the light of foregoing conclusions, the following recommendations were offered:

1. The teachers may be given the appropriate training on pedagogy, competence, and technology in order to elevate their self-efficacy in organizing and executing the online teaching.
2. The readiness of the teachers may be enhanced by providing them the appropriate knowledge, skill and technology. Also, they may be given the actual simulation with the use of the available integrated virtual learning environment such as Schoology and Google meet.
3. The school administrators may consider subscribing to internet provider with faster bandwidth. Also, they may provide free load for mobile data for teachers as the MOOE warrants.
4. The proposed action plan may be submitted for the review and evaluation to the concerned authorities prior to its implementation.
5. Further study may be conducted which will include other schools having similar distance learning delivery modality and other variables not covered in this research work.

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