

Pedagogical Approaches and Information and Communication Technology (ICT) Skills of Teachers in the E-Learning

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Abstract— The study aimed to determine the pedagogical approaches and Information and Communication Technology (ICT) skills in the e-learning of the teachers in Sorsogon City Division during the school year 2020-2021. It used the descriptive-survey method since a questionnaire was used in gathering the primary data as reflected in the problem. The respondents were the 216 teachers in the City Division of Sorsogon who were selected using random sampling. The statistical tool utilized were the frequency, ranking, and weighted mean. This study concluded that the teachers often use the appropriate pedagogical approaches in the new normal. They often use their basic computer literacy, ability to back up files, experience for online work, ability to nurture creativity, and social networks. Also, the most instructional materials applicable for distance learning are printed materials, cellphone, internet, television, and email. It was recommended that the teachers may be provided with seminar, trainings, and workshop on the appropriate pedagogical approaches in e-learning for them to be fully equipped in delivering the instruction.

Keywords— E-Learning, ICT Skills of Teachers, Pedagogical Approaches, Sorsogon City.

I. INTRODUCTION

Learning is said to be one of the most salient features that plays a very important role in our country's progress. It is a must for individuals to consider the problems, trends, and innovations in the educational systems. Progress can be measured using different pedagogical approaches in teaching. Pedagogy is an encompassing term for many strategies and actions that a teacher can take to influence learning in others – and as such, no single approach should be adopted in isolation. Instead, the approaches should be considered interchangeable, depending on the situation and the students' needs.

The COVID-19 was first experienced in Wuhan, China in the late December 2019 (Sheeran, Khan, Kazmi, Bashir, & Siddique, 2020). The educational systems are

likewise preparing for the post COVID-19 eras which are characterized as the “new normal”. The COVID-19 pandemics undeniably caught the educational systems and learners off guard. This situation revealed gaps in the curriculum and to address this gap is to develop a set of preparedness competencies forming a goal of the curriculum.

Several scholarly works all over the world have been recently published to tackle the multidimensional implications of COVID-19 crisis to the expected new normal period (Sintema 2020 & Toquero, 2020 on educational; Radwan and Radwan 2020 on social and economic; Usak, Masalimova, Cherdymova, & Shaidullina, 2020 on social and psychological). There has been a call to integrate preparedness content into curriculum. Basic Education Schools have realistically incorporated preparedness frameworks in their curriculum in recent years.

In many countries like the Philippines, preparedness as part of the goals of education for young learners has been given attention (Kagawa & Selby, 2014). The shift of the teaching-learning delivery in schools to modular distance learning made more challenging, on the part of the school personnel. It was the reason why DepEd leaders are always finding avenues to solve the problems and capacitating its teachers and school heads to become more effective in their field for the modular distance learning.

Cognizant to these situations, the researchers were encouraged to determine the different Pedagogical Approaches and ICT Skills of Teachers in the E-Learning. This then brought discomfort and offered a different level of challenge because it requires the skills of the students rather than the knowledge that they process. For these reasons, teachers are struggling in finding the easiest possible way in delivering the skills even without face-to-face. It may seem difficult but with passion and dedication, they hope to be able to surpass these ordeals brought by the pandemic. Not only that they hope and pray for the betterment of everyone but also wish that everything will be back to normal. Hence

this research is conducted to ascertain the Pedagogical Approaches and Information and Communication Technology (ICT) Skills of teachers in the E – Learning in the Sorsogon City Division, School Year 2020 – 2021.

II. OBJECTIVES

The study aimed to determine the pedagogical approaches and Information and Communication Technology (ICT) skills in the e-learning of the teachers in Sorsogon City Division during the school year 2020-2021. Specifically, it identified the following: (1) Appropriate pedagogical approaches utilized during the new normal; (2) The ICT skills of the teachers in terms of: basic computer literacy, ability to back up files, experience on online project work, ability to nurture creativity, and social networking skills; (3) The applicable instructional materials for distance learning; and (4) Proposed action plan based on the results of the study.

III. METHODOLOGY

In this research, quantitative methodology was used to collect and analyze the data obtained from all the respondents. The questionnaire was self-developed and finalized by the researcher before they were distributed to the targeted group of respondents. The questionnaires were designed specifically to address research objectives about the pedagogical approaches and ICT skills of 216 teachers, teaching in grades 7 to 12 in public secondary schools in Sorsogon City Division. The results of the data gathered from the questionnaires were tabulated, analyzed, and interpreted. The statistical tool utilized were the frequency, ranking, and weighted mean.

IV. RESULTS AND DISCUSSION

The presentation of the data includes the following topics: 1) pedagogical approaches utilized during the normal; 2) level of knowledge of ICT skills of the teachers in terms of basic computer literacy, ability to back up files, experience on online project work, ability to nurture creativity, and social networking skills; 3) instructional materials applicable for distance learning; and 4) proposed action plan as the output of the study.

1) Pedagogical approaches utilized by the teachers during the normal

The data reveal that generally the teachers often used the pedagogical approaches in the new normal with composite mean of 3.82. The approach of preparing test that are congruent to the lessons got the highest weighted mean of 4.06 which is described as often. Also, the teachers often used the approach of planning tasks and discussing fewer complex issues with weighted

mean of 4.00. The rest of the approaches are often used by the teachers with weighted mean ranging from 3.63 to 3.94.

The results meant that the pedagogical approaches were commonly understood as the approaches to teaching. It is referred to the theory and practice of learning and how this process has an impact and is influenced by the social, cultural, economic and the political factors of the students. This implied also that these approaches provide direction to the individuals, particularly the heads, directors, principals, and instructors of the educational institutions in terms of the ways which they are required to put into practice towards leading to enrichment of the overall system of education.

The result is supported by the study of Kapur (2014) which concluded that the major benefits of pedagogical approaches are, the instructors can bring about transformations in the teaching-learning methods and instructional strategies. In addition, they are well-aware of the fact that they need to make use of modern, scientific, technical, and innovative methods. The pedagogical approaches make provision of information to the instructors that they need to put into practice innovative methods in the implementation of tasks and activities.

2) ICT skills of the teachers in terms of basic computer literacy, ability to back up files, experience on online project work, ability to nurture creativity, and social networking skills.

Basic Computer Literacy- Relative to the ICT skills of teachers along basic computer literacy, the composite mean is 3.75 that is interpreted as often. The creation of a presentation with simple animations functions emerged as the highest weighted mean of 4.21 which is also described as often. Likewise, the creation of a presentation with audio or video clips has the weighted mean of 4.19 that is interpreted as often.

It meant that teachers used the computer skills that they are used to in their job such as power point presentation aside from word processing and spreadsheet. This implied that the importance of computer literacy in teacher education programs, exposure to changes in the methodologies, curriculum reform, and that innovation in the professions are very important. Similarly, computer literacy skills enable teachers to implement effective record keeping strategies, and computer assisted instruction and communication.

The result is supported by the study of Ogundele and Etejere (2018) which concluded that there is a high positive significant relationship between computer literacy skills and teachers' job effectiveness. The

computer literacy skills, such as word processing, data processing, Excel, PowerPoint, and interconnectivity operations, have significant impacts on teachers' job effectiveness. They include areas such as, record keeping strategies, student academic performance, teachers' job performance, school discipline, and community services.

Ability to Back up Files- in relation to ICT skills of backing up files, the teachers often access files from any device with an available internet connection with weighted mean of 4.26. Also, they often can copy files to an external hard drive with weighted mean of 4.06. The other three ICT skills are often used by the teachers with weighted mean ranges from 3.66 to 3.94. Generally, the teachers often can back up files with composite mean of 3.95.

This means that the teachers use backup which is the process of creating a copy of the data on the system that is use for recovery in case the original data is lost or corrupted. It can also use backup to recover copies of older files if it has been deleted in the system. It would imply that the backup is to create a copy of data that can be recovered in the event of a primary data failure. Primary data failures can be the result of hardware or software failure, data corruption, or a human-caused event, such as a malicious attack (virus or malware), or accidental deletion of data.

The said findings are corroborated by the idea of Topfer (2010) that online backup is increasingly becoming the default choice for many small businesses. This involves the data being stored in the 'cloud' rather than just on your computer. Once it has been uploaded, the data can be accessed from any computer terminal. It is expected to see online backup to become standard practice over the next few years for any business who values their data.

Experience on online project work- The teachers often use email and other platforms for easy communication with their colleagues as an experience in online project work with weighted mean of 4.29 emerging as the highest value. However, the teachers often experienced that connectivity is relaxed but interaction and human contact are lacking with weighted mean of 4.06. The other three indicators are often experienced by the teachers with weighted means ranging from 3.65 to 3.94.

Ability to nurture creativity- relative to the ability to nurture creativity, the teachers often continue to challenge themselves to further advance the abilities with the highest weighted mean of 4.09. Similarly, they often give reward when curious about something and have opportunity to explore new topics, take risk to

advance the abilities, and look for a variety of solution whenever approach a problem with weighted means of 3.66, 3.89, and 3.92, respectively. Consequently, the teachers sometimes devote themselves to develop the creative abilities and become an expert with weighted mean of 3.35.

The said result means that the teachers usually do some challenges that will enhance their abilities further especially when problems are encountered at work or at home. This is one of the ways in nurturing their creativity which also needed by their learners.

This implied that creative thinking is one of the important things that leading edge school administrators are increasingly looking for. They go along teachers' flexibility, adaptability, networking skills, research ability, motivation, time management, and entrepreneurial thinking.

The said finding is supported by Collard and Looney (2014) who stated that teachers would not be able to integrate creative teaching methods or nurture creativity in their regular practice without the support of their school leaders and peers. Indeed, introducing new methods, particularly methods that represent a significant departure from regular practice, is a risky endeavor for them.

Social Networking Skills- Generally the teachers often have the social networking skills with composite mean of 4.09. The use of social networks to share ideas with each other and to connect with teachers and other persons from another country got the highest weighted means of 4.25 and 4.24, respectively, both described as often.

This would mean that social network is an online community that brings people with common interests, opinions, activities, and experiences together by sharing their news, photos, videos, and events. A social network is essentially composed of a representation of each user (often a profile), his social links as well as a variety of additional services. These online communities also provide means for users to interact with each other over the internet, such as email and instant messaging.

It implies that social media have witnessed an exponential growth. It is now infiltrating nearly every field, including the educational arena. These online social networks are increasingly being used for different reasons not only by students but by teachers as well.

Just like the idea of Willbold (2019) who claimed that social media platforms enable free voice and video calls, the sharing of documents, links, and any other type of information. They can all be highly effective in

improving the academic performance and students' learning. Also, Faizi, El Afia and Chiheb (2013) recommended that educators use these online social communities whether they are working in fully online, blended, or face-to-face learning contexts.

3) Instructional materials applicable for distance learning

The instructional materials are the content or information conveyed within a course. These include the lectures, readings, textbooks, multimedia components, and other resources in a course. These materials can be used in both face-to-face and online classrooms; however, some must be modified or redesigned to be effective for the online environment. The best instructional materials are aligned with all other elements in the course, including the learning objectives, assessments, and activities.

This would imply that such materials must be carefully planned, selected, organized, refined, and used in a course for the maximum effect. The planning and selection of instructional materials should take into consideration both the breadth and depth of content so that student learning is optimized.

The result is partially supported by the study of Onyilagha and Nnajofofor (2014) who concluded that good instructional materials should be clear, precise, and must deliver accurate message as were initially designed to do irrespective of traditional or distance educational system. Accordingly, technology may have greater influence on distance education than the traditional classroom system, however, when applied appropriately, technology intends also to enhance learning in the traditional classroom system.

4) Proposed Action Plan on the Pedagogical Approaches and Information and Communication Technology (ICT) Skills of Teachers in the E – Learning.

The proposed action plan on the pedagogical approaches and information and communication technology (ICT) skills of teachers in the E – Learning dealt primarily on the enhancement and development of utilized pedagogical approaches by teachers during this new normal form of educating learners.

Generally, the proposed action plan for the pedagogical approaches and information and communication technology (ICT) skills of teachers in the e – learning aims to: (a) Enhance the pedagogical approaches utilize by the teachers in the new normal; (b) improve the ICT skills of the teachers in terms of basic computer literacy, their ability to back up files, ability to nurture creativity and social networking skills; (c) provide the teachers

with sufficient knowledge and skills in using different instructional materials applicable for distance learning; and (d) help both teachers and students facilitate teaching and learning process effectively and efficiently during this new normal.

V. CONCLUSIONS

Based on the findings, the researchers concluded that the teachers often use the appropriate pedagogical approaches in the new normal. They often use their basic computer literacy, ability to back up files, experience for online work, ability to nurture creativity, and social networks. Furthermore, the most instructional materials applicable for distance learning are printed materials, cellphone, internet, television, and email. The researchers also concluded that there is a need to conduct an action plan to enhance the ICT skills of the teachers for the e-learning, during and post pandemic times.

VI. RECOMMENDATIONS

The researchers would like to recommend that the teachers may be provided with seminar, trainings, and workshop on the appropriate pedagogical approaches in e-learning for them to be fully equipped in delivering the instruction. Another is that the school administrators may continually improve the ICT skills of the teachers through capability building activities on basic and advanced computer literacy, internet technology, and social media. Moreover, the teachers may be given the favored instructional materials applicable for distance learning. In addition, the action plan may be submitted to the City Division office for implementation, and if found feasible, may be adopted. The researchers recommend that further study may be considered that will cover a wider scope and the inclusion of other variables not covered.

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