

Profiling Teachers' Readiness and Competence for Flexible Learning

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ABSTRACT

The DepEd's Basic Education Learning Continuity Plan (BE-LCP) School Year 2020-2021 mandates both public and private schools nationwide to implement Flexible Learning Options (FLOs). The implementation of FLOs in the DepEd provides a venue for teachers to develop their readiness and competence in the various alternative learning delivery modalities and in technology integration. However, not all teachers maximize FLOs in the conduct of their classes. In this mixed methods study, the researcher aimed to determine teachers' readiness and competence in the conduct of flexible learning. Data were collected via online survey involving 65 randomly selected teachers from the Humanities and Social Sciences Department of the Schools Division of Cauayan City, Philippines. Results of the descriptive analysis showed that the teachers have implemented FLOs to a very great extent and their readiness for technology integration is at a very great extent. In addition, the participants' level of readiness and competence in terms of instructional delivery, utilization of technological resources, and assessment and evaluation is very high. Age, gender, specialization, and number of seminars attended influence the teachers' level of competence in the implementation of FLOs in terms of instructional delivery, utilization of technological resources, and assessment and evaluation. Moreover, the qualitative analysis of the problems and challenges encountered by the teachers and the students in conducting classes using FLOs generated the following themes: poor internet connectivity and limited access to technological resources. Further, the researcher formulated an action plan aimed at enhancing teachers' level of readiness and competence for FLOs.

Keywords: Basic Education Learning Continuity Plan (BE-LCP), Flexible Learning Options (FLOs), TPACK

INTRODUCTION

Education plays a significant role in the development of individual citizens towards nation building. However, the present coronavirus disease 2019 (COVID-19) pandemic has brought extraordinary challenges and opportunities into the educational system around the world, including the Philippines. In almost all sectors, the fight against the threats of COVID-19 pandemic suffered profound effects and impacts, and one of the sectors which has been affected is education. Most countries around the world have temporarily closed educational institutions to contain the spread of the virus and reduce infections. This closure has affected more than 1.2 billion learners worldwide, with more than 28 million learners in the Philippines (UNESCO, 2020).

In the Philippines, there were 552,246 cases as of February 16, 2021, of which 28,926 were active cases, 511,796 recovered, and 11,524 died (DOH, 2021). Worldwide, there were 110,032,334 cases, of which 22,755,055 were active cases, 84,848,131 recovered, and 2,429,207 died (Worldometer, 2021). The public health emergency brought about by COVID-19 calls on the Department of Education (DepEd) to be innovative and resourceful in delivering quality, accessible, relevant, and liberating education.

In response to this emergency, the DepEd implemented the Learning Continuity Plan (LCP) through DepEd Order No. 012, s. 2020, also known as the Adoption of the Basic Education Learning Continuity Plan for School Year 2020-2021. By virtue of this order, the DepEd has mandated all basic education institutions to use Flexible Learning Options (FLOS) during the pandemic (DepEd, 2020). In line with this, the Department, through the Schools Division Offices, undertakes the urgent and necessary development, production, and provision of learning resources, in accordance with its mandate (DepEd Order No. 018, s. 2020). In the higher education sector, on the other hand, the Commission on Higher Education (CHED) has encouraged higher education institutions (HEIs) to use their academic freedom in implementing available distance learning, e-learning, and other alternative modes of delivery to students, provided these HEIs adhere to applicable policies of the Commission (CHED, 2020).

Today, new rules and policies have been implemented by the government to control the spread of the COVID-19 and to safeguard the health of the masses. Education, however, must not stop. The adoption of the Basic Education Learning Continuity Plan (BE-CLP) in the Philippines supports the alternative learning delivery modalities based on FLOS (ADM and ALS programs), including face-to-face learning, distance learning, and blended learning. It provides specific details on distance learning through modular, online, and radio/TV-based instruction (Fontanos et al., 2020). As to the curriculum offering, the learning competencies have been decongested to focus only on the most essential learning competencies (MELC) which are aligned with the achievement of 21st-century skills such as critical thinking, collaboration, communication, and creativity (De Villa & Manalo, 2020).

Consequently, the adoption of the FLOs as an alternative learning delivery modality took a shift from the traditional to a more complex teaching-and-learning process. Though subject matter will be taught in different ways, pedagogies and strategies in teaching seem difficult to implement in the different FLOS, and teachers may or may not be adequately competent and prepared in the delivery of instruction.

The Schools Division of Cauayan City consists of 66 elementary schools and 14 secondary schools. Among the 14 secondary schools in the division, there are 13 schools offering the Humanities and Social Sciences Strand (HUMSS) under the Academic Track of the Senior High School Curriculum. The Cauayan City National High School - Main Campus, categorized as a mega school; the Villa Concepcion National High School, classified as a large school; Cauayan City National High School - Marabulig Extension, categorized as a medium school; and Cauayan City National High School - Cabaruan Extension, classified as small school, are among the secondary schools that offer the HUMSS strand.

The 'Project BERNARD' (Bringing Education using Radio and Television, Non-Print, and Automated Resources to the Diverse Learners), which is a blended-learning strategic approach introduced by the Schools Division of Cauayan City as a FLO to ensure the continuity of education under the BE-

LCP of the DepEd, has been utilized in all the Division's secondary schools offering the HUMSS strand since the school year 2020-2021.

The Schools Division of Cauayan City also adopted different learning modalities aside from the PROJECT BERNARD, such as online and offline learning and modular distance learning as FLOs in the conduct of synchronous and asynchronous classes. However, based on observations and feedback, there are ongoing problems in the conduct of blended learning delivery especially in integrating technology in the classroom during the conduct of synchronous and asynchronous classes.

There are reported barriers in terms of competence of the teachers in the conduct of blended learning. In addition, teachers in the HUMSS department do not receive proper training relevant to ICT integration and the alternative learning delivery modality. The schools, on the other hand, have inadequate support for teachers in their conduct of synchronous and asynchronous classes.

Furthermore, the teachers utilized ICT more frequently for information dissemination than its actual use. Records have also shown that since the adoption of the PROJECT BERNARD, there have been limitations in the capacity of teachers in utilizing technology in their classroom, and in their preparation of the ICT to be used in the blended learning delivery modality.

The scenario challenged the researcher, who belongs to the HUMSS Department of the Schools Division of Cauayan City, in examining and profiling teachers' readiness and competencies for flexible learning. Hence, this study aimed to determine teachers' extent of implementation of FLOs; extent of readiness in technology integration; level of readiness in terms of instructional delivery, utilization of technological resources, and assessment and evaluation; and level of competence in the implementation of FLOs. Moreover, the sought to explore the problems and challenges encountered by the teachers in the use of FLOs. The results of the study would serve as the researcher's basis for crafting a plan of action that would help enhance teacher's readiness and competence for flexible learning.

Conceptual Framework

The study was anchored on the Basic Education Learning Continuity Plan (BE-LCP) of the Department of Education and on other legal bases pertaining to the implementation of the Flexible Learning Options.

Basic Education Learning Continuity Plan

The BE-LCP of the Department of Education prescribes the utilization of Flexible Learning Options, providing a framework for using the different learning delivery modalities that can be adopted in different localities to ensure the delivery of the teaching and learning process. Furthermore, the DepEd BE-LCP provides guidelines in using ICT as part of the mechanisms for the new learning delivery modality that ensures appropriate and quality learning materials and resources in different platforms and technology, which may be available in a timely and efficient manner. In connection to this, the DepEd aims to train and develop teachers' competence in utilizing ICT in the conduct of classes using the flexible learning options. Hence, this framework helped the researcher in evaluating the readiness and competence of teachers in using flexible learning options.

Flexible Learning Options

The BE-LCP of the Department of Education prescribes the use of various Flexible Learning Options (FLOs), which is defined as “learning interventions and pathways that are responsive to the needs, context, circumstances, and diversity of learners” (DepEd 2019a, p. 96). Depending on existing circumstances and resources, FLOs allow flexible schedule, venue, and approach to learning (Fontanos et al., 2020).

The DepEd started implementing FLOs as separate programs and projects to improve participation rates and reduce the number of students at risk of dropping out. During the pandemic, the DepEd took on some of these projects as regular programs under the Alternative Delivery Modes (ADM) or the Alternative Learning System (ALS) as subsets of FLOs with a specific line-item budget at the different governance levels. ADMs and ALS have proven useful in addressing dropouts in the upper secondary level (Albert et al., 2018). These programs are implemented in schools and communities to provide access to learners who are not able to go to school for various reasons such as health, economic responsibilities, and disasters.

The FLOs emphasize the different alternative learning delivery modalities under the BE-LCP of the DepEd. In the context of Cauayan City, the Schools Division of Cauayan City proposed and adopted the ‘PROJECT BERNARD’ (Bringing Education using Radio and Television, Non-Print, and Automated Resources to the Diverse Learners), which is a strategic teaching and learning approach patterned after the FLOS and utilized to ensure the continuity of education under the BE-LCP.

PROJECT BERNARD, along with the different FLOs that include face-to-face learning, modular distance learning, printed and digital learning, online learning, and offline learning, is being utilized in all schools in the Schools Division of Cauayan City, and in all the secondary schools in the division offering the HUMSS strands from school year 2020-2021 to present.

Various studies on the implementation of FLOs and teachers’ readiness and competence in the use of FLOs in the Philippine education system have been conducted since the onset of the pandemic. In the context of the Schools Division of Cauayan City, using FLOs still requires an in-depth study and evaluation.

Legal Bases

The following legal bases provide guidelines for the conduct of this study. The legal bases served as the standards and guiding principles of the researcher in conducting this study.

Amid the public health emergency caused by the Covid–19 pandemic, the DepEd is committed to providing continuous basic education services to the people and the community. This is in accordance with its constitutional mandate, "to establish, maintain, and support a complete, adequate, and integrated system of education relevant to the needs of the people, the country, and society at large," as stated in section 2(1) of Article XIV of the Philippine Constitution.

This is also supported by Republic Act 9155, otherwise known as the Governance of Basic Education Act of 2001, which mandates the DepEd to protect and promote the right of all citizens to quality basic education and shall take appropriate steps to make education accessible to all. This act orders the DepEd to enact and implement educational policies and guidelines to ensure the delivery of quality basic education and the continuous improvement of reforms and policies in education in the attainment and realization of the vision, mission, goals, and objectives of the Department.

To ensure that the constitutional mandates will be realized in this time of the pandemic, the Department of Education issued DepEd Order No. 12, s. 2020, also known as the Adoption of the Basic Education Learning Continuity Plan (BE-LCP) for School Year 2020-2021, which encourages the use of alternative learning delivery modalities based on Flexible Learning Options that include face-to-face learning, distance learning, and blended learning. The BE-LCP also emphasizes the importance of using ICT as part of the mechanisms for the new learning delivery modality that ensures appropriate and good-quality learning materials and resources in different platforms and technology which may be available in a timely and efficient manner.

Another constitutional mandate has been enacted to further strengthen the quality delivery of education in all learning institutions in the Philippines. This is clearly stated in Republic Act No. 11494, otherwise known as “Bayanihan to Recover as One Act,” which mandates the state to give assistance, subsidies, discounts or grants to schools, universities, colleges, technical vocational institutions, teachers, faculty, and students for the purchase of distance learning tools such as computers, laptops, tablets, and other ICT devices and equipment necessary to conduct and access classes and learning materials under alternative delivery modes of teaching and learning in the new normal through the DepEd, the CHED, and the TESDA, in partnership with GFIs; and for the support of alternative learning modalities, digital education, digital infrastructure, and continuity plans, such as the purchase of equipment, materials, and supplies related thereto, printing and delivery of self-learning modules, provision of safe school infrastructure, equipment and facilities such as handwashing stations, soap, alcohol, sanitizers, and other disinfecting solutions, as well as medical health supplies deemed appropriate by public health officials such as thermometers, face masks, and face shields, subject to existing accounting and auditing rules.

Moreover, the Department of Education issued DepEd Order No. 018, s. 2020, also known as the Policy Guidelines for the Provision of Learning Resource in the Implementation of the Basic Education Learning Continuity Plan, which aims to set the standards and specifications in the provision of learning resources in the implementation of the BE-LCP. It aims to provide learning resources that will serve as learning toolkits for learners where procedures, instructions, and other details are provided to aid the learning process, with the supervision of responsible adults along with the continuous monitoring and guidance of the teachers.

The DepEd continuously implements the K to 12 Enhanced Basic Education Program and the Basic Education Learning Continuity Plan of 2020 which opens a venue for FLOs as an alternative learning delivery modality. The integration of ICT into the teaching and learning process highlights the use of innovations and technology as a viable mechanism to improve the quality of teaching, performance, and productivity of learners and teachers amidst the Covid-19 pandemic.

Paradigm of the Study

The paradigm in Figure 1 shows how the theories and concepts presented are translated into the context of the study.

Figure 1. Paradigm of the Study

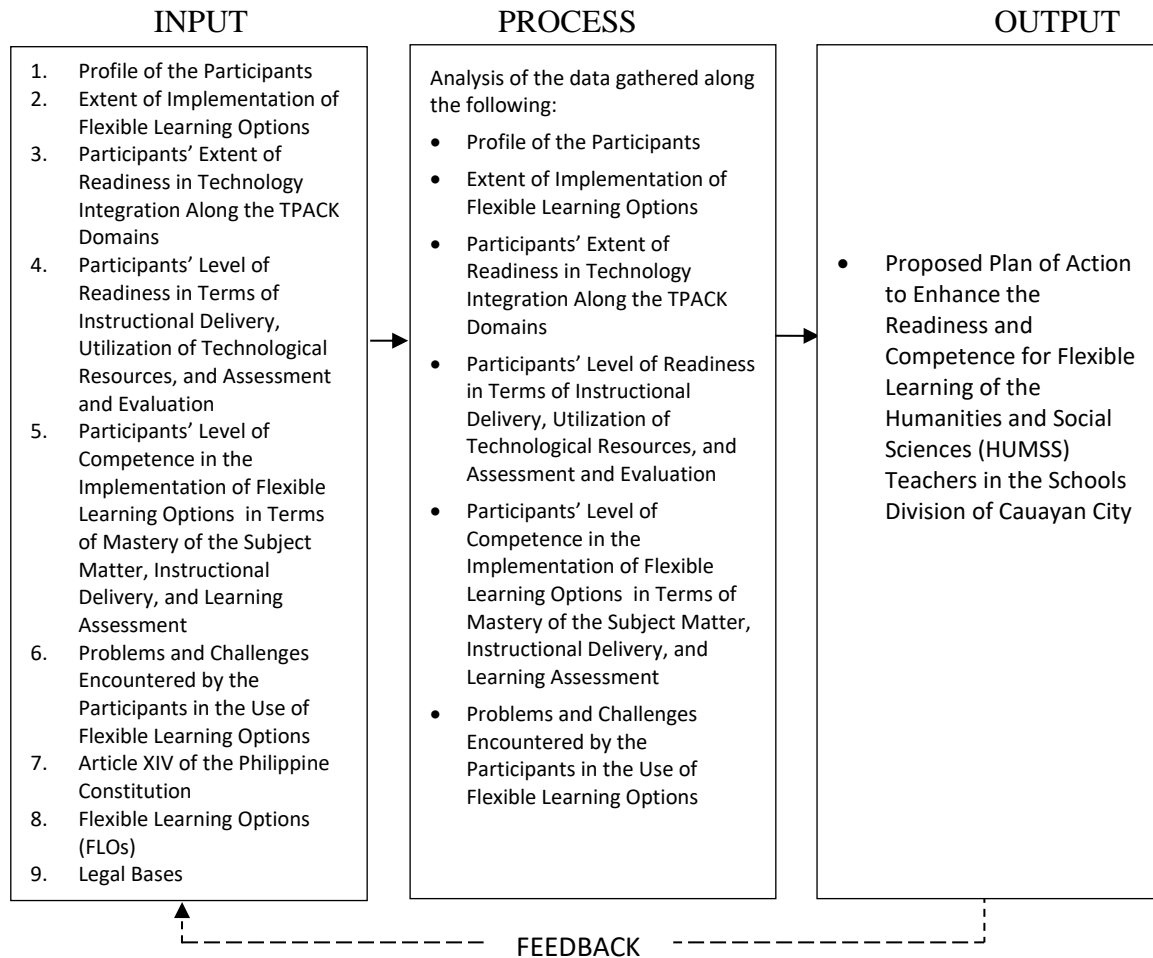


Figure 1 presents the input, process, and output of the present study. The input variables included the profile of the participants; the extent of the implementation of flexible learning options; the participants' extent of technology integration along the identified TPACK Domains; the participants' level of readiness in terms of instructional delivery, utilization of technological resources, and assessment and evaluation; the participants' level of competence in the implementation of flexible learning options; and the problems and challenges encountered by the participants in the use of flexible learning options.

The process involved the analysis of the aforementioned inputs. The output is a proposed plan of action to enhance the readiness and competence for flexible learning options of the Humanities and Social Sciences (HUMSS) teachers in the Schools Division of Cauayan City.

Statement of the Problem

This study aimed to assess the readiness and competence for flexible learning options (FLOs) of the Humanities and Social Sciences (HUMSS) teachers in the Schools Division of Cauayan City for the school year 2021-2022. Specifically, it sought answers to the following questions:

1. What is the profile of the participants in terms of the following?
 - 1.1 Age
 - 1.2 Gender
 - 1.3 Highest Educational Attainment
 - 1.4 Area of Specialization
 - 1.5 Number of Seminars/Trainings Attended Related to FLOs in the Last Three Years
 - 1.6 Employment Status
 - 1.7 Length of Service
 - 1.8 School Category
2. What is the extent of implementation of the FLOs along the following?
 - 2.1 Learning Platforms and Other Technology Resources
 - 2.2 Utilization of Different Strategies
 - 2.3 Teaching and Learning Delivery Modality
3. What is the participants' extent of readiness in technology integration along the following TPACK domains?
 - 3.1 Technological Knowledge (TK)
 - 3.2 Technological Content Knowledge (TCK)
 - 3.3 Technological Pedagogical Knowledge (TPK)
4. Is there a significant difference in the participants' extent of readiness in technology integration along the TPACK domains when they are grouped by profile variables?
5. What is the participants' level of readiness in the implementation of FLOs along the following dimensions?
 - 5.1 Instructional Delivery
 - 5.1.1 Modular Distance Learning
 - 5.1.2 Radio-Based Learning
 - 5.1.3 Television-Based Learning
 - 5.1.4 Printed and Digital Learning
 - 5.1.5 Online Learning
 - 5.1.6 Offline Learning
 - 5.2 Utilization of Technological Resources
 - 5.3 Assessment and Evaluation
6. Is there a significant difference in the participants' level of readiness in the implementation of FLOs along the identified dimensions when they are grouped by profile variables?
7. What is the participants' level of competence in the implementation of FLOs along the following dimensions?
 - 7.1 Mastery of the Subject Matter
 - 7.2 Instructional Delivery
 - 7.3 Learning Assessment
8. Is there a significant difference in the participants' level of competence in the implementation of FLOs along the identified dimensions when they are grouped by profile variables?
9. What are the problems and challenges encountered by the teachers and the students in the conduct of classes using FLOs?

10. What plan of action can be proposed to enhance the participants' readiness and competence in the conduct of classes using FLOs?

Hypotheses

1. There is no significant difference in the participants' extent of readiness in technology integration along the TPACK domains when they are grouped by profile variables.
2. There is no significant difference in the participants' level of readiness in the implementation of FLOs along the identified dimensions when they are grouped by profile variables.
3. There is no significant difference in the participants' level of competence in the implementation of FLOs along the identified dimensions when they are grouped by profile variables.

METHODOLOGY

Research Design

This study used mixed approaches to research. For the quantitative approach, the descriptive design was used to describe the profile of the participants and the extent of implementation of flexible learning options. It was also used to determine the extent of readiness of the participants in technology integration along identified TPACK domains; their level of readiness in the implementation of FLOs along instructional delivery, utilization of technological resources, and assessment and evaluation; and their level of competence in the implementation of FLOs along mastery of the subject matter, instructional delivery, and learning assessment. Moreover, the design was also used to ascertain the significant difference in the aforementioned focus variables when the participants are grouped by profile variables.

On the other hand, the qualitative approach through thematic analysis was used to explore the problems and challenges encountered by the participants in the use of flexible learning options.

Participants of the Study

The participants of the study were the Humanities and Social Sciences (HUMSS) teachers at the Schools Division of Cauayan City, in the province of Isabela, representing different school categories. Stratified purposive sampling was used to select the participants.

Table 1. Participants of the Study

Name of School	Percentage	Sample
Cauayan City National High School - Main	63.07	41
Villa Concepcion National High School	18.50	12
Cauayan City National High School - Marabulig Extension	10.77	7
Cauayan City National High School - Cabaruan Extension	7.69	5
Total	100.00	65

Table 1 presents the percentage of teachers and sample size from each of the participating schools. The participants are Grades 11 and 12 teachers who taught in the HUMSS track of the senior high school in the Schools Division of Cauayan City.

Instrumentation

The instrument that was used to collect the data was survey questionnaire consisting of seven parts. Parts two, three, and six were adopted, and the rest were researcher-made and subjected to validation by research experts and an ICT expert.

Part 1 collected data on the profile of the participants such as age, gender, highest educational attainment, area of specialization, number of seminars or training attended relevant to the conduct of FLOs, employment status, length of service, and school category. Part 2, which was adopted from Das et al. (2016) and Al-Awidi and Aldhafeeri (2017), assessed the extent of implementation of flexible learning options.

Part 3 was adopted from Schmidt et al. (2009-10). It measured extent of readiness of the participants in technology integration along identified TPACK domains. Part 4 assessed the participants' level of readiness in the implementation of FLOs along instructional delivery in terms of modular-distance learning, radio-based learning, television-based learning, printed and digital learning, online and offline learning; along utilization of technological resources; and along assessment and evaluation.

Part 5 of the questionnaire, which was adopted from Herrera and Janer (2021), assessed the participants' level of competence in the implementation of FLOs along mastery of the subject matter, instructional delivery, and learning assessment. Lastly, part 6 elicited the problems and challenges encountered by the teachers and the students in the use of flexible learning options.

Data-Gathering Procedure

To obtain the data needed for the investigation, the researcher undertook the following procedure.

1. The researcher sought the approval of the dissertation panel of St. Paul University Philippines (SPUP) by presenting this study to the technical committee. After integrating the recommendations of the panel, the researcher submitted the revised manuscript to the Research Ethics Committee (REC) of SPUP for review of its ethical soundness.
2. The researcher requested the approval of the Schools Division Superintendent of DepEd Schools Division Office of Cauayan City and of the school principals of the selected schools for the gathering of data needed for the study.
3. Upon the approval of the superintendent and principals, the researcher coordinated with the participants for the floating of questionnaires.
4. In the informed consent process, the researcher oriented the participants on the nature and objectives of the study through the preliminary part of the questionnaire. After securing their informed consent, the researcher administered the questionnaires online through Google Forms.
5. The researcher protected the participants' right to privacy, anonymity, and confidentiality throughout the study.
6. After they were gathered personally by the researcher, the data were analyzed and interpreted using appropriate methods and tools.

Data Analysis

The researcher analyzed the data using the following tools:

Frequency and Percentage. These were used to describe the participants profile in terms of age, gender, highest educational attainment, area of specialization, number of seminars or trainings attended related to FLOs, employment status, length of service, and school category.

Weighted Mean. This was used to determine the extent of implementation of FLOs, as well as the participants’ extent of readiness in technology integration along identified TPACK domains, level of readiness in the implementation of FLOs, and level of competence in the implementation of FLOs. To interpret the means, the researcher will use the following Likert scales.

Table 2. Scale for Determining the Extent of Implementation of FLOs and the Participants’ Extent of Readiness in Technology Integration Along Identified TPACK Domains

Mean Range	Descriptive Interpretation
3.25–4.00	Very Great Extent
2.50–3.24	Great Extent
1.75–2.49	Moderate Extent
1.00–1.74	Low Extent

Table 3. Scale for Determining the Participants’ Level of Readiness and Level of Competence in the Implementation of FLOs

Mean Range	Descriptive Interpretation
3.25–4.00	Very High Level
2.50–3.24	High Level
1.75–2.49	Low Level
1.00–1.74	Very Low Level

Independent Samples t-Test. This was used to test for significant difference in the participants’ extent of readiness in technology integration along identified TPACK domains, level of readiness in the implementation of FLOs, and level of competence in the implementation of FLOs when they are grouped by gender and employment status.

One-Way Analysis of Variance (ANOVA). This was used to determine the significant difference in the participants’ extent of readiness in technology integration along identified TPACK domains, level of readiness in the implementation of FLOs, and level of competence in the implementation of FLOs when they are grouped by age, highest educational attainment, area of specialization, number of seminars/trainings attended related to FLOs in the past three years, length of service, and school category.

Thematic Analysis. This was used to explore the problems and challenges encountered by the teachers and the students in using flexible learning options.

RESULTS AND DISCUSSION

1. Profile of the Participants

Most of the participants are aged 26-30 years at 21 or 32.31%; the majority are female at 46 or 70.77%; most are bachelor's degree holders who are currently enrolled in their master's program, at 25 or 38.46%; most specialize in Social Studies at 20 or 30.77%; and the majority have attended 1-3 seminars/trainings related to FLOs in the last three years, at 34 or 52.31%.

Moreover, the majority of the participants are permanent/regular DepEd teachers at 63 or 96.92%; the majority have been in the teaching profession for 1-5 year/s at 45 or 69.33%; and the majority teach in a mega school at 41 or 63.08%.

2. Extent of Implementation of Flexible Learning Options Along the Identified Domains

2.1 Learning Platforms and Other Technology Resources

The result of the descriptive analysis of the extent of implementation of flexible learning options in terms of learning platforms and other technology resources indicate that the participants' use of hardware, software and applications, learning platforms, and networking obtained mean ratings of 2.91, 3.20, 2.99, and 2.84, respectively. This finding implies that the participants utilized the aforementioned technologies to a "great extent."

Also, the participants' use of other resources earned a mean rating of 3.31, which suggests that the participants utilized other learning resources such as audio-visual presentations, printed and digital learning materials and references to a "very great extent." The overall mean of 3.05 indicates that the participants implemented FLOs through learning platforms and other technology resources in their classrooms and schools to a "great extent."

The aforementioned findings are supported by Scwab (2016) who stated that teachers commonly used hardware and digital tools such as smartphones and laptops to support interactive learning activities and effective discussions in their teaching. Similarly, Islam et al. (2019) pointed out that the use of technology in teaching makes teachers competent in the pedagogical and content areas, thereby helping learners learn efficiently using technological tools.

Moreover, the participants have been exposed to the different software and applications available for the implementation of FLOs. They utilized software and applications to a "great extent" during their asynchronous and synchronous learning sessions. Meanwhile, the participants utilized learning platforms such as DepEd Commons, DepEd Learning Management System, DepEd Learning Portal, DepEd TechUnit, and SDO Cauayan City RBI to a "great extent."

Further, the present findings are also supported by the study conducted of Stec et al. (2020) which indicates that online teaching has three main approaches, namely, enhanced, blended learning, and online approach. Enhanced learning involves the intensive use of technology to ensure innovative and interactive instruction. Blended learning mixes both distance and online education. The online approach entails that the course content is delivered virtually. Online education is convenient for students, because they can always access online materials (Stern, 2020).

2.2 Utilization of Different Strategies

The participants' assessment of the extent of implementation of flexible learning options in terms of using different strategies earned an overall mean of 3.37, which is described as "very great extent." Nine of the 10 indicators were rated as "very great extent." The indicator *The teacher can manage the class on time in a technology-enriched classroom* obtained the lowest mean rating of 3.22, described as "great extent." The finding indicates that the participants can create, prepare, and use various technology-enriched learning resources appropriate for the different strategies of the flexible learning options.

2.3 Teaching and Learning Delivery Modality

The participants' assessment of the extent of implementation of flexible learning options in terms of teaching and learning delivery modality obtained an overall mean of 3.33, which is described as "very great extent." This finding implies that the teachers can create, prepare, and provide learning materials and alternative learning resources to learners in different learning modalities. In addition, teachers can manage and utilize various strategies in the different learning delivery modalities. Furthermore, teachers can assess the learning progress of students through monitoring, feedbacking, and remediation using different learning delivery modalities.

3. Participants' Extent of Readiness in Technology Integration Along the Identified TPACK Domains

3.1 Technological Knowledge (TK)

The participants' extent of readiness in technology integration in terms of technological knowledge (TK) obtained an overall mean of 3.33, which is described as "very great extent." Eight of the 10 indicators earned mean scores of 3.34, 3.35, 3.25, 3.35, 3.34, 3.40, 3.42, and 3.48, with a descriptive interpretation of "very great extent." The indicators *I know how to solve my own technical and technological problems* and *I feel confident that I can help students when they have difficulty with technology* marked the lowest mean ratings of 3.14 and 3.22, respectively, which are described as "great extent."

The finding suggests that the teachers have a very great extent of technological knowledge and expertise in the use of technology, as well as in how technological tools can be used and integrated into their teaching. According to Koehler and Mishra (2009), teachers have very great level of technology knowledge in applying technology tools and resources in their teaching. The finding of the present study, therefore, implies that the participants have the knowledge of the features of technological tools and their appropriate use in the teaching and learning process.

3.2 Technological Content Knowledge (TCK)

The participants' extent of readiness in technology integration in terms of technological content knowledge (TCK) earned an overall mean of 3.31, which is described as "very great extent." This result implies that the participants are knowledgeable in the integration of technology and content. The finding also suggests that the participants are proficient in the content of their respective disciplines or subject matters and effectively use technology to teach the content. Moreover, the utilization of technology and high level of content knowledge makes teachers more competent in content areas in the classrooms and helps learners to learn efficiently using technological tools (Islam et al., 2019). Supporting the said finding,

Koehler and Mishra (2008) reported that teachers have a great knowledge of integrating content, pedagogy, as well as appropriate technology for effectively delivering the lesson.

3.3 Technological Pedagogical Knowledge (TPK)

The participants' extent of readiness in technology integration in terms of technological pedagogical knowledge (TPK) obtained an overall mean of 3.33, which is described as "very great extent." This finding suggests that the teachers can use technology with appropriate teaching strategies to facilitate the delivery of lesson content. The finding further implies that they have the competence in selecting appropriate teaching strategies and technological tools to maximize the development of creative and critical thinking among learners. The aforementioned finding is supported by the result of the study of Lawless and Pellegrino (2007) that teachers have very great extent of readiness on the use of effective teaching strategies and technology to actively engage learners in instructional tasks and activities.

4. Significant Difference in the Participants' Extent of Technology Integration Along the TPACK Domains when Grouped According to Profile Variables

The results of the test for significant difference in the participants' extent of technology integration along the identified TPACK domains when they are grouped by profile variables show that all the three domains obtained probability values higher than 0.05 level of significance; therefore, the null hypothesis is accepted. This suggests that there is no significant difference in the participants' extent of technology integration along technological knowledge (TK), technological content knowledge (TCK), and technological pedagogical knowledge (TPK) when they are grouped by age, gender, highest educational attainment, area of specialization, number of seminars/trainings attended related to FLOs in the last three years, employment status, length of service, and school category. In other words, the participants' extent of technology integration along the TPACK domains does not vary regardless of any of their profile variables.

5. Participants' Level of Readiness in the Implementation of FLOs Along the Identified Dimensions

5.1 Instructional Delivery

5.1.1 Modular Distance Learning

The participants' assessment of their level of readiness in the implementation of FLOs along instructional delivery in terms of modular distance learning obtained an overall mean of 3.33 described as "very high." This finding suggests that the teachers can prepare and provide self-learning modules (SLMs), learning activity sheets (LAS), and communication and monitoring tools to help students who are on modular distance learning. The very high level of readiness of the teachers in the conduct of modular distance learning also implies that SLMs, LAS, and other learning resources are available in the schools for distribution.

5.1.2 Radio-Based Learning

The assessment of the participants of their level of readiness in the implementation of FLOs along instructional delivery in terms of radio-based learning obtained an overall mean of 2.78, which is described as "high." This means that the participants have a high level of readiness in terms of radio-based learning. It also implies that radio-based instructional materials are available and being utilized in their schools and in remote areas where students reside. In connection, Arbutante (2020) agreed that the RBI has affected

the lives of learners in so many different ways. It provided learning opportunities to learners who are unable to attend face-to-face sessions such as those who work or live in remote areas. It was successful in expanding access and quality of distance education. Further, radio holds great potential in terms of supporting students who learn at a distance (Chandar and Sharma 2003).

5.1.3 Television-Based Learning

The participants' assessment of their level of readiness in the implementation of FLOs along instructional delivery in terms of television-based learning earned an overall mean of 2.93 described as "high." This suggests that the teachers have a high level of readiness in facilitating their classes using television-based instruction just like using radio-based instruction. The high level of readiness of the teachers along this dimension implies that instructional materials for television-based learning are available and being utilized in their schools and in the division.

5.1.4 Printed and Digital Learning

The assessment of the participants of their level of readiness in the implementation of FLOs along instructional delivery in terms of printed and digital learning obtained an overall mean of 3.36, which is described as "very high." This implies that the teachers have a very high level of readiness in facilitating their classes using printed and digital learning. Printed and digital learning materials such as self-learning modules (SLMs), learning activity sheets (LAS), weekly home learning plans (WHLPs), and other learning materials were distributed by the teachers for the delivery modality. Moreover, the very high level of readiness of the teachers in printed and digital learning also suggests that they are confident about facilitating this mode of learning.

5.1.5 Online Learning

The participants' assessment of their level of readiness in the implementation of FLOs along instructional delivery in terms of online learning earned an overall mean of 3.44 described as "very high." This finding indicates that the participants are very highly prepared in facilitating their classes in an online learning setup because they are skilled and competent in integrating technology, finding the use of technology as a necessity for their teaching. This is supported by the study of Phan and Dang (2017) which states that teachers of online learning must have the technological skills and competencies in basic computer operation and technical issues relating to internet use to become good facilitators of e-learning. The researchers also stressed that many teachers who do not consider themselves skilled in using ICT tools feel that technologies are not helpful in their teaching and personal work.

5.1.6 Offline Learning

The assessment of the participants of their level of readiness in the implementation of FLOs along instructional delivery in terms of offline learning obtained mean an overall mean of 3.34, which is described as "very high." This suggests that the teachers are very highly prepared in facilitating their classes using offline learning modality because self-learning modules (SLMs), learning activity sheets (LAS), and other learning resources can be delivered or distributed to learners even without internet connectivity. Moreover, this suggests that the teachers have high confidence that in the delivery of offline learning, students may seek assistance from family members, stakeholders, community members, and their teachers while learning offline.

5.2 Utilization of Technological Resources

The participants' assessment of their level of readiness in the implementation of FLOs along utilization of technological resources earned an overall mean of 3.29 described as "very high." This implies that the teachers are very highly prepared in finding and selecting technology resources to be utilized in the different learning modalities. They are adept at using technological resources in facilitating the teaching and learning process.

5.3 Assessment and Evaluation

The assessment of the participants of their level of readiness in the implementation of FLOs along assessment and evaluation obtained an overall mean of 3.32, which is described as "very high." This finding indicates that the teachers very highly prepared in developing assessment and evaluation tools based on the learning competencies and in modifying assessment and evaluation tools appropriate for their learners.

6. Significant Difference in the Participants' Level of Readiness in the Implementation of FLOs Along the Identified Dimensions when Grouped by Profile Variables

The results of the comparative analysis of the participants' level of readiness in the implementation of FLOs along the identified dimensions show that when grouped according to age, highest educational attainment, number of seminars/trainings attended related to FLOs in the last three years, employment status, length of service, and school category, all the dimensions obtained probability values higher than 0.05 level of significance; therefore, the null hypothesis is accepted. This implies that the participants' level of readiness in the implementation of FLOs along the three dimensions does not vary when they are grouped according to the aforementioned profile variables.

On the other hand, gender influences the participants' level of readiness in the implementation of FLOs along utilization of technological resources as well as assessment and evaluation, while area of specialization is a determining factor of their level of readiness along utilization of technological resources, as indicated by the probability values lower than 0.05 level of significance obtained by these dimensions.

7. Participants' Level of Competence in the Implementation of FLOs Along the Identified Dimensions

7.1 Mastery of the Subject Matter

The participants' assessment of their level of competence in the implementation of FLOs in terms of mastery of the subject matter obtained an overall mean of 3.42, which is described as "very high." This finding implies that the participants are very adept with theories, concepts, and principles related to the subject they teach; they can provide content and research-based discussions; they can connect and build relationship between lesson objectives and contents; and they can provide contextualized examples and learning activities appropriate for their learners.

In connection to the finding, Rena (2000) observed that adequate knowledge of the subject matter helps the teacher to teach learners correctly, thereby also helping learners to learn correctly. This leads to the achievement of set objectives and the consequent interest of learners to continue in the learning

process. As highlighted above, the teachers' very high level of knowledge of the subject matter has much influence on the process of achieving = lesson objectives. In line with this, Rice (2003) also asserts that teachers must possess sufficient knowledge in their area of teaching. Any teacher who does not possess the required knowledge of subject matter in his or area of teaching cannot be effective.

7.2 Instructional Delivery

The assessment of the participants of their level of competence in the implementation of FLOs in terms of instructional delivery earned an overall mean of 3.56 described as "very high." This suggests that participants have a very high level of competence in carrying out and achieving lesson objectives as well as in delivering lessons using various formats to cater to their learners' different learning styles and abilities. Moreover, the teachers can manage the flow of their lessons, emphasize the development of higher-order thinking skills, manage the teaching and learning process using different technology and resources through different instructional and learning delivery modalities, and promote the learning and growth of students by administering meaningful instructional delivery in attaining the lesson objectives.

7.3 Learning Assessment

The participants' assessment of their level of competence in the implementation of FLOs in terms of learning assessment obtained an overall mean of 3.46, which is described as "very high." This finding indicates that the participants are very highly competent in selecting and developing assessment and evaluation tools necessary to measure the level of knowledge, comprehension and understanding, and mastery of competencies of learners, as well as in giving adequate tasks within a reasonable time and in communicating learning assessment through feedback. The finding further implies that the teachers have a very high level of competence in administering and promoting learning assessments, such as formative and summative assessments, through different learning delivery modalities.

8. Participants' Level of Competence in the Implementation of FLOs Along the Identified Dimensions when Grouped by Profile Variables

The results of the comparative analysis of the participants' level of competence in the implementation of FLOs along the identified dimensions show that when grouped according to highest educational attainment, employment status, length of service, and school category, all the dimensions obtained probability values higher than 0.05 level of significance; therefore, the null hypothesis is accepted. This implies that the participants' level of readiness in the implementation of FLOs along the three dimensions does not vary when they are grouped according to the aforementioned profile variables.

On the other hand, age influences the participants' level of competence in the implementation of FLOs along mastery of subject matter; gender, along the three dimensions; area of specialization, along learning assessment; and number of seminars/trainings attended related to FLOs in the last three years, along mastery of the subject matter, as indicated by the probability values lower than 0.05 level of significance obtained by these dimensions.

9. Problems and Challenges Encountered by the Teachers and the Students in the Conduct of Classes Using FLOs

Two themes emerged from the thematic analysis of the participants' open responses about the problems and challenges they encountered in the conduct of classes using flexible learning options. These are (1) limited and poor internet connectivity and (2) limited access to technological resources.

Limited and Poor Internet Connectivity

The participants expressed that they have limited to poor internet connectivity when conducting FLOs, particularly during synchronous sessions. Participants also stated that due to poor internet connectivity, both teachers and students have difficulty logging in and joining online or virtual meetings. In addition, the teachers reported that students are unable to access learning materials and activities uploaded on Messenger chat group, Google Classroom, Learning Management System, and other platforms used by the teachers during asynchronous sessions through alternative delivery modes. Furthermore, the teachers stated that some students do not have data and internet cables/fibers to connect to the internet because they live in areas with limited internet access.

Limited Access to Technological Resources

The participants also indicated that students have limited access to technological resources. Their students do not have access to or the means to acquire digital devices such as personal computers, laptops, smartphones, among others, which they can use for synchronous and asynchronous learning through various alternative learning delivery modalities. Moreover, they stated that some parents whose children are enrolled in modular-distance learning and other learning options, such as radio- or television-based instruction, do not have phones for monitoring and supervising their children.

10. Proposed Plan of Action to Enhance the Participants' Readiness and Competence in the Conduct of Classes Using FLOs

The importance of training on flexible learning options (FLOs) in schools cannot be ignored. Amidst the Covid-19 pandemic worldwide, alternative learning delivery modalities such as the FLOs became a mechanism adopted by public and private schools nationwide for the teaching and learning process to continue.

Considering the guidelines on the Learning Continuity Plan (LCP) by virtue of DepEd Order No. 012, s. 2020, also known as the Adoption of the Basic Education Learning Continuity Plan for School Year 2020-2021 of the Department of Education (DepEd) that mandates the department in utilizing FLOs in the Philippine educational system during the pandemic, this study has shown that there are problems and challenges facing the country's basic education in terms of teachers' level of readiness and competence in the implementation of FLOs.

To help ensure that the DepEd achieves its objective of improving the teaching-learning process and addressing the problems and challenges related to FLOs, the researcher proposes an action plan anchored on the findings of the study. In crafting the action plan, the researcher also used as basis the DepEd's SPATRES (Strategies, Programs, Activities, Tasks, and Resources) tool so that the plan would be aligned with the required format of the DepEd towards easier understanding and application.

CONCLUSION

Based on the findings presented, the researcher drew the following conclusion:

The use of flexible learning options in the Schools Division of Cauayan City through the DepEd Basic Education Learning Continuity Plan (BE-LCP) for School Year 2020-2021 has been successful. Its implementation in all schools in the division makes the teaching and learning process continuous and accessible even during the time of the Covid-19 pandemic. The utilization of the technological resources in the conduct of classes provides students with a unique learning experience, thereby improving the learning process. Moreover, the use of the different learning delivery modalities has enhanced teachers' competence and readiness in using FLOs to provide responsive, relevant, and quality basic education even during the pandemic.

RECOMMENDATIONS

Based on the findings presented and the conclusion drawn, the research recommends the following:

1. The Schools Division Superintendent may support the implementation of the action plan to enhance teachers' readiness and competence in conducting classes using flexible learning options. The superintendent may also consider the conduct of extensive enhancement programs that are responsive to the needs of teachers.
2. Teachers with high level of readiness and competence in technology integration and flexible learning delivery may develop a comprehensive peer-mentoring program to assist teachers with low level of readiness and competence.
3. School administrators may provide technology and internet resources to motivate their teachers in conducting classes using FLOs.
4. The Schools Division ICT Coordinator may conduct more trainings on technological resources and new learning platforms.
5. The Schools Division may seek the support of local government units and other stakeholders in implementing the plan of action.
6. The researcher may consider presenting the findings of the study, including the action plan, towards helping enhance teachers' readiness and competence in conducting classes using FLOs.
7. Future researchers may expand the scope of the present study by covering all teachers in the Schools Division of Cauayan City to come up with a comprehensive picture of the readiness and competence of teachers in flexible learning.
8. Future researchers may also investigate the status of implementation of FLOs in the Division by exploring various topics used in the study.

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