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# Issues Influencing the Certification of Online Career and Technical Educators in the Western Pacific Region

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This is to certify that the doctoral study by

Benjamin Borja Seman

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Abstract

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MEd, Framingham State University, 2014

BS, Northern Marianas College, 2008

Project Study Submitted in Partial Fulfillment

of the Requirements for the Degree of

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## Abstract

The problem this study addressed is career and technical education (CTE) teachers' perceived concerns of the eTeacher certification process and perceived support needed to increase CTE teacher participation in the process. Although an eTeacher certification process is available and free of cost in the Western Pacific region, local secondary CTE teachers have resisted enrolling in certification courses, resulting in few CTE offerings for the distance education program. The purpose of this study was to explore the perceived concerns of CTE teachers and the perceived support needed to increase participation in the eTeacher certification process to teach online CTE courses in the Western Pacific region. The conceptual framework of the study was the stages of concerns model. The study was guided by two research questions focused on the perceived concerns of secondary CTE teachers regarding their participation in the eTeacher certification process and perceived supports needed to encourage secondary CTE teachers to participate in the eTeacher certification process to teach online CTE courses. Data were collected through individual interviews of 10 highly qualified CTE teachers in the Western Pacific region. Data analysis involved two coding cycles, a priori coding followed by axial coding. Findings from this study reflected five themes that indicated a lack of professional development to improve online teaching skills and knowledge on the eTeacher certification process and distance education program in the study site district. The study can lead to positive social change by promoting greater access to CTE courses by students, resulting in them being better prepared for the workforce.

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Dedication

I dedicate this study to my parents, Vicente Laniyo Seman and Rufina Emerei Tuloi Borja Seman. Thank you for your sacrifice for my siblings and me. Mom, thank you for instilling in me the value of patience and hard work. Ng soak l nguu tial techalle e ouraeng a sulem e ouchais er kau el kmo, kau a **"Beduk er a dmolech."** Dad, I wish you were here to see the result of your labor. Your daily teachings of disciplined, self control and perseverance have made me the man I am today. Iya ighi weires bwe uuse ghal llo dad. Ighi mwuschel ibwe abwari me bwal ngalugh yeey apelughlugh rel alongal yoomw abwungbwung me weires rel tepengighamem. Ghilisow ngaluugh semaay. Yeel iyaai **"fúúsemwóghut."**

To my siblings, Shan, Lynn, and Marvin, we all came so far in life. I admire all of your accomplishments and it motivates me to strive to complete this challenge. We'll add this study to our wall of accomplishments. Cheers to us Bwiibwiis, Cheeehooo!!!

To my children, Vimbert, Santiago, NJ, Emma, and Arya, daddy love you all so much. I couldn't have done this without the thought of all of you. Remember that when facing any challenge, every effort taken is a step closer to finishing. Keep your compass pointing north and stay the course. You got this!

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Table of Contents

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List of Tables

Section 1: The Problem

## The Local Problem

There is a high demand for skilled workers in the Western Pacific region, but foreign contract workers are often hired instead because there is a lack of a skilled local workforce (Torres, 2019). A skilled worker is any worker who has particular skills, training, and knowledge that they can apply to their work (Hayes, 2021). Aligning secondary, high school career and technical education (CTE) programs with the workforce needs of the Western Pacific region allows acting strategically to ensure students in CTE programs develop valuable academic and technical for the state (Suffren & Mezera, 2018). CTE is divided into different clusters focused on business, agriculture, and construction (Stauffer, n.d.). As online learning becomes an accepted and necessary medium for teaching and learning (Garza Mitchell, 2017), there has been an expansion of available distance education programs in the Western Pacific region. However, per the distance education and technology instruction director, the current local program has limited CTE course offerings for high school students due to a lack of certified CTE teachers in the district who teach online.

Providing teachers with training and certification to teach online improves secondary teachers' practice and self-efficacy by delivering new knowledge, skills, and qualifications on effectively integrating old and new materials and approaches to adapt to teaching online (Anas & Musdariah, 2018). According to the distance education and technology instruction director of the Western Pacific region, although online teaching certification courses are available and free of cost in the Western Pacific region,

secondary CTE teachers have not enrolled in certification courses resulting in reduced online CTE course offerings for their students. Recent reports from the study site school district, such as the distance education course catalog for Spring 2020 (see Appendix G), show that only two of the 23 courses offered in distance education were CTE courses. With this study, I addressed the problem that although online teacher certification is available for teachers in the Western Pacific region, CTE teachers have not been choosing to be certified to teach online.

## Rationale

The Distance Education and Technology Instruction Student Portal program (see Appendix F) offers online courses to students within the district to advance themselves towards graduation and make up required district-level credits for graduation that are not provided as face-to-face options at their local school. Additionally, online CTE courses allow students to access CTE skills courses in areas of interest that may not be offered in their school but provided within the district. In a KSPN News (2020) report, the commissioner of education described the importance of training all teachers, including CTE teachers, to deliver online courses for the upcoming school year. According to a 2018–2019 public school system report from the study site, the school district has 606 instructional staff, and of that number only 60 have been certified to teach distance education by completing the distance education process provided by the school district. A recent Job Vacancy Announcement in the district proclaims that one of the requirements for any teacher to teach a distance education course must have completed the eTeacher certification course (see Appendix J).

Without proper professional development (PD) and training, teachers may be unprepared for the task of teaching a course online to a dispersed population of students (Rehn et al., 2018). Preparing CTE teachers to teach online has additional considerations compared to traditional coursework because so many CTE programs use specialized equipment or models to deliver instruction, require hands-on learning, and rely on in-person hours for students to meet credentialing standards (McKay et al., 2021). The Office of Curriculum and Instruction CTE director stated in an interview that the Western Pacific Region public school system has 40 certified CTE teachers, only four of whom are certified to teach online. In the distance education course catalog for Spring 2020, the district's public school system offered 23 courses in distance education, and only two were CTE courses. Government officials, such as a local congressman, have also expressed their hopes for the Western Pacific region to implement more CTE course opportunities (Erediano, 2019a). The purpose of this study was to explore the perceived concerns of CTE teachers and the perceived support needed to increase participation in the eTeacher certification process to teach online CTE courses in the Western Pacific region.

## Definition of Terms

*eTeacher*: This certification process facilitates learning using different types of competencies, such as pedagogical knowledge, technological skills, communication, and interpersonal skills

(Anas & Musdariah, 2018).

*Distance education*: An institutional education activity in which student, teacher, and educational materials in different locations are brought together via communication technologies (Gundüz & Işman, 2018).

*CTE*: A catchall terms that encompasses a broad scope of credit-bearing and noncredit courses and programs intended to lead to employment (Garza Mitchell, 2017).

## Significance of the Study

The advancement of technology has made online distance education a reality for educators and students today. Through distance education, both teachers and students can access a CTE course without relocating their residency and school. This study can contribute to positive social change by promoting an understanding of CTE teachers' concerns related to the eTeacher certification process. With more certified CTE teachers for distance education, more CTE courses can be accessible to all students in the study site district regardless of the public school they are currently attending.

## Research Questions

I developed the following research questions to guide this study and explore the issues that influence CTE teacher participation in the eTeacher certification process.

RQ1: What are the perceived concerns of secondary CTE teachers regarding their participation in the eTeacher certification process to teach online CTE courses in the Western Pacific region?

RQ2: What are the perceived supports needed to encourage secondary CTE teachers to participate in the eTeacher certification process to teach online CTE courses in the Western Pacific region?

## Review of the Literature

Distance education is evolving quickly in response to student demand for accessibility, affordability, and emerging technologies (Frankel et al., 2020). The ability for institutions to offer courses on an online platform gives more opportunities for students to access these courses anywhere in the world in real time. In the Western Pacific region, despite the availability of a certification program to teach a CTE course with distance education, CTE teachers are not taking advantage of the opportunity to become certified.

I begin the following literature review by describing the conceptual framework for this study, the concerns-based adoption model (CBAM), which is followed by a discussion of topics pertinent to the broader problem, including distance education, CTE, CTE and distance education, training for distance CTE teachers, and examining CTE teachers' perceptions of participating in training to teach online. Literature was obtained through databases accessible through the Walden University Library, such as ERIC and EBSCOhost, and the Google Scholar search engine. The key terms used to narrow the search included *distance education, online learning, and barriers to teaching online, eTeacher certification,* and *benefits of teaching in distance education*.

## Conceptual Framework

The conceptual framework for this study was the CBAM, which a group of researchers developed at the Texas Research and Development Center for Teacher Education (Hall, 1979). According to Hall (1974), CBAM is a model that defines the interaction between an adopting institution, a user system, and the resource system (i.e.,

expert knowledge available to the user). The exchange is called collaborative linkage and is characterized by open communication, which allowed the resource system to assess the individual user's needs and concerns and select personalized intervention strategies based on the assessment (Hall, 1974).

The CBAM can help supervisors or change leaders understand how individuals respond to change and ensure that the correct actions are followed to help ensure the change initiative's success. The implementation of a new program is a highly personal developmental process in which there are three elements for CBAM in assessing and guiding the process: stages of concerns, levels of use, and innovation configuration map (Mize et al., 2020). I focused on the stages of concern element in the current study.

The CBAM recognizes that change is a process, not an event (Trapani & Annunziato, 2018). This means that when a site decides to adopt a new model or program, time is necessary to prepare the individuals and the organization for new roles, responsibilities, and resource allocations (Loucks, 1983). The second element of CBAM, stages of concern, is when new users' concerns are monitored and identified (Mize et al., 2020). As individuals think about and try an innovation, their feelings change in which their first concerns are self-oriented, so some questions that may arise are: "How will it affect me?" and "How will my role change?" (Loucks, 1983). After such concerns are resolved, the following questions become more task oriented, such as "How can I find time to juggle all the demands? How do I do it?" (Loucks, 1983). Only when these task-related concerns decrease do concerns about impact become foremost, such as "Is this new program benefiting the children? and what can I do to increase my effectiveness?"

(Loucks, 1983). With this information, leaders can address individuals' specific concerns, including the usage of questionnaires, interviews, and open-ended statements to understand concerns and the support needed to address concerns.

The CBAM, specifically the stages of concerns, relates to the current study because it acknowledges that change is a process and takes time. Realistic expectations need to be set for use and observable results (Loucks, 1983). According to Loucks (1983), no one should expect the implementation of a new program to go smoothly, especially since new behaviors must be mastered and unanticipated events lie at every turn. The model was developed to describe changes people undergo as they adopt new programs and how they can be helped to make those changes effective, efficient, and humanistic. The model aligned with the study's guiding research questions that focus on the perceived concerns and support of CTE teachers in participating in the eTeacher certification process to teach online CTE courses in the Western Pacific region. The stages of concerns element in the CBAM aligned with the problem this study addressed and the research questions by providing a framework indicating how teacher concerns can influence change perceptions. I also used the stages of concerns element to guide the development of my interview questions and the a priori codes, allowing for a better understanding of teachers' concerns and how to support participation in the certification process.

## Review of the Broader Problem

The literature reviewed in this section focuses on understanding teacher perceptions of concerns and support needed to participate in the eTeacher certification

process. In the review, I focus on distance education itself, with specific research regarding distance teaching CTE content and the challenges faced concerning distance education in general, specifically with CTE content, as well as CTE teachers' perceptions of PD training.

**Distance Education**

Technology-based learning requires a different lesson approach, design, and needs from traditional teaching (Ozturk et al., 2018). Distance education implies a different teaching style, giving the opportunity to use communication and information technologies at the highest level (Ozturk et al., 2018). Most online programs are based on constructivist learning models, which presume that learners are actively involved in the educational process by developing meaningful learning experiences and interacting with teachers and peers to accumulate and create knowledge (Tartavulea et al., 2020). Making the online educational process as effective as possible could benefit both students and educational institutions since online programs can overachieve and outperform on-campus students (Tartavulea et al., 2020).

Distance education can occur both synchronously, where students and instructors meet virtually in real time, or asynchronously, where students and instructors participate at different times (Davis et al., 2018). It is recommended that the deployment of online learning for various instructional purposes be sustained in all forms of distance education but with an emphasis on usability, affordability, and the enhancement of learners' academic achievements (Olatunji & Adewumi Adebisi, 2021). Beyond the United States, places such as Australia have recorded data showing that the rate of domestic students in

higher education enrolling in an entirely external mode rose from 17.5% in 2010 to 21.9% in 2015 and 22.8% in 2016 (Davis et al., 2018). In Nigeria, perceptions of employers on the role of emerging technology tools in transforming CTE for sustainable workforce development are essential in transforming CTE programs in producing a competent workforce (Olabiyi & Chinedu, 2018).

With distance education, academic institutions experience a changed physical burden, but the students have the opportunity to learn without leaving their home or office (Gunduz & Isman, 2018). The internet has opened the doors to new types of learning, and distance education is constantly evolving and gaining popularity (Rusu & Tudose, 2018). Its relevance with the new generation shows how dependent they are on modern means of communication and less interested in traditional learning (Rusu & Tudose, 2018). Widespread usage of online learning has been taking place in secondary and higher education and in a wide range of disciplines (Ozturk et al., 2018). It has made it possible to fill in the gap of related skills needed in career readiness, economic industries, and educational desires.

Distance education provides synchronous and asynchronous communication and interactions between teachers and students in an environment that creates a social development of student interactions (Ozturk et al., 2018). In a study on teaching music with distance education, Narita (2018) used the Greens model to analyze five characteristics of informal music practices in schools: the students choosing their repertoire; copying recordings by ear; learning in a friendship group; knowledge acquisition starting from “real world” repertoire and thus may be haphazard; and deep

integration of listening, performing, and composing with an emphasis on creativity. Other examples include gamification as a proposed motivational strategy in teaching computer programming and professional networking were highly recommended for teaching agriculture (Feldpausch et al., 2019).

One factor that has been identified to impact teacher participation as distance education instructors is the training culture and its co creative functions (Holmgren et al., 2019). The teaching and learning culture houses values on education, occupation, and regulatory power struggles in implementing digital technology and never in a vacuum (Holmgren et al., 2019). Cultural pressure affects teachers' willingness to teach in distance education because introducing a new culture, digital technology, and distance learning is never easy and requires a practical planning approach. The domain of a teacher's control corresponds to the actions that demonstrate their classroom management, dealing with learners' behavior, and setting and guiding the tasks to be carried out either online or face-to-face (Narita, 2018). Teachers need to consider what goals should be promoted and which appropriate methods and tools (Holmgren et al., 2019).

Researchers have questioned whether online education is simply a substitute for in-person education or if it can expand access to students who would not otherwise have enrolled in an educational program (Xu & Xu, 2019) The convenience of online learning is particularly valuable to adults with multiple responsibilities and highly scheduled lives; thus, online learning can be a benefit to workforce development, helping adults return to school and complete additional education that could otherwise not fit into their daily

routines (Xu & Xu, 2019). Teachers resisting the incorporation of distance education are the main obstacle to developing this type of educational program (Villarruel et al., 2019). Most teachers are then found using the old teaching methods instead of adopting the new methods such as distance learning (Agbo et al., 2018). Although some studies have attempted to show that online learning could occur with only the students interacting, teachers' support cannot be underestimated (Holmgren et al., 2019). It was clear that for distance learning to be successful, teachers should not only adapt to the more structured and deliberating style of distance learning but also be included and involved (Holmgren et al., 2019).

**CTE**

CTE may have different terminology in different world areas, but it is widely accepted as an agent of technological development, the industrial revolution, economic growth, and vocational independence (Adepoju & Aigbavboa, 2020). Different countries have tried to restructure their CTE system to keep pace with other developed countries and meet students, teachers, and employees (Adepoju & Aigbavboa 2020). Given that it has been recognized in the United States that there is a shortage of college graduates with bachelor's degrees to fill openings within the related industries of agriculture, food, environmental science, and natural resources, with technology-supported distance education becoming an increasingly popular learning mode in CTE, it may be a potential remedy for the decline (Feldpausch et al., 2019; Holmgren et al., 2019).

CTE has been experiencing a renaissance across the United States over the past decade, fueled in part by a surging economy that demands a skilled workforce with the

academic, technical, and employability skills required for success (Connet, 2019). Davis et al. (2018) shared that the rapid growth of online learning and distance education is due to technological advancement. Given such advancements are likely to continue, academic leaders and accrediting bodies must be prepared to address the changing landscape of higher education (Davis et al., 2018). Institutions worldwide are currently using online technology to enrich teaching and learning modalities and improve domestic and international access to educational materials (Davis et al., 2018). The availability of a certified and competent workforce is a challenge also faced by many governments and private entities (Olabiyi & Chinedu, 2018). The skills and competencies of a workforce are dependent upon the quality of the education and training available (Olabiyi & Chinedu, 2018).

**CTE and Distance Education**

When building a house, the first phase is planning, and during this phase, a blueprint design is created, and certified engineers inspect and approve or disapprove of the design based on safety code requirements. This example is similar to the application and implementation of distance education for CTE. According to Martin et al. (2019), technology has a significant influence on students, instructors, and higher education institutions involved in online learning, resulting in more online courses, degree and certification programs, and technology-supported courses during face-to-face instruction. For many instructors, the shift from a face-to-face to an online teaching environment can be unsettling and jarring; therefore, institutions need to explore ways to support the pedagogical transition from teacher-centered to learner-centered instruction (Martin et al.,

2019). While many institutions use a one-size-fits-all approach to assist with faculty development for online learning, it is essential to provide pre- and in-service teachers with skilled online instructors to experience the benefit of quality online instruction firsthand as students (Borup & Evmenova, 2019).

As a content facilitator, the teacher is responsible for delivering content and facilitating understanding of the fundamental meaning of the subject matter (Anas & Musdariah, 2018). In the context of online teaching and learning, the teacher facilitates learning through a platform, such as Moodle-based e-learning and Chamilo, or learning management systems, such as Blackboard, with the application of multiple media (Anas & Musdariah, 2018). Educational institutions maximize the potential usage of information and communication technologies within a responsible and accurate approach to teaching in a digital context when instructors are competent (Gülbahar & Adnan, 2020).

As distance education matures, faculty members should maintain a broad range of knowledge and experience in online teaching and learning. PD is essential to improve teachers' readiness skills for teaching online. It may have its greatest impact when it models the types of online courses the school district would like faculty themselves to design and facilitate (Borup & Evmenova, 2019). In the online environment, instructors have new responsibilities, including developing teacher presence and connection to students (Martin et al., 2019). Teacher-centered PD programs that allow flexibility and self-paced scheduling were most successful, and instructors were most receptive to learning new skills that could be immediately applied to their instructional context and

placed a high value on opportunities for self-improvement and networking with peers (Martin et al., 2019). Today, many universities provide support and training to faculty members in various formats, including informal learning environments, mentoring, in-service training, or structured certificate programs through different organizational structures, such as centers for teaching and learning, distance learning centers, instructional technology support units, or centers for excellence (Gulbahar & Adnan, 2020).

Teaching and learning with distance education in fields of CTE, such as firefighting training certification, is described as an unexplored area (Holmgren et al., 2019). From a teacher's perspective, the following issues are addressed: (a) What challenges and contradictions can be identified in training practices implementing distance education? (b) What changes in training practices can be identified during the implementation period? and (c) What factors will contribute to or counteract these changes (Holmgren et al., 2019)? With the teacher taking the role of facilitator in distance education, it allows the learner more freedom of choice, including directing their learning process (Narita, 2018). As a motivational factor, the teacher and students have a more dialogical relation because they understand different perspectives in their subject area (Narita, 2018). Distance education has opened the doors for more opportunities to further education in the various CTE degrees and certifications and has become an education model that applies lesson materials and interaction using communication technologies (Ozturk et al., 2018).

**Training for Distance CTE Teachers**

The shift in the skills and qualifications of the digital age and the changing profile of learners require significant repositioning of the teaching-learning processes and environments (Pierce-Friedman & Wellner, 2020). In systems with an insufficient conventional education approach, it becomes an obligation to plan radical innovations and a series of transformations in education policies and purposes, organizations and functions of educational institutions, and content of education programs (Gunduz & Isman, 2018). Because problems related to the economy require the provision of economic and high-quality services with limited resources, problems related to social issues require equalitarian and widespread education service. Issues related to educational content require transforming elitist higher education to mass higher education, stereotyped and compulsory processes to flexible and multioptional processes, and preadulthood teaching to lifelong learning (Gunduz & Isman, 2018). Today, high-quality CTE programs are being championed by educators, policymakers, and employers alike, who recognize that these robust models can help high school students acquire the skills, training, and postsecondary credentials they need to thrive in the 21st-century workforce (Rosen, 2020).

The spread of distance education, the establishment of distance education centers, and the initiation of undergraduate and graduate education are essential for understanding the distance education perception (Gunduz & Isman, 2018). Learning and teaching in the online platform, conducted in the convenience of one's home, has proven to be increasingly attractive to both students and instructors (Gülbahar & Adnan, 2020).

However, this takes ongoing PD for online instructors in applying best practices, training, and support (Gülbahar & Adnan, 2020).

In the United States, student enrollments in distance education have increased with an average of 568,000 students per year or approximately 6.7 million students (Davis et al., 2018). With the increasing popularity of distance education, more opportunity for an improved economy by increasing its workforce through CTE training programs is possible. With emerging technologies, the internet, and the availability of distance education, students can enroll in CTE programs worldwide. However, the constantly changing and evolving technology of the 21st century will require development in educational technology for CTE training and facilitate the teaching and learning process from teacher-centered to more student-centered learning (Olabiyi & Chinedu, 2018).

Although technological advancements have paved the way for distance education, there are still challenges that need to be addressed. Egas-Reyes et al. (2019) shared that after using several virtual platforms, N-Moodle ends up being relevant. On the other hand, the inclusion of the virtual-face-to-face element in the learning process allows for active participation of the students and a reduction in the dropout rate of the course. With that mentioned a need for a response with readily available technical advice and support, tutoring to develop web navigation and exploration skill, and the provision of selected reading and online or face-to-face dialogical engagement with others must be addressed (Vargas et al., 2021). Other challenges involve the appropriate and effective application of distance education platforms for CTE courses.

Educational companies have developed several CTE online courses due to the demand of many universities that offer CTE online degrees (Byanjankar & Bhaskar, 2020). Multiple media were used to teach distance education online, such as video, online software, social networks, and audio. Byanjankar and Bhaskar (2020) contended that with Information and Communication technologies, teachers can plan and implement learning activities and additional resources effectively in education. Martin et al. (2019) shared common online teaching barriers include instructors' perceptions of the quality of online instruction or their ability to foster student learning in this new environment. One way to address this is by creating a sense among instructors that technology is a primary driver of online learning. This dictates the need for teachers to constantly learn new approaches to using technology (Martin et al., 2019). It is suitable for teachers to use tools and technology by training and support from experts on adapting the technology (Byanjankar & Bhaskar, 2020).

**CTE Teachers' Perceptions of the Training Process**

Distance education is a constantly evolving and advancing interdisciplinary field and part of mainstream education (Bozkurt, 2019). Contradictions may arise with the implementation of technology-supported training between the way teachers perceive and act in the learning environments and the opportunities for interaction and learning offered in digital learning environments (Holmgren et al., 2019).

CTE teachers share dichotomous experience levels where some are more experienced than others (Agbo et al., 2018). Although training and PD may be offered, the implementation of the technology-supported training may result in contradictions

arising in the encounter between how teachers perceive, and act in, the learning environment (Holmgren et al., 2019). These contradictions could result in rejection, which means that training practices are not significantly affected, or in the emergence of expansive learning manifesting itself in new course designs and new ways of teaching (Holmgren et al., 2019).

Teaching courses in the virtual environment is not only a new means of delivering course content to students but is an increasingly innovative way of facilitating information for the success of learning across age groups and geographic spaces (Pierce-Friedman & Wellner, 2020). Videoconferencing, for example, is distinctive from other distance education methods because while it might be considered internet-enabled, it has differences from an online course or virtual school (Rehn et al., 2018). According to Rehn et al. (2018), while teachers are attracted to pioneering the opportunity of videoconferencing, generally, they still use their same face-to-face course designs and teaching strategies in the video conferencing context. For an improved learning experience, it is recommended that the teaching practice, most especially with distance education, be interactive and student-centered (Rehn et al., 2018). Without proper PD and training, teachers are left unprepared for the task of effectively teaching courses across a screen to a dispersed population of students (Rehn et al., 2018).

Building motivation and supporting the training process involves creating a learning environment for teachers where competence, autonomy, and relatedness are supported to facilitate higher intrinsic motivation (Pilkington, 2018). This implies the urgency for analyzing the teachers' attitudes to teaching, learning, and an awareness of

values and assumptions in the training culture. It seems important to consider in analyses of implementation processes of digital technologies in an educational context (Holmgren et al., 2019). Faculties require foundational training before online teaching and ongoing access to educational materials supporting sustained high-quality education (Frankel et al., 2020). Providing faculty the tools for online course design and delivery can help schools support faculty, provide more robust courses for students, and build high-quality, sustainable online programs (Frankel et al., 2020).

The use of information and communication technologies in education enables an easier way to search for solutions to problems in education and go beyond conventional methods against intensifying courses of education (Gunduz & Isman, 2018). The move from classroom-based learning to online learning, which is typically multimedia-based, has placed greater (and different) demands on instructors (Pierce-Friedman & Wellner, 2020). This change of emphasis in the instructional setting may prove difficult for some instructors transitioning from traditional teaching into the online environment (Pierce-Friedman & Wellner, 2020). For this reason, teachers who are involved or will take an active role in the distance education process should be informed about the mechanism, benefits, limitations, and outcomes (Gunduz & Isman, 2018).

The availability of distance education provides a new horizon in facing the digital teaching and learning environment. Expecting teachers to innately design, develop, and deliver quality and effective online instruction without support. Considering the distinct needs of adult learners, faculty must apply research-based methodologies, innovative instructional technologies, and comprehensive assessment practices to strengthen their

craft and improve student learning outcomes (Pierce-Friedman & Wellner, 2020). Some online teacher development programs offer teachers and educational practitioners a comprehensive and interactive online course (Anas & Musdariah, 2018).

## Implications

The advancement and availability of technology have made it possible for the Western Pacific region public school system to implement a distance education program. Although the region was able to create a distance education program that offers academic opportunities for students, it has yet to implement the opportunities for online learning for CTE fully. The limited number of certified online CTE teachers serves as evidence of the importance of the study. With each secondary school in the Western Pacific region offering different CTE courses, having the courses available online through distance education will allow students to enroll in CTE courses that are not provided in their school.

Several project deliverables were possible depending on the data from this proposed study. The first potential project was a PD for CTE teachers. School leaders working with district administrators could use data from this study to design PD to specifically address the needs of CTE teachers, especially those who lack experience with online instruction and are concerned about the change. PD can address concerns and provide support to teachers participating in the eTeacher certification process (McKay et al., 2021). Another project deliverable might be a policy paper that includes recommendations to be shared with leaders of the Western Pacific region. The paper would consist of findings that could inform the key management leaders, such as the

distance education and instructional technology director and the office of curriculum and instruction CTE director, on the teachers' concerns related to the eTeacher certification for CTE teachers and how they can best be supported in the process. The information could be shared with other leaders such as school principals and vice-principals who could encourage the participation of CTE teachers in their schools. These changes will move towards the goal of increasing the number of certified CTE teachers to teach in distance education.

## Summary

CTE is teaching specific career skills to students in secondary and postsecondary institutions. Some leaders recognize the CTE program in the Western Pacific region to be an essential part of education, for it may act as a remedy to the lack of trade skilled workers in the local workforce. With distance education, opportunities for students, teachers, and community members to access CTE courses without travel are possible. However, a lack of fully certified CTE teachers in the distance education program has led to a limited number of CTE courses offered. Although the certification process to teach in distance education is free, the vast majority of CTE teachers have not participated in the process.

The purpose of this basic qualitative study was to explore the perceived concerns of secondary CTE teachers related to the eTeacher certification process to teach online CTE courses in the Western Pacific region. According to the CTE curriculum director of the Western Pacific region, although there are 40 CTE teachers in the system, only four are certified to teach distance education. Interviews were first be conducted with six CTE

teachers who are not certified to teach distance education. Interviews with the four CTE teachers already certified to teach distance education will be conducted afterward. Their responses were compared to determine their perceived barriers of the certification process.

The results of this study provided valuable data on CTE teachers' perception of the eTeacher certification process. The collected data were analyzed and based on the findings, there is a need for improvements to the eTeacher certification process and design PD's for the CTE teachers as well as policy recommendations to be shared with leaders of the Western Pacific region. The recommendation guides the certification process and assists the Western Pacific region leaders in making necessary changes to increase the number of certified CTE teachers to teach in distance education. In the next section, I have outlined the methodology used in this study, including a selection of participants, data collection, and analysis plans.

## Section 2: The Methodology

The purpose of this basic qualitative study was to explore the perceived concerns of secondary CTE teachers related to the eTeacher certification process to teach online CTE courses in the Western Pacific region. In this section, I describe the methodology employed in this study. The research design, participants, ethical considerations, data collection and analysis, findings, and conclusions are also discussed. The section concludes with an explanation of the assumptions, scope, study limitations, and delimitations.

### Research Design and Approach

The problem under study was that although online teacher certification is available for teachers in the Western Pacific region, CTE teachers have not been choosing to be certified to teach online. According to a recent Fall Distance Education eLearning Gateway catalog at the study site, of the 25 online courses offered, the number of CTE courses offered was two (see Appendix F). In the study site's most recent distance education course catalog for Spring 2020 (see Appendix G), 23 courses were offered through distance education venues, but only two were CTE courses. The lack of CTE courses taught in distance education reflects the limited number of certified CTE teachers for distance education, which supported the need for this study. Due to the Western Pacific region being a small island community, there are already a limited number of highly qualified teachers. Although having the certification process for teaching distance education free of cost is a positive motivator for teachers, only a few

CTE teachers have gone through the process, which also supported the need for this study.

For this research, I used the qualitative methodology. When deciding between the qualitative and quantitative approaches, I realized the quantitative method would not help me understand why CTE teachers are not taking advantage of the opportunity to become certified to teach in distance education because quantitative research is objective, which would not have provided the depth of information and subjectivity needed to determine how teachers feel about the process (see Creswell, 2017). On the other hand, qualitative research yields rich, descriptive data that can be useful when answering the research question (Creswell, 2017).

Qualitative research is used to understand how people experience the world (Bhandari, 2020). As mentioned, the qualitative methodology aligned well with the current study because it could be used to guide the various phases of a study design (see Kegler et al., 2018). When deciding on a qualitative design, I examined the different designs to find the most suitable approach to answer the research questions and fit the sequential questioning format. Deciding on the appropriate method of data collection required serious consideration. Although there are many approaches to qualitative research, they tend to be flexible and focus on retaining rich meaning when interpreting data (Bhandari, 2020). Being that I aimed to explore the perceived concerns of secondary CTE teachers related to the eTeacher certification process to teach online CTE courses in the Western Pacific region in this study, individual interviews provided me with a clear and detailed understanding of the needed information. Besides individual interviews,

other qualitative data collection methods are through observations and focus groups. Although conducting observations would have allowed for recording what was being seen, heard, and encountered, it would not have provided the information needed on teachers' perceptions of the certification process for distance education. Observations are mainly used in ethnographies that focus on context and culture (Sauro, 2015). A focus group is another data collection approach to qualitative research that involves asking questions and generating discussion among people (Sauro, 2015). However, conducting focus groups also poses a challenge in getting the participants comfortable sharing their opinions and interacting with other participants (Schwab, 2020). Carrying out individual, open-ended interviews eliminated the chance of participants not sharing their personal views due to being in a large group.

## Participants

Qualitative research requires selecting research participants or sites based on purposeful sampling (Creswell, 2017). I also chose the questioning location so that participants were comfortable with the surrounding environment.

### Criteria for Selection

The population pool for participants in this study included 40 CTE teachers. I purposely selected participants who fit specific criteria to ensure a fair and unbiased study (see Cypress, 2018). To take part in the current study, participants had to be employed by the study site district, highly qualified CTE teachers in the Western Pacific region, and teaching at the secondary level (i.e., Grades 7 through 12). To be deemed a highly qualified teacher in the Western Pacific region for this study, an individual had to

have obtained a bachelor's degree, hold a certificate teaching license, and have passed Praxis 1 and 2. I interviewed 10 highly qualified CTE teachers, both certified and noncertified, who teach online for this study. I attempted to recruit an equal number of participants in each group.

**Justification of Number of Participants**

The study included 10 highly qualified, Grade 7–12, CTE teachers in the Western Pacific region. Participants were certified or noncertified to teach in the district online through the eTeacher certification process. Qualitative research is considered meaningful if the sample selected is information rich and the analytical capabilities of the researcher are high (Shaheen et al., 2019). In interview studies, the sample size is often justified by interviewing participants until reaching data saturation (Francis et al., 2010). In the current study, the sample size was employed for an in-depth analysis of concerns of teachers who had and had not gone through the certification process (see Shaheen et al., 2019). Eight to twelve participants are common in qualitative studies, and the necessary sample size varies due to the information richness of the data, variety of participants, broadness of research question, data collection method, and the type of sampling strategy (Moser & Korstjens, 2018). The geographic location of this study also limited the number of qualified participants due to the small number of highly qualified CTE teachers available in the region.

**Procedure for Gaining Access to Participants**

When planning how to conduct this study and after receiving approval from the Walden University Institutional Review Board (IRB), I considered how I would gain

access to research participants and sites. To gain access, I first sent letters to the Western Pacific regions' commissioner of education (see Appendix B) requesting his acknowledgment and asking permission to conduct the study within the school system. It is a common courtesy of respect in the island culture to seek approval from the head of a household before entering any home for any reason. In this case, this metaphoric request for permission to access the school was submitted to the district's commissioner of education. With his acknowledgment, I sent a courtesy letter or email to all school leaders so they would be aware of my research. Next, recruitment letters were generated and sent via email to possible participants. Hard copies of the recruitment letter (see Appendix E) were also put in envelopes and placed in the school mailboxes of the CTE teachers that fit the inclusion criteria to participate in the study. Further communication with teachers was also carried out through email once the paper-based letter had been sent and a response was received.

Once I completed Walden University's IRB application, I communicated to the administrator of the respective schools through email. I introduced myself and my current pursuit of a doctorate in the email as well as shared my desire to approach certain staff members as potential participants for my study and explained that if the intended participant(s) agreed to take part in my research, I would ensure that the interview would not be held during the teachers' work schedule. When the school administrators responded to my email and agreed to my request, I requested permission to use the email addresses of their CTE teachers as a means of communication if the teachers decided to participate in the study. I am currently the vice principal of a school in the study site

district and am included in the district's email network account with Google and Google Meets. To avoid any conflicts of interest or confusion, none of the CTE staff members of the school I work at were invited as participants in the study, and I created a personal email account with Google. By creating a personal account with Google, I still had the Google Meet function without having to use my work email account.

I emailed each potential participant as the initial communication point of access. In the email, I expressed my gratitude for their willingness to participate in the study and requested a time that fit their schedule to meet with me on the Google Meet application. Google Meet is an online platform by Google that Western Pacific region school districts use to easily communicate as a district. The participants and I then held our meetings virtually at the designated times.

**Establishing a Researcher-Participant Relationship**

For the participants to feel comfortable taking part in this study, I established a relationship of trust with them. In building trust between the researcher and participants, researchers should be unobtrusive, honest, unassuming, self-revealing, and reflective listeners (Pitts & Miller-Day, 2007). Whether working alone or as part of a larger research team, the relationship that develops between a researcher and participant is critical to the success of the research project (Pitts & Miller-Day, 2007). I built a positive and trusting relationship with the participants by maintaining clear and honest communication. I gained their trust by providing a document consent form to the participants that acknowledged their participation and ensured the confidentiality of their personal information as well as valuing their time by keeping the dates of the interviews

and their starting times. A researcher-participant relationship also must be upheld and fostered throughout the research to ensure honest and good-quality results (Algeo, 2012).

**Protection of Participants' Rights**

As part of my efforts to build trust with the participants, I ensured that their personal information would remain confidential and not be shared with anyone or the platform. Confidentiality means that only the researcher and the individuals in the research team can identify individual responses from the research participants (Creswell, 2017). All research documents, including the participants' responses to the interview questions, will be kept confidential and secured in my password-protected laptop that requires thumbprint identification to access for 5 years after completion of the study. Any hard copy related to the study, such as the interview questions and letters to participants, were secured in my file cabinet at home, which can be locked with a key. None of the collected data were linked to any participants and will only be used for this research.

**Protection of Participants**

In this study, I did not collect any data until the participants had given their informed consent (see Appendix D). Consent should be given freely, participants should understand what is being asked, and involved persons must be competent to consent (Arifin, 2018). I had a contract agreement ready for the participant when agreeing to participate in the study that ensured the protection of the participant's identity and their responses to the interview questions. The contract, which was signed and dated by both me and the participant, also included further information about the study and the participant's acknowledgment that signing the document meant that they were giving

their consent to participate in the study. Informed consent in research can be defined as permitting full knowledge of the possible consequences, risks, and benefits of the study (Creswell, 2017). I also shared information regarding informed consent when recruiting participants for the study.

According to Arafin (2018), for any research study, especially when dealing with human participants, ethical practices must be taken seriously and recognized as a legal requirement. The protection of human subjects through the application of appropriate ethical principles is compulsory (Arifin, 2018). When conducting this study, I remained honest with the participants and thorough in my explanation of each step of the research process they would experience (see Hardaway, 2018). Although some research may require that the researcher withhold information from the participant for the sake of the study, I did my best not to subject the participants to any words or actions that may have been physically or psychologically harmful. For this study, the guiding research questions and purpose were disclosed to the participants, and their responses to the interview and follow-up questions were answered.

## Data Collection

Before any data were collected, I ensured that the collection tool to be used was credible and conducive to the study (see Hardaway, 2018). I used an individual interview method for collecting data and communicated with each participant to schedule their online interview. The following two research questions guided this study:

RQ1: What are the perceived concerns of secondary CTE teachers regarding their participation in the eTeacher certification process to teach online CTE courses in the Western Pacific region?

RQ2: What are the perceived supports needed to encourage secondary CTE teachers to participate in the eTeacher certification process to teach online CTE courses in the Western Pacific region?

Without asking the research questions directly to the participants, I gained the answers based on their responses to the interview questions that were asked during the individual interviews (see Appendix C). Their responses were collected as data that allowed me to identify themes (see Burkholder et al., 2016).

**Description and Justification of the Data for Collection**

I collected data from open-ended, semi structured interviews. Before data were collected, I verified that the interview questions and follow-up questions were clearly stated, aligned with the research questions, and harmless to the participants. I conducted individual interviews to collect data because the aim was to elicit each participant's experiences, perceptions, thoughts, and feelings (see Moser & Korstjens, 2018). Because the goal was to investigate the motivations of CTE teachers pertaining to their participation in the eTeacher certification process to teach online CTE courses, an individual interview was an appropriate data collection method. In the interviews, the participants were given ample time to respond thoroughly without interruption and share their feelings and opinions on the issue. I communicated openly and with honesty to the participants on a suitable date to meet and have the interview.

**Source of Each Data Collection Instrument**

The data collection materials were researcher produced. To answer the research questions, I generated interview questions (see Appendix C) and follow-up questions that were open ended to collect rich and detailed data. I created the collection instruments specifically to answer the research questions and understand the phenomenon of why CTE teachers were not participating in the distance education certification process. Table 1 shows the alignment of the interview questions for noncertified CTE teachers with the overall research questions, and Table 2 shows the interview questions for the certified teachers. I used technology to make accommodations for the participants and myself and conducted the individual interviews online. For the safety and confidentiality of the meetings, the link to the room was shared only with the participant taking part in that specific interview.

**Table 1**

*Interview Questions for Noncertified CTE Teachers*

| Interview questions | RQ1 | RQ2 |
|---|---|---|
| Tell me about your experiences with distance learning/education either as a teacher or student. | X | X |
| Based on your knowledge/experience on distance education, from the perspective of a distance education teacher, what are your concerns with its implementation? | X | |
| Describe how you utilize an online learning platform to teach a CTE class. | X | |
| How is the quality of instruction important when teaching a CTE course in distance education? | | X |
| What certification programs does the district offer to become a certified distance education teacher? | | X |
| What would encourage you to participate in the eTeacher certification process? | X | X |
| Why or why not should the certification process become a certified CTE teacher for distance education is mandated by the district? | X | X |

**Table 2**

*Interview Questions for Certified CTE Teachers*

| Interview questions | RQ1 | RQ2 |
|---|---|---|
| Tell me about your experiences with distance learning/education either as a teacher or student. | X | X |
| Describe how you utilize an online learning platform to teach a CTE class? | X | |
| How is the quality of instruction important when teaching a CTE course in distance education? | X | |
| Why did choose to become certified to teach CTE courses at a distance? | | X |
| How did the certification process help you become an effective CTE distance education teacher? | | X |
| What do you think would be a motivating factor for non-certified teachers to participate in the certification process to become a certified CTE distance education teacher? | X | X |
| Why or why not should the certification process become a certified CTE teacher for distance education is mandated by the district? | X | X |

**Justification for the Sufficiency of Data**

In a qualitative study, the data collections process generates a large amount of data (Creswell, 2017). For this study, there were two participant groups due to the criteria. One group consisted of CTE teachers who are certified to teach CTE in distance education, and the other consisted of CTE teachers who have not gone through the certification process and therefore cannot teach in distance education in the Western Pacific region. To ensure that each participant felt comfortable answering the questions, individual interviews was the method used for data collection. The interview consisted of 10 questions for the participants who are certified to teach CTE at a distance, and 10 questions for those who have not gone through the certification process (see Appendix C). The two sets of questions for both participant groups were of the same context but worded differently based on whether or not the participant has been certified to teach

distance education. The goal of the multiple interviews and interview questions were to reach data saturation where no new information arises and maximum information on the phenomenon is provided (Moser & Korstjens, 2018).

New media are increasingly used for collecting qualitative data, such as through online observation and individual online interviews (Moser & Korstjens, 2018). I used the online platform, Google Meet, to conduct the individual online interviews virtually and have the discussions recorded. After the individual interviews, I immediately worked on the transcription of the recorded interviews and communicated a date for the participant to take part in the member checking process. Member checking is an important process where the researcher shares the transcript with the participant to check for accuracy and reflect the totality of the interview, including pauses, punctuation, and non-verbal data (Moser & Korstjens, 2018). I familiarized myself with the data by reading and rereading the transcript carefully and conscientiously in search of deeper understanding and identifying essential patterns and themes (Moser & Korstjens, 2018).

**Process for Data Collection**

The data collection method utilized in this study was open-ended semi-structured interviews. The interview questions were written down in an interview guide sheet and focused on providing rich, detailed information that addresses the research questions. The sequences of the questions were predetermined and also vary depending on participants' responses and how the interview unfolds (Moser & Korstjens, 2018). I treated the interview as a back-and-forth dialogue between the participants and the researcher rather than a strict question-answer interview (Moser & Korstjens, 2018).

I stayed in control of the interview in the sense that I am giving clear directions and the participants are in control of their responses (Moser & Korstjens, 2018). The interview guide and questioning included open-ended questions, detailed questions, probes, and prompts (Moser & Korstjens, 2018). Probes are exploratory questions such as "Tell me more about this? or "Then what happened?" (Moser & Korstjens, 2018). Prompts are words and signs that encourage participants to tell more (Moser & Korstjens, 2018).

After I completed the individual interviews, I informed the participant that they would receive word from me within two days to conduct a member check of the interview. Before the process of member check, the recording of the interview was fully transcribed. The number of interviews in a day varied depending on participants' time availability, but I tried to schedule the interviews every other day.

Interview data were transcribed immediately after the interview; these transcription documents were used to identify codes and themes. According to Elliott (2018), coding is the process of analyzing qualitative text data by taking them apart to see what they yield before putting the data back together in a meaningful way. It allows for an overview of disparate data for the researcher to make sense of them in relation to their research questions (Elliott, 2018). Participant responses were identified. Then, expressions, repeating words, and phrases were identified and highlighted in the transcript. Emerging themes were noted where they occur in the transcript. When completed, I created a chart to display the themes, sub-themes, and examples that helped me with the conclusion.

## Gaining Access to Participants

Before reaching out to the participants, I completed the IRB application. When completed, I sent a letter to the participants both by email and delivery to their respective school boxes (see Appendix E). When the participant had responded with interest in partaking in the study, I moved forward with planning the date of the interview. Gaining access to a research site was not as difficult as gaining access to the participants. The research site of data collection was through an online platform using Google Meet. The online platform allowed the participants and researcher to have the individual interview at their convenient location and is accessible to all staff of the Western Pacific region.

## Role of the Researcher

Although I am currently a vice principal in my school, which is also a school within the district, I avoided inviting any CTE teachers in my school to participate in this study for ethical issues. Being that this study was conducted at the local community level and recognizing the fact that the island community has a small population with a culture where it is common to know everyone, at the beginning of the research, I established boundaries. I ensured that the participants were not of the same school where I am employed or are aware of my role, which is that of a researcher and not a friend. I was fair and unbiased by recording what was said and not what I believed to be meant by the participant. As the researcher, I practiced and followed the data collection protocol. I conducted the data collection phase as planned and kept my meeting appointments with participants, which also includes member checking and feedback.

## Data Analysis

The focus of analysis is to bring out suggested meanings that people attach to their actions and responses related to a phenomenon (Ravindran, 2019). Qualitative data analysis brings meaning to a data set with a wide range of materials which in this study will be individual interviews (Lester et al., 2020). According to Lester et al. (2020), several common practices persist across qualitative processes to analysis, such as coding, noting reflections, identifying similar phrases and relationships between variables, patterns, themes, and common sequences. Although qualitative data analysis software is available, it is the researcher who is the primary instrument that attempts to bring out these meanings by a deep engagement with the data collected and the individuals who provided it (Ravindran, 2019).

### Coding Procedure

The data analysis consisted of two cycles of coding. Coding is a fundamental aspect of the analytical process and how the researcher breaks down the data collected to make something new (Elliott, 2018). According to Saldana (2015), codes are often used in qualitative research when analyzing the transcription of an interview, where codes are assigned to data that are similar to each other. For the first cycle coding, I used a set of a priori codes that are aligned to the CBAM framework, methodology, and research questions as recommended by Nieuwenhuis (2015). These codes were used for first-level concept coding to identify broad categories with the data (Saldana, 2015). Table 3 shows a priori codes focused on the stages of concern construct of CBAM (Hall, 2010). When conducting the interview, the caption function was turned on that allowed me to use it

when transcribing the interview, and when reviewing the recording of the interview, I made corrections of any inaccuracies from the automated captioning function.

**Table 3**

*A Priori Codes Based on Stages of Concerns to be Used for Data Analysis*

| A priori codes | Description of code |
|---|---|
| Unconcerned | The teacher is concerned about other educational concerns rather than the CTE certification. |
| Self | The teacher describes personal feelings of uncertainty in whether they should participate in the eTeacher certification program. They might voice supervisor support related to online teaching. |
| Task | The teacher is concerned about time, logistics, schedules, and fitting everything in that must be done related to eTeacher certification. |
| Impact | The teacher is focused on how the eTeacher certification is affecting their ability to serve students and what can be done to increase outcomes. |

The second cycle of coding consisted of axial coding when all interviews and transcriptions were completed. It involved coding across the data extracted from the first cycle coding to determine overreaching concepts, themes, and categories (Saldana, 2015). All repeated concepts were categorized as well as descriptive data were sorted into coded categories until saturation is achieved (Saldana, 2015). To remain organized, I applied a color-code system for each newly formed theme other than simply labeling them. If there were phrases that didn't seem to apply or fit any of the codes, I set them aside for further exploration.

**Evidence of Quality**

To ensure the quality of my data collection and analysis, I first did away with any bias by focusing on the responses given by the participants and not my interpretation or opinions. I ensured that the interview questions aligned with the research questions and

purpose of my study and ask each question in a clear and paced tone. I had the online interview recorded and transcribed immediately after and coded based on the similarities and categorized into themes.

## Accuracy and Credibility

### Member Checking

Immediately after interviewing with a participant, I began transcribing the interview. This was made possible due to recording the online interview. Afterward, I began to analyze the collected data. The principle is that what emerges from the data analysis determined and shaped the subsequent sampling decisions (Moser & Korstjens, 2018). I used the three-column chart that I created with Microsoft Word to collect data (Appendix N). After the data collection, I had a follow-up meeting with the participant to conduct a member check on the transcribed recording. The participant verified that what was transcribed was accurate and not based on my assumptions on what was meant or tried to say. It is important that the transcript is accurate and reflects the interview experience (Moser & Korstjens, 2018). By not deviating from this protocol, I avoided results that were biased and not credible.

### Credibility

To ensure quality data collection and analysis, I conducted a follow-up meeting with the participants for a member check to take place. During this process, I also debriefed the participant on the interview and allowed the checking of the transcript based on the interview audio recording which allowed the participant comfort knowing that the transcription was accurate. It was through this process that I hoped to eliminate

any bias or misinformation by including the participant to ensure the accuracy of the transcript (Moser & Korstjens, 2018). Confidentiality and anonymity of the participants were preserved by not revealing their names and identity in the data collection, analysis, and reporting of the study findings (Arifin, 2018). I was able to keep the participants' identities confidential by assigning each participant a number such as a Participant 1 or T1. Only I had access to the correlation of participants' names and numbers which was in my notes and stored in my laptop and kept with me at all times and protected with a password and facial recognition.

**Discrepant Case**

Avoiding bias is significant to any qualitative study. As mentioned earlier, to ensure quality with my data, I first did away with any bias by focusing on the responses given by the participants and not my interpretation or opinions. As additional efforts to avoid bias, I was open to contrary evidence (Yin, 2017). CTE is divided into different clusters focused on careers such as business, agriculture, arts, science technology engineering, and mathematics education, and construction. My experience as a science teacher in a middle school taught me that although a colleague of mine may be in the same department, we teach different disciplines or standards of science. While I teach physical science, my colleague teaches biology. It is the same with CTE, where different teachers in the department teach the different career-based curricula. While one teacher teaches music, another teaches journalism and may have different opinions towards the appropriateness of distance education for their respective CTE course.

# Data Analysis Results

## Data Collection

Ten CTE teachers in the secondary education level were interviewed for this study. Six of the participants were CTE teachers who were not certified to teach in the distance education program and four of the participants were CTE teachers who are certified to teach in the distance education program. All interviews were conducted in an online setting. Google Meet was used to host and record each interview including the captions which was beneficial when transcribing the interviews. Interviews ranged in length from 18 minutes and 39 seconds to 44 minutes and 14 seconds long and averaged at 31 minutes and 44 seconds. Participants interviewed reported their teaching experience as ranging from 3 years to 27 years and all currently hold a highly qualified teaching credential. Participants interviewed are currently teaching a variety of CTE subjects such as intro to computer, computer literacy, agriculture, music, art, graphic design, and drama (see Table 4).

**Table 4**

*Participant Demographics of Experience, Gender, and Current Position*

| Participant | Years of experience | Gender | Subject area | Certification (Y/N) |
|---|---|---|---|---|
| T1 | 3 | Female | Intro to computer | Y |
| T2 | 8 | Male | Graphic design | N |
| T3 | 14 | Male | Agriculture | Y |
| T4 | 25 | Male | Drama | N |
| T5 | 12 | Male | Art | N |
| T6 | 10 | Male | Computer literacy | N |
| T7 | 10 | Male | Art | Y |
| T8 | 8 | Male | Music | N |
| T9 | 5 | Female | Computer literacy | Y |
| T10 | 16 | Female | Computer literacy | N |

To prepare the data for analysis, I transcribed each interview using Otter and the captions from the Google Meet recordings. I listened to each interview, making additions, corrections, and deleting items that were not transcribed accurately using the program. I then listened to the interview a final time to ensure that all necessary changes were made and word for word transcription was met. After the transcribing was completed, participants' transcribed responses were copied to an interview responses table created using Microsoft Word. The table consisted of five columns. In the first column, I had listed the research questions that corresponded to each interview question. The second column contained the corresponding interview questions. The participants' response was in the third column. The fourth column was for the main key points from the participants' responses. The fifth column was for categories and themes that align with the a priori

code. Appendix H and Appendix I displays a sample of the interview response table used certified and noncertified CTE teachers.

The interview response table was used for me to observe and take note of connections I was seeing between the other coded interview and themes that saw emerging. Responses corresponding to a priori codes were collected onto a second table in order to determine axial codes across the data. The second table, I created using Microsoft Word, was designed to organize the categories of the a priori codes from the first table to generate axial codes (see Appendix M). The table was designed with six columns where the a priori codes were in Column 1, description of the a priori code in Column 2, brief example for reference from interview of certified CTE teacher in Column 3 and noncertified CTE teacher in Column 4. In Column 5, I had the common categories and themes in Column 6. A color codes system was used in order to visually see the frequency of the emergent themes and identify the common categories that aligned with a theme. The axial codes were identified as the themes generated in Column 6.

**Data Analysis**

The data analysis was completed using the deductive analysis coding process. A "good code" is one that captures the qualitative richness of the phenomenon (Fereday & Muir-Cochrane, 2006). Encoding the information organizes the data to identify and develop themes from them (Fereday & Muir-Cochrane, 2006). Level 1 coding was completed utilizing the standard a priori coding. I also had a code reference file in my laptop to ensure that the coding is consistent with all participants. A researcher journal

was also kept as a record of notes taken during interviews other than the recording of the interview via Zoom, identifying emerging themes, and questions that arises as I coded the data. I was able to refer to the notes emerging themes were identified as well as patterns of emerging themes across interviews.

When conducting the Level 2 axial coding, I reread the interview transcription of the interviews again and listened to the recordings as well to ensure I understood the context of the responses from the participants. I identified themes that repeated across interviews within the a priori codes and did not include a theme until I noticed it was repeated at least four times within the data and from at least two or more participants. I was able to find relation of all codes in the a priori coding and identify five emerging themes in the axial coding process.

In conducting my data analysis, I first addressed any bias by focusing on the responses given by the participants and not my interpretation or opinions and keeping an open mind to evidence that may be contrary (Yin, 2017). After each interview, I was able to schedule with the participants to meet with them again via Zoom and conduct a member check which is a vital process for me as the researcher to share the transcript with the participant to check for accuracy and reflect the totality of the interview, including pauses, punctuation, and non-verbal data (Moser & Korstjens, 2018). When the accuracy of the interview transcript was confirmed by the participants, I proceeded to input the transcription to the interview response table I had created. The findings showed no discrepant data or data that do not agree with the emerging themes (Bashir et al., 2008). When numerous categories were observed during phase 1 with the a priori codes, I

was able to classify each category from the a priori codes that had relation into an emergent theme during the Phase 2 (see Appendix N).

**Emergent Themes**

The table in Appendix N shows the categories of the a priori codes during the data collection. Also shown are the emergent themes during the axial coding process which is where further refining, alignment, and categorization of the themes takes place (Williams & Moser, 2019). The five observed emergent themes were 21st century knowledge/skills, student to student/ student to teacher engagement, motivational factors, quality/relevant PD, and teacher experiences observation with online learning for CTE.

**Theme 1: 21st Century Knowledge/Skills**

One of the emergent themes observed in the second coding phase, axial coding, was 21st century knowledge/skills. Numerous categories were developed during the initial coding phase of the a priori codes that led to this theme such as; navigation, standard norm, college and career readiness, multimedia tools, quality of technology skills or process. 21st century knowledge and or skills are defined as the collaboration, solving complex events, using technological tools, using language, symbols and texts (Karatas & Arpaci, 2020). All of the participants shared their acknowledgement on the importance of distance education most especially after the experience of schools closing due to the COVID-19 pandemic. Participant T1 stated in the interview “I think everyone should be certified. It’s really about being able to use what they know about literature and translate it into the digital world as a standard knowledge and expanded skills.” According to the participants, during the shutdown of schools due to the pandemic, the

district leaders decided as a course of action to invest in online learning through the learning management system of Blackboard Ultra (BBU). Classes were held online and students were able to receive their education without entering their school campus and/or classrooms. Participant T6 shared "now that distance education is almost like a norm as in the students I get in the classroom now are aware how to navigate BBU." Participant T6 also shared how the students were also knowledgeable on how to access and navigate through their classes on BBU which included Blackboard Collaborate, the online classroom portal, and utilize other functions such as sending messages and emails. T1, T3, T4, T6, T9, and T10 shared the benefits of the online learning experience was the ability for teachers, especially those who aren't as tech savvy, to learn and enhance their knowledge and skills with online educational technology. They also shared the need for further knowledge and training on the different multimedia resources and how to effectively use it in their lessons and classes online. Students are also given the opportunity to be introduced to online learning which one of the most important innovations is in the U.S. higher education system in the past two decades (Xu & Xu, 2019). Participant T8 shared that he had also experienced distance learning as a student and that at the time, "it was just not as enticing. Video was still very slow and wasn't as accessible but it's actually pretty decent now." Participant T3 stated "it was a challenge only because of accessibility that some of the students have. For students that had good internet connection and equipment, it was easier for them."

**Theme 2: Student to Student/Student to Teacher Engagement**

Student to student and student to teacher engagement was noted by all participants as an important factor in the learning and teaching process. Participant T4 stated "Interaction with an online teacher is not the same as interaction with the classroom teacher. We noticed this with students who have difficulty in learning, reading issues, focus issues, and time management issues." T4 also shared how difficult it was for the teacher and student to participate in a drama class without being able to see the audience which includes reading their body language. The same was also shared with regard to the audience viewing the presenter. Participant T2 shared the experience of having to teach online due to the pandemic and stated that "the hard part is trying to get the students to go online to login, especially since with distance learning, they're normally at home. I always find myself having to call every parent of students who are absent." Participant T5 stated frustrations in art class when students are drawing and "there is no one there to guide them and give immediate feedback." Participant T5 shared that as their teacher, his frustration was that he "cannot find out who's looking online and going beyond the studying to just look for answers."

**Theme 3: Motivational Factors**

All participants shared views on motivational factors pertaining to distance education and taking time to be certified for teaching online and teach in the distance education program. Of the four participants who are certified to teach in the distance education program, whom are participants T1, T3, T7 and T9, only T1 and T9 had actually participated in teaching in the online program. Participant T7 stated that "as a

professional, especially at this age, they really do need that face to face instruction. They need the social aspect of teaching and learning first before a more independent style of learning." Participant T3 stated that his "class is a very hands on application type of class where students have to perform certain things such gardening and going outside and demonstrating certain themes in regards to agriculture." Participant T1 stated her interest "to see how else you could reach those that we can't because of one's location." T1 shared how she "wanted to challenge myself if I'm able to teach effectively and efficiently through the online platform or any Blackboard or online." T1 also stated,

> distance education is very convenient, considering if all student have access to online and are able to know how to navigate what they need to do in order to be successful. It is very much important to really sit down and pick and choose their instruction.

Participant T9 stated that, "as a student, flexibility was the most important advantages. As a teacher, learning about the different programs, resources, and medias available made my teaching easier and also more fun."

Participants T2, T3, T5, T6, T7, T8, and T10 all shared that a huge motivational factor for them is monetary compensation. For Participants T3 and T7 whom are already certified to teach online, both shared that they foresee many challenges extra work being that their classes are more hands on. With the extra load of work, they would prefer an increase in compensation. Participant T2 shared how he already has a side business and stated "I can make more with the business. I hear from what other people make and my business makes more with the same amount of time or less." Participant T5 shared,

> time is money, so make it worth my while. Compensate me for the time I'm going to take away from my friends and family and my own social life in order to, better a practice or skill, to do more for a community or society purposes.

Participant T6 stated when asked what would motivate him to participate in the eTeacher certification process, "with my situation, that would be monetary." He explained that he was satisfied with what he was currently doing and values his time at home with his family, so a significant amount of compensation would be a determining factor. Participant T8 shared that his experience teaching music online during the time of the pandemic made him realize that there was a need "to bridge the gap between new teaching strategies and old in order to maximize instructional quality towards teachers for distance education." With that he foresees a lot of work to be done and would like to be compensated for the additional work of getting certified then making the attempt to teach music, which requires a lot of hands on practice and guidance, in an online environment. He also stated "more certification backed with more compensation will always motivate somebody but also just what motivates them with more opportunity." Participant T10 stated,

> my honest answer, especially now at this time that we're all trying to survive would be higher pay. I am interested in learning more about access to accommodate learners online and the new technologies out there and PD but a higher pay would be more influencing for me.

Participant T4 shared his motivation factor to be certified and teach online would be,

> to simply try to make sure that the thing that I would spend the most time with other than the mechanics would be to recognize that there are that there are these drawbacks. And you have to take those drawbacks into account. And taking these drawbacks into account. You can at least warn your students as to what as to what they're missing, which I think is only fair.

Other motivational factors shared by the participants were catered more towards students such as stated by Participant T4,

> I think that allows the students the ability to schedule when it's most convenient. It provides substantial opportunities for education at night, weekends. And this could be particularly of use with students that are currently trying to hold down part time or full time jobs.

T10 stated, "being able to work in your own space and at your own time is a great thing."

**Theme 4: Quality/Relevant PD**

Each a priori code had categories pertaining to quality and relevant PD. While all participants agree that online learning is vital to a student's educational experience in the 21st century, most were hesitant about mandating teachers to become certified to teach online for reasons such as fear for colleagues who aren't tech savvy, certification does not necessarily mean quality teaching, the power of choice, lack of knowledge, and more. Quality PD and trainings was preferred recommendation from the participants. According to Participant T1,

> I think knowing the dynamic of at least some that are not so tech savvy is my reason why it shouldn't be mandated because at the end of the day, everyone should have a choice on what they want to build on."

Participant T5 shared how he doesn't agree with some policies with regards to distance education. From his experience having to teach online during the pandemic, he stated,

> although they said that they want privacy to a household because some households less fortunate than others, I also believe that the primary role of parents is to set up an area in the house for education in the timeframe.

He shared that "teaching online was difficult because you're trying to gauge students work but where's the fidelity?" I cannot know who's looking online or behind the blank screen". Participant T6 stated that distance education "doesn't fit with CTE like other subject areas. Most CTE courses are very hands on and it is difficult to replicate that practice in an online setting." Participant T8 shared,

> I already know how I want to go about with this and students just need to know what the expectations are. So as far as certifications go, just show us what to do, what to press and that will motivate me to become better.

**Theme 5: Accessibility and Parental Involvement**

Due to the COVID-19 pandemic that forced schools in the district to close and offer services remotely, teachers in the district gained experience teaching online. The participants had much to share regarding their experiences and observations on online learning with their respective CTE courses. All participants shared their biggest concern which also resonated with the public school district and parents were the accessibility

issue for students. Participant T3 stated “it was a challenge only because of accessibility” either with an electronic device or internet connectivity. Participant T2 stated “there were a lot of limitation especially with families out there in our island that are struggling; some families might not have power at their homes.” All participants shared their observation of an increase in student absenteeism and a lack of motivation on the end of the student, parent support, and challenges at home. Participants T2, T4, T5, and T7 shared their concern with regards to lack of parental involvement and support. Participant T2 stated “there’s no support at home, even if we call them. Another hard part is when there’s no contact number or phone numbers change,” Participant T5 stated,

> I believe it’s on the parent or guardian that you got to do something to ensure your child is able to pick up internet activity. We gave them everything they needed such as school issued devices; they need to meet us halfway.”

Participant T7 shared “it also depends on what the educational values are in the students’ home.”

Another topic that constantly being brought up by all participants was the fact that CTE consist of courses that requires a lot of hands on activities in order to build skills pertaining to the subject field. While participants T1, T6, and T9 shared how they didn’t feel as affected with online learning in comparison to other CTE teachers due to their classes being computer related, they did acknowledge that it would be difficult to teach online with a class that requires hands on learning. Participant T6 shared,

> if we were to go back to full online learning, I’m pretty sure the students are capable of continuing their learning, you know, being that all students are issued a

> laptop or iPad, but for classes like agriculture or music, or those who really require specific tools, it would benefit the kids if they had their own resources.

Participant T2 stated,

> CTE is very hands on. So it's difficult to teach CTE distance wise because I can always show them a video but that's as far as that goes. Sometimes students, they do get frustrated when they draw because there's no one there to really like, guide them.

Participant T5 shared,

> I'm able to upload video links with the program. I'm able to upload all the worksheets and everything with the program. I'm able to record videos, tutorials classes. The most important thing is the actual student to student engagement, student to equipment engagement. Not allowing us to be in the workshop or lab doesn't give the right learning experience.

**Evidence of Quality**

I applied several procedures to provide evidence of quality for my study. Each qualitative interview data was recorded via Zoom with captions turned on and the with my research journal where I kept special notes of the interviews. Using the transcription feature of Zoom, I transcribed each interview. I constantly referred back to the recording of the interview to ensure that the transcription was accurate. Member checking was conducted with each participant to ensure accurate representation of their interview response. During the coding phase, I often reference the coding list which included codes

that protects the identity of the participants and a priori codes to ensure consistency of codes across interviews.

**Outcomes**

Data were collected to answer two research questions. Table 5 shows the alignment between the emergent themes and each of the study's research questions.

**Table 5**

*Alignment of Themes and Research Question*

| Research question | Emergent theme |
|---|---|
| RQ1: What are the perceived concerns of secondary CTE teachers regarding their participation in the eTeacher certification process to teach online CTE courses in the Western Pacific region? | Student-to-student/student-to-teacher engagement<br><br>Motivational factors<br><br>Accessibility and parental involvement |
| RQ2: What are the perceived supports needed to encourage secondary CTE teachers to participate in the eTeacher certification process to teach online CTE courses in the Western Pacific region? | 21st century knowledge/skills<br><br>Quality/relevant PD |

Since all participants have had experience with online learning by the shutdown of schools in the district due to the COVID-19 pandemic, they all had background knowledge in teaching online. Their online teaching experience determined the interest level to go through the certification process and teach online. The key findings related to RQ1 are the lack of student to student and student to teacher engagement and the lack of quality PD on how to plan, structure, and utilize media effectively and efficiently in an online classroom setting. Teachers noticed a lack of motivation in the students which lead to multiple issues such as attendance, time management, and an increase on number of

students failing and in need of summer school. Teachers expressed the need for quality PD regarding the best teaching practices and methods for teaching distance education. The teachers indicated that they received adequate PD and training on how to operate and utilize Blackboard Ultra, the chosen learning management system in the school district. According to Powell and Bodur (2019), to promote efficacy of online learning, standards should be created that incorporate tenets of effective PD and address unique environment characteristics. Although each participant recognized that online learning is a part of learning in the 21st century, only two out of the four participants that are certified to teach distance education in the district actually participated in the program.

The key finding for RQ2 was for the district to offer monetary compensation or opportunities for higher pay. According to Goulimaris (2015), motivation exits as long as an individual tries to satisfy his/her needs and stops as soon as the needs are satisfied. Most of the participants expressed the need of compensation as a motivating factor considering the number of hours they will have to put into getting certified which is perceived as time away from families, friends and other daily activities. The teachers who have not participated in the certification process shared little interest in becoming certified mostly due to them not believing that online learning complements their classes which requires a lot of hands on activities. The teachers expressed their frustration, while trying to teach online, that they are not able to be present and guide their students in developing their skills with regards to the lessons of their respective courses. Having a face-to-face interaction with their students is an important and motivating factor in comparison to a teacher to student relation through a screen.

An interesting finding from the study was how all participants agreed to the idea of an online learning platform available as an extension of their classes. Although all schools in the district are back to face to face instruction, all participants still utilize blackboard ultra to upload class information/bulletins, assignments, homework and special projects. Being that blackboard ultra is a district approved online platform, teachers also use it to make special announcements to their students regarding courses as well as their respective school. All participants shared its convenience not only in saving time and resources, but the benefits for students as well as for those who happens to be absent for a period of time.

**Project**

The findings of this study revealed a need for PD. The training would focus on distance education for the 21st century, navigational skills through blackboard ultra, instructional strategies in an online learning platform, training on multimedia skills, and implementation of multimedia in lessons for distance education. The training would also provide needed information on the eTeacher certification process and the distance education program offered in the district. Although CTE consist of different courses such as agriculture, music, and computer applications, the PD would provide the CTE teachers with skills needed to conduct their lessons and facilitate learning online effectively.

## Conclusion

The problem of this study was that although online teacher certification is available for teachers in the Western Pacific region, CTE teachers have not been choosing to be certified to teach online. The purpose of this interview study was to

explore the perceived concerns of CTE teachers and the perceived support needed to increase participation in the eTeacher certification process to teach online CTE courses in the Western Pacific region. The research questions were generated to explore the issues that influence CTE teacher participation in the eTeacher certification process. Ten secondary CTE teachers from the Western Pacific Region Public School District were interviewed. After conducting the interviews, the transcripts were generated and organized into the a priori codes that have been created and defined. Categories were then generated that lead to identifying the emergent themes during the axial coding phase of the data analysis process. This study was guided by the concerns-based adoption model or CBAM (Hall, 1979).

The findings of this research indicated the need of a PD for CTE teachers in the Western Pacific region. CTE teachers in the Western Pacific region felt there was a lack of training on how to effectively teach their courses in an online learning environment and were unaware of the eTeacher certification process. They also shared that monetary compensation would be a factor for them participating in eTeacher certification process and teach in the distance education program in the district but are not aware of the district's compensation plan of a distance education teacher. In exploring RQ1, it can be concluded that CTE teachers have varying instructional strategies for teaching online and based on their previous experience teaching online due to the COVID 19 pandemic, most struggled which impacted their opinions of distance education. Additionally, the results showed that most CTE teachers were unaware of the district's monetary compensation for online teachers which is huge motivating factor. In exploring RQ2, it can be

concluded that PD is needed for CTE teachers in order to effectively teach their courses in an online learning platform and offer students a 21st century educational experience. In Section 3, I explained in detail the project developed as a result of these findings in order to provide the needed support to CTE teachers and include a review of literature related to the project.

# Section 3: The Project

In this basic qualitative study, I collected and analyzed data to address the problem that although online teacher certification is available for teachers in the Western Pacific region, CTE teachers have not been choosing to be certified to teach online. The findings showed that participants acknowledged the importance of online learning as part of the educational experience of the 21st century and most, if not all, teachers in the Western Pacific Region public school system are experienced with online learning due to the closing of schools because of the COVID-19 pandemic.

The data revealed that although most teachers, including those who have gone through the eTeacher certification process, are reluctant to participate in the distance education program based on their experiences teaching online during the pandemic. According to Sari and Nayir (2020), teachers might not be ready for the distance education process due to a lack of preparation and/or support. Data from this study indicated that there is a need for support through PD to improve the qualities of teaching strategies, student engagement with peers and teachers, and classroom management for distance education. Data from this study also indicated that a PD will provide opportunities to address perceived concerns of the CTE teachers.

## Rationale

The findings of this study indicated the need for PD to better inform CTE teachers about the eTeacher certification process and teaching in an online environment. The data showed that although the participants have received some training and gained experience teaching their content online due to the COVID-19 pandemic, they shared concerns

regarding the lack of PD on how to be an effective teacher online. Participants, especially those who had not participated in the eTeacher certification process, shared their lack of knowledge pertaining to the eTeacher certification process and the distance education program conducted by the Western Pacific Region public school district.

Based on the themes that emerged from the data, there is a need for PD for CTE teachers to participate in the eTeacher certification process and teach in the distance education program. I chose PD as the genre for the project because it was evident that although the participants had teaching experience online, they lacked training on how to teach effectively in an online environment, knowledge on the eTeacher certification process, and awareness of the different compensation rates for teachers in the distance education program for the district. The PD, as proposed, will continue annually every summer for teachers to advance their knowledge, skills, and attitudes to continue meeting the demands of 21st century learners (see Nooruddin & Bhamani, 2019).

## Review of the Literature

I conducted a literature review focused on the research in PD, specifically for secondary CTE teachers. PD was chosen as the genre for the project because it was evident that the participants felt that although they had experience teaching online due to the COVID-19 pandemic, they still lacked training to improve the qualities of teaching strategies, student engagement with peers and teachers, and classroom management for distance education. The concerns from the participants justified the need for a PD focusing on teaching strategies for CTE. The literature review is organized around the following topics: understanding the difference between teaching online and face-to-face,

impact of online learning for teachers and students, importance of continuous PD on distance education and applications, and online learning resources for CTE.

I searched the research databases accessible through the Walden University Library, such as ERIC and Sage, and the Google Scholar search engine to locate relevant, up-to-date, and peer-reviewed articles. I narrowed my search to locate articles published between 2019 and 2022. The keyword search terms and phrases used were *teaching online versus face-to-face, online learning technology for CTE teachers, online resources for CTE, importance of PD for CTE,* and *teaching strategies for online learning*. When I searched for the terms above, the databases produced a sufficient amount of information for the literature review.

**Online Versus Face-to-Face Instruction**

One of the major themes that emerged from the data analysis in the current study was the need for quality PD. While the participants acknowledged the importance of online learning for 21st century knowledge and skills for students, they lack the knowledge and training on how to effectively plan and structure instruction in an online setting. According to Sari and Nayir (2020), the advancement of technology has enabled existing knowledge and information sharing platforms to be processed as dematerialization, such as the transformation of printed books into eBooks, newspapers and magazines into websites, and the traditional classrooms into e-learning. The middle of the 1990s witnessed the slow advent of internet-based education and early applications of online distance learning (Ebner & Gegenfurtner, 2019). Before offering a distance education course, the instructor must access additional resources of the faculty, such as

instructional design and technological services (Sari & Nayir, 2020). According to Wang et. al. (2019), 65.5% of higher education institutions in the United States offered online courses and the online enrollment has been growing by 2010. Despite the explosive growth of online learning in higher education, it has also raised some pressing concerns regarding low student engagement and high dropout rates in online courses and programs (Wang et. al., 2019). As pedagogical recommendations for distance education can be different than for traditional classroom instruction, enough time to learn both the technology and pedagogical techniques are recommended to improve the classroom experience for both students and teachers (Sari & Nayir, 2020).

There has been a significant increase in the number of available e-learning resources and educational technologies, which have gained more importance in higher education and professional training contexts (Ebner & Gegenfurtner, 2019). According to Sari and Nayir (2020), the emergence of distance education applications dates back to about 300 years utilizing tools and methods, such as through mail, radio, television, open education, online education, virtual education, e-learning, and m-learning. Though various factors can account for the high attrition rates in online learning environments, motivation, as a salient component of learning in any educational environment, has drawn increased research attention (Wang et. al., 2019). Although distance education offers significant opportunities in terms of expanding education opportunities, especially in higher education, there have been failures due to the low quality resulting from the lack of investment in educational institutions and the adoption of traditional methods by teaching staff (Sari & Nayir, 2020). Concerns about not being present in the same

location at the same time eliminates the opportunities for immediate social interactions to occur among students and instructors in online learning, resulting in reports of negative experiences of feelings of isolation, frustration, anxiety, and confusion (Wang et. al., 2019). According to Sari and Nayir, if teachers in distance education only lecture and teach, this is not a guarantee of quality education but only part of the task.

The COVID-19 pandemic forced schools to move entirely from face-to-face to remote instruction, which created an unprecedented instructional environment for both instructors and students (Serhan, 2020). While these students are now defined as digital natives in terms of technology, those who develop educational policies, manage education, and prepare and explain course content cannot go beyond digital immigrants, no matter how much they update themselves (Sari & Nayir, 2020). The use of distance learning techniques such as video conferencing is not new and has been used for many years to communicate in real time (Serhan, 2020). When used for distance education however, concerns that teaching and learning using video conferencing is not of the same quality of the one experienced in a traditional classroom (Serhan, 2020). Before offering a distance education course, especially a synchronous video conferencing course, the instructor must access additional resources of the faculty, such as instructional design and technological services (Sari & Nayir, 2020).

**Online Learning Technology for CTE Teachers**

Online learning makes it possible for learners to take up a course without attending a physical educational institution, and the benefit of enrolling in a course from their home or any place they are comfortable enables the learner to get credible

certifications, thereby, improving their qualifications, which in turn, play an important role in career progression (Simamora, 2020). Challenges associated with online learning for students and teachers is the unwillingness of parents to support their children in distance learning, the lack of access to technology and the internet, and economic hardship (Duraku & Hoxha, 2020). Technological advancements allow at-risk students many opportunities to receive a credit to graduate on time as well as giving them different venues for learning and assessing their learning (Simamora, 2020). According to Duraku and Hoxha (2020), the concerns of teachers engaged in the learning process were related to opportunities to conduct remote/online learning due to their level of knowledge and skills in the use of technology, access to technology, and isolation at home. According to Simamora (2020), the need for quality online instructors is especially important in colleges of education.

Online learning programs differ from traditional education in a number of significant ways, one of which is the ranks of students served. For teachers, online classes allow a new method of teaching with access to the advanced tools and technology involved in it and can reach too many students (Naik et al., 2021). Online learning programs can serve student of all ages, levels or ability, and learning backgrounds and have become popular due to their perceived potential to supply more flexible access to content and instruction by (a) increasing the supply of learning experiences for those that cannot or choose to not attend traditional schools, (b) assembling and disseminating instructional content more efficiently, and (c) increasing student-instructor ratios while achieving learning outcomes adequate to those of traditional classroom instruction

(Simamora, 2020). There may be many advantages and disadvantages of online classes for both faculties and students. However, according to Naik et al. (2021), the major limitations of online learning are the lack of online teaching experience consumes more of teachers' time and practice, the technological difficulties of both teachers and students with high-speed internet access, and students getting used to learning and being evaluated online.

According to Guatam and Guatam (2021), online learning is transferring an academic institute into a home institute in which a virtual environment of interaction, simulation, and collaboration enables teachers and students to create a world that encompasses anything they can dream up. What might be easily perceived and approached in the classroom requires a little more probing and alertness in an online class (Nambiar, 2020). The richness of technology and institutional capabilities influence the effectiveness of online teaching-learning practices (Guatam & Guatam, 2021). Investigating and analyzing how online classes should be designed and arranged by taking into consideration the perspectives of students and teachers should be an integral part of building online teaching and learning methodologies (Nambiar, 2020). According to Duraku and Hoxha (2020), who intended to identify the factors influencing the ability of educational systems to integrate technology in teaching, it is suggested that to achieve positive results in the integration of teaching technology, it is necessary to understand the types of interchanges between teachers, students, and technology.

**Continuous PD for Online Learning**

The COVID-19 pandemic caused the shutdown of schools and colleges, affecting 1.5 billion children and youth across 188 countries as well as affecting the teaching-learning process (Guatam & Guatam, 2021). Teaching and learning activities that are usually carried out with face-to-face meetings have turned into virtual meetings in various online learning applications (Simamora, 2020). In the 21st century, knowledge itself is growing ever more specialized and extending exponentially (Karatas & Arpaci, 2021). With online classes becoming increasingly popular, teaching–learning strategies must be carefully constructed to provide students with a quality learning experience and compensate for the distance associated with space and time (Tanis, 2020). According to Srinivasacharlu (2019), it will be a grave mistake for educators to ignore these developments and their impact on teaching. School systems must find ways to meet the growing demand for teachers to remain relevant and competent (Figland et. al., 2019). Thus, to prepare efficient future teachers in the 21st century, the teacher educators are required to continually update and equip themselves with ever-increasing skills and competencies to always remain topnotch in their profession and do justice to society, and this can only be possible if they can take up continuing PD (Srinivasacharlu, 2019). Often, teacher in-service training is conducted through PD workshops that are designed to promote and enhance teacher knowledge, provide training in key areas, and increase teaching effectiveness (Figland et. al., 2019).

Continuing professional development (CPD) refers to the process of tracking and documenting the skills, knowledge, and experience that teachers gain both formally and

informally as they work, beyond any initial training (Srinivasacharlu, 2019). According to Figland et. al. (2019), the PD needs of teachers change over time, and this has often created difficulties in identifying which types of training and PD should be offered. According to Srinivasacharlu (2019), teacher educators can attend workshops that provide reliable/practical dimensions to the discussion on the various aspects of a particular topic and problems by the group of participants.

It is not surprising that PD needs of teachers change over time, especially in CTE. CTE teachers play a vital role in the nations' educational systems, so it remains important that these teachers are meeting CTE standards. Specifically, agricultural educators provide students with foundational knowledge in a wide variety of areas within the agricultural industry (Figland et. al., 2019). They adopt a practical approach to formulating solutions for multiple issues (Srinivasacharlu, 2019). Agriculture teachers are expected to implement a total agricultural education program that includes Supervised Agricultural Experience programs and leadership opportunities through a local FFA chapter in addition to delivering content in the classroom and laboratory (Figland et. al., 2019). According to Srinivasacharlu (2019), there many programs and PD opportunities available for CTE teachers to improve their digital literacy and skill.

It is especially important that colleges of education provide pre- and in-service teachers with skilled online instructors so that they can experience the benefit of quality online instruction firsthand as students (Borup & Evmenova, 2019). Teacher educators can attend workshops, symposium, brainstorming sessions, public lectures, and training programmers; seek out a resource person; and participate in funded projects

(Srinivasacharlu, 2019). According to Borup and Evmeonova (2019), teaching online requires different competencies, and skilled face-to-face teachers do not necessarily make quality online teachers. These challenges are also exacerbated when access to quality PD is impacted by time, financial, and geographic constraints experienced by teachers (Powell & Bodur, 2019). Unfortunately, teacher preparation programs in colleges of education have been slow to respond to this growing need, and few pre service teachers take coursework that helps them gain the skills required to teach online (Borup & Evmenova, 2019).

**Online Learning Resources for CTE**

The worldwide COVID-19 pandemic forced schools to close their doors, and as a result, the only experience that many pre- and in-service teachers have with online learning is as online students themselves (Borup & Evmenova, 2019). The pandemic made it difficult for school faculty – especially those who are not trained in technology-mediated teaching – to maintain educational continuity (Oranburg, 2020). There is urgent general need for principled changes in education elicited by current e-learning tools, services, and information technology (IT) communication. According to Kiv et. al. (2019), cloud technologies contribute to all aspects of educational technologies; cloud-based learning tools, platforms, paradigms, and models; functioning programs, or papers relevant to modern engineering and technological decisions in the IT age. To teach online, individuals will need at least four things: a computer, a microphone, a webcam, and some software (Oranburg, 2020). Digital transformation is considered a strategic vision for how educational organizations evolve from a traditional model; for example,

traditional classroom learning must evolve from student and teacher engagement in the physical world to the new digitally enabled and data paradigm (Ovcharuk et al., 2022). The main role in the process of acquiring digital skills is played by teachers, who must not only be able to use IT to implement the learning process, but also be able to create a digital learning environment for students (Ovcharuk et al., 2022).

According to Ovcharuk et al. (2022), of the main challenges facing education today is the lack of awareness of teachers about digital tools for distance learning in modern conditions. The key components teachers reported looking for in online resources included a wide array of factors, with several being mentioned most frequently, including ease of use, adaptability, ability to interest or engage the students, and degree it related to the content they were already using (White et al., 2020). In addition, in today's digital society, the education system faces a limited number of available teaching materials and guidelines on how to use IT to teach their subjects; there is a problem of insufficient training of teachers to use digital tools in professional activities (Ovcharuk et al., 2022). Other factors they listed included completeness, relevance to standards, current local facts and connections, inclusion of labs or activities, and visuals. According to Oranburg (2020), achieving best practices in online education is time consuming and resource intensive. It takes hundreds of hours to properly design and implement an online course. Remote instruction in P–12 education today might occur when schools must close due to weather or other conditions (Hash, 2020). According to Kiv et al. (2019), there are numerous cloud topics since 2018 such as; mobile and blended learning, cloud based e-learning platforms, tools and services, cloud technologies of open education, cloud based

and mobile learning technologies for teacher, vocational education and training, and many more. For some students, remote learning might simply involve receiving a packet of instructions and materials from their school that they complete and return independently (Hash, 2020). Online information resources are those which can be accessible through World Wide Web such as e-journals, eBooks, e-databases, and online search engines; however, it comes under the broader term of electronic resources (Lavanya & Santharooban, 2018). But classes could also be synchronous, meaning that they happen over a videoconferencing platform in real time, or asynchronous, which involves guided independent study around specific assignments and due dates (Hash, 2020). According to Petrozitskaya et al. (2021) new information and communication technologies and methods used for distance learning, combined with theory and practice, become a new quality knowledge environment. The internet facilitates these and other processes such as recording and file sharing, all of which might sustain students' interest more than traditional instruction (Hash, 2020). For example, distance learning is understood as pedagogical activity in which interaction between the teacher and student's takes place, as well as interactive information resources reflecting all components of the educational process (Petrozitskaya et al., 2021). Online information resources are invaluable research tools that complement the print-based resources and are becoming more and more important for the academic community, nowadays (Lavanya & Santharooban, 2018).

## Project Description

The PD plan is designed to cover three full days of training. Each day will be for eight hours. CTE teachers and the CTE program coordinator should be present. The 3-day PD will take place during the first week of the school year which is when teachers report back to work and students are still on summer break. It is during this week when PDs are offered to teachers and would provide the intended audience with enough time to prepare for the upcoming academic year. I will be responsible for hosting monthly follow-up meetings with the CTE teachers in my school to check on their progress and provide feedback to the teachers from classroom observations. I will set up a pre- and post conference where the teacher will provide a lesson plan outlining the lesson activities. I will observe; teachers utilizing blackboard ultra and its features, such as: collaborate in their online classroom, teachers incorporating digital tools into the lessons to promote collaboration and engagement amongst students, and teachers designed and created lessons that incorporate different teaching strategies to encourage critical thinking and collaboration.

Based on the results of the study, CTE teachers expressed the need for PD to improve the qualities of teaching strategies, student engagement with peers and teacher(s), and classroom management for distance education. After the observation, I will use the rubric used during the observation to provide feedback to the teacher when they meet again during the post-conference (see Appendix K). I will share their constructive feedback and what areas went well as well as areas for improvement. After the 3-day PD, the teachers will receive a certificate to acknowledge their attendance. The

total hours of the teacher's participation in the PD, which will be indicated in their certificate, will count towards the teachers' certification and license, as is usual when attending any PD. The Western Pacific Region Public School System requires teachers to renew certification and teaching license in which PD hours is one of the main requirements.

**Needed Resources, Supports, and Potential Barriers**

For the 3-day PD, there are no resources needed other than what is already available for such a training. The setting for the PD will take place in the cafeteria of my school which has space for teachers to move around and collaborate as well as a mounted projector, screen, and sound system for the presentation. Another necessary resource would be access to the internet and charging stations for teacher laptops which is also available at my school cafeteria. Other resources needed would be sticky notes, butcher paper and markers. Administrative support would include assistance from the CTE and distance education program coordinators. These individuals would provide support to teachers relating to CTE priority standards and moral support.

The two foreseen barriers to this 3-day PD would relate to it taking place over the summer when teachers are on summer break. The teachers are not obligated to participate in any PD over the summer and may do so if they wish to earn PD hours. A possible mitigation would be to plan the 3-day PD during the first week of staff reporting back to work before the new school year. During this time, administrators are mandated to provide PD opportunities for teachers. The second barrier for having the PD over the summer would be to provide pay differential for the teachers. The teachers understand if

they participate in a PD of any break, weekend, or holiday, a pay differential is to be expected. To mitigate this issue again would be to offer the 3-day PD during the first week of work before the start of the new school year.

**Proposal for Implementation**

The proposal for implementation of the 3-day PD will require a meeting with certain educational leaders. A meeting with the CTE program coordinator and distance education program coordinator is necessary to gain their support which may inform and encourage the participation of the teachers. The PD will be held on the first week of work when teachers return from summer break. These are days when students are not reporting to school and administrators are mandated to provide PD to their staff.

**Project Timetable**

Day 1 of the PD will be titled "Distance Education: Introduction and Opportunities". At the beginning of the PD, the teachers will be seated in groups of five. They will share their knowledge and opinions on the distance education as well as their experiences. Working in small groups will allow teachers to share openly as to how they meet their goals and priority standards through distance learning. The teachers will receive a formal introduction to distance education and its development over the decades. The introduction will allow teachers to recognize the improvements of distance education and its potential for further development. The teachers will also recognize the importance of distance education pertaining to opportunities for both teachers and students. Based on the findings of the study, the teachers will then receive clarifying information on the certification process to become a distance education teacher in the Western Pacific

Region and the compensation plan for its' teachers. At the present date, the compensation for a distance education teacher depends on the amount of students registered for their course. According to the distance education program coordinator, the distance education teacher will get paid $250.00 per student and will teach a course in a span of 12 weeks. The teachers will also receive training on navigation skills and usage of online platforms such as Nearpod and eDynamics. Nearpod is an online learning platform that provides interactive lessons, videos, and gamified learning activities. The online platform eDynamics offers over 200 CTE curriculums from grades 6 through 12.

Day 2 will build from Day 1. Day 2 will be titled "Classroom Management and Teaching Strategies for Distance Education". In the beginning of Day 2, the teachers will participate in the two corner activity where a statement pertaining to distance education will be shared and the teacher will proceed to a corner designated for an agreed and disagreed response. A sample question would be "Teaching online is much better that than in a traditional classroom". This activity will lead into the introduction of classroom management and teaching strategies for distance education. The key words for this part of the presentation will be engagement and interaction. The teachers will have time to practice using features from BBU such as collaborate which is a live classroom and features such as small group rooms in order to divide students online into small groups for discussions. The teachers will also learn how to facilitate the learning by controlling the time span of the break into small group rooms and how to monitor and encourage student participation. Teachers will have time to utilize the online platform, Nearpod and eDynamics, with blackboard ultra. The teachers will have time to discuss in small groups

their experience with what they have learned and how it may impact their teaching online. Teachers will also receive a sample of a structured online learning lesson in a CTE course that is managed for student engagement and success.

The final day will be an add-on from Day 2. Day 3 will be titled “Linking It All Together”. This day will allow teachers to collaborate and lesson plan together. Teachers will practice using blackboard ultra not only as an online classroom site but a link to different online platforms such as Nearpod and eDynamics. Once the teachers are done lesson planning, they will create a mini presentation to share with the audience about their lesson ideas. At the end of Day 3, teachers will complete an evaluation form (see Appendix L) regarding the effectiveness of the 3-day PD.

**Roles and Responsibilities**

As the researcher, it is my responsibility to meet with the CTE and distance education program coordinators to discuss the importance and need of the PD for the CTE teachers and other administrators in my school. With the deliberations, an effective plan may be put in place to meet the needs of the teachers. As the researcher, it will also be a responsibility to provide all necessary materials, documentation, and evaluation for each of the 3-day of PD. As the researcher, I will be the presenter of the 3-day PD, the program coordinators will serve as facilitators. The program coordinators will also be responsible to identify priority standards and goals. As the researcher and administrator of my school, I will be responsible for monitoring teacher progress by conducting classroom observations and hosting pre- and post conferences to provide feedback. I will also be responsible for being aware of what the teachers are learning and promoting

collaboration between different CTE content teachers. The teachers have the most critical role as active participants in the 3-day PD. The teachers will be responsible to make the best of their learning experiences and collaborate with other participants in the development of lessons for their respective course.

## Project Evaluation

There are two types of evaluation which are formative and summative evaluations. Formative evaluations occur during the operation of a program or activity. The purpose is to provide those responsible for the program with ongoing information about whether instruction is meeting the needs of the students and whether adjustments are needed (Guskey, 1999). Summative evaluation is conducted at the completion of a program or activity and is to provide program developers and decision makers with information the overall effectiveness of the program (Guskey, 1999). For this 3-day PD, I will use both formative and summative evaluations.

A daily formative evaluation will be conducted based on observation of teacher's collaboration, engagement, and response. The daily summative evaluations will occur at the end of each day of PD will allow the facilitator an idea of the effectiveness of the PD as well as areas in need of improvement. The summative evaluation will be conducted in the end of each session (See Appendix L). The teachers will be provided with a link that will direct them to the evaluation form online and will be asked to complete it before leaving. The summative evaluation form will consist of rating scales that ask teacher to evaluate the content, process, and context of the PD.

The summative evaluation will have statements for teachers to select as their rating from strongly agree to strongly disagree. Since the summative evaluation will be done through a Google form, the facilitator will be able to view the responses from the teachers and create visual representations and percentages to see how teachers rated each component of the PD. The overall goal of the project is to:Increase CTE teacher's knowledge on the development of distance education and how it is conducted in the Western Pacific Region.

- Provide CTE teachers information of the eTeacher certification process and the compensation plan for distance education teachers in the district.
- Provide CTE teachers with information on the opportunities for students and teachers with distance education.
- Increase CTE teacher's usage and navigating skills with educational platforms such as Nearpod and eDynamics.
- Provide CTE teachers with classroom management strategies for online learning.
- Provide CTE teachers with online teaching strategies.
- Explore different ways on how to incorporate different online educational platforms in their online lessons.
- Provide CTE teachers with samples of well structured lessons for online CTE courses.
- Increase CTE teacher's technological skills in linking different online learning applications with Blackboard Ultra.

- Provide CTE teachers with the opportunity to collaborate in designing lessons for their course in an online environment.
- Allow participants opportunities to share their ideas, opinions and experience with distance education and what they have learned for the PD.

The effectiveness of the PD will be demonstrated by the teacher's responses and ratings in the evaluation. The intention of the 3-day PD is to encourage CTE teachers in the district to participate in the eTeacher certification process and teach their respective courses in the distance education program by improving their teaching skills as an online teacher. The PD intends to improve on the CTE teachers' instructional delivery, engage students and encourage collaboration, and increase teachers confidence and comfort level as an online learning facilitator. The continuous process of formative and the summative evaluation will provide sound, useful, and sufficiently reliable information that can be used to make thoughtful and responsible decisions about the PD processes and efforts (Gusky, 1999).

The primary stakeholders are students, teachers, administrators of my school, and program coordinators. It is critical that to involve all stakeholders in the decision making process regarding the educational process and opportunities for students. The Western Pacific Region Public School District is able to communicate with all stakeholders via email, social media, school and district websites, newsletters, and automated notifications.

## Project Implications

The COVID-19 pandemic forced the closing of schools in the district which mandated all teachers to facilitate their courses remotely with minimal trainings and knowledge. For most CTE teachers, the experience was not favorable and caused resentment towards distance education. Other than the CTE teacher's lack of knowledge on the eTeacher certification process and distance education program, the experience influenced most CTE teachers in the district opinions and participation. The 3-day PD has the potential to change the views of CTE teachers in the district with participating in the eTeacher certification process and teaching in the distance education program. Although the distance education program offers CTE courses, it has been limited on number of options to choose from. With more offerings of CTE courses in the distance education program, students may avail in opportunities to earn needed credits for graduation, advance their credit earnings, and explore the field of career of their interest begin a path towards career readiness.

When thinking about the big picture, having more CTE teachers certified and teaching in the distance education program, will lead to more recruitment of students in CTE courses online which may provide the skilled workforce needed in the community. The 3-day PD evaluation plan will provide essential information of teachers' experience and learning as well as areas of improvement. It will be a step forward in the right direction in the influence of CTE teachers being distance education teachers in the district.

# Section 4: Reflections and Conclusions

The purpose of this basic qualitative study was to explore CTE teachers' perceived concerns of and the perceived supports needed to increase participation in the eTeacher certification process to teach online CTE courses in the Western Pacific region. From data analysis, I discovered that although most, if not all, CTE teachers in the district were experienced in teaching online but most have not sought eTeacher certification. For this reason, I designed a 3-day PD training to provide the motivation and support for CTE teachers in the district to seek eTeacher certification. In this final section of the study, I reflect on the project strengths and limitations, provide recommendations for alternative approaches, and describe my scholarship and personal growth. Lastly, I discuss the importance of the work, its implications and applications, and possible directions for future research.

## Project Strengths and Limitations

The project's strengths focus on how the 3-day PD enriches the CTE teachers' knowledge and skills in structuring and managing an online course in their respective field. The PD also allows CTE teachers to reflect on ways that the PD can help them move their content forward and receive valuable feedback from their colleagues and administrators. The limitations of the project are concentrated on possible reasons for low teacher participation due to timeframe constraints, resistance from teachers, and lack of funding. Although there may be limitations to the project, opportunities to mitigate low teacher participation can be pursued.

**Strengths**

A primary strength of this 3-day PD is affording teachers the opportunity to receive knowledge and clarification concerning the eTeacher certification process and distance education program in the district. Based on the data analysis, I learned that the majority of CTE teachers are unaware of the eTeacher certification process and how the distance education program is conducted by the study site school district. Although monetary compensation was identified as a motivational factor for CTE teachers, they were not aware that the eTeacher certification process is free of cost and the distance education program pays extra compensation to online teachers. According to Kalinowski et al. (2019), the effectiveness of teacher PD can be measured via the following levels: teachers' acceptance of and satisfaction with the PD intervention, teacher learning (i.e., changes in knowledge, motivation, beliefs, etc.), teachers' classroom practice, and student learning. The 3-day PD will also provide CTE teachers the opportunity to participate in collaborative activities to enhance their skills and knowledge as an online teacher. The teachers will also be given the chance to learn and generate structured lessons for online learning that are meaningful and promote engagement and interaction amongst students and teachers.

Another strength of this project is the self-reflection and feedback aspects included in the PD. As part of the project to improve CTE teachers' perceptions and skills with teaching online, administrators will hold pre and post conferences and conduct classroom observations. Self-reflection is an essential part of the learning process, and it encourages teachers to make necessary changes in their teaching practices (Ferreira et al.,

2020). The observation will allow teachers to self-reflect on their online teaching practices and make improvements based on constructive feedback from the administrators. The 3-day PD will give CTE teachers insights to online teaching strategies that have been approved through research and give them opportunities to reflect, identify their needs, and make necessary changes.

**Limitations**

I identified three limitations to this project. The first limitation is the time frame in which the 3-day PD will take place. The intended timeframe for this 3-day PD is during the first week of the school year. At this time, teachers will report back to work and are obligated to participate in PDs or workshops. Teachers may resist taking part of the PD during their summer break.

The second limitation to this project may be the teachers' resistance towards distance education. According to Hall et. al. (1974), the CBAM is a theoretical model for facilitating change that helps leaders and researchers understand, lead, and monitor the complex process of change in education. The participants expressed their dissatisfaction with distance education during the COVID-19 pandemic, which caused the shutdown of all schools and mandated distance education. Their experience with teaching remotely during the pandemic had a negative impact on their perception of teaching online and may cause them to resist participation in the 3-day PD.

The third limitation of this project is funding. The intended timeframe for this project is during the first week of the school year. At that time, teachers will report back to work and are obligated to participate in PD. If the PD was held during summer,

teachers would not be obligated to attend, and therefore, their participation would mandate compensation. The Western Pacific region school district pays teachers a differential whenever they attend workshops or PD during the weekends and breaks. A lack of compensation for attendance might limit the number of teachers attending the 3-day PD.

## Recommendations for Alternative Approaches

One of the major themes that emerged from the data collection was the need for quality and relevant PD. Because CTE teachers felt the need for online learning training, I proposed a 3-day PD to assist and improve their online teaching skills. One recommendation would be to include teachers from content areas other than CTE in the PD, especially teachers interested in teaching in the distance program. Administrators could create workshops each semester, and content-specific teachers could collaborate and create innovative and impactful lessons for online learning in their content area. One way to accomplish this would be to use the time when teachers report back to work from summer break. Teachers in the study site district typically report to work 1 week before the start of the new school year. In this time, administrators are expected to provide PD for teachers and staff. Delivering the PD training on distance education during this time would allow teachers the opportunity to collaborate and share ideas and instructional strategies to implement in their courses, which could result in teachers planning and aligning their instruction and assessments with one another. The other segment of the PD could be delivered a week before the school year ends. When the school year is over, teachers typically continue with work for a week before their summer break begins. At

this time, teachers could be required to attend the PD, discuss which strategies worked and which did not, and plan purposefully for the next school year.

## Scholarship, Project Development and Evaluation, and Leadership and Change

Completing the journey of this project study and planning the 3-day PD has been a challenging educational experience. It was an awakening experience as a novice researcher, which, in turn, made me have more respect for other researchers who have successfully gone through the process. The required courses that I completed were essential for this project study. Through the development of the project, I learned the details and difficulties of conducting a basic qualitative study, which allowed me to understand the problem through the eyes of the participants, causing me to be objective and set aside biases.

The experience of collecting data helped me to discover information about CTE teachers' perceptions of the eTeacher certification process and distance education in the district. Although data collection was the most challenging task of the study, it was the most exciting as well. I had the opportunity to listen to CTE teachers share their experiences as a distance education teacher and describe to what extent they are informed about the eTeacher certification process. The transcribing and coding process was where I felt my qualitative research training was crucial because I had to ensure that I retold the participants' experiences accurately. Although the coding process was time consuming, it allowed me to understand the problem deeply. I was also able to ensure that the information provided was credible through member checking. After receiving feedback from the participants, I revisited the data to ensure that I reached saturation. There I

began to connect ideas and information, and the themes emerged from the data, making it possible to plan for a more manageable project.

Planning for the project was another challenging experience for me. Customarily, administrators and leaders decide what PD should be presented to teachers and mandate teachers to attend. During these trainings, teachers are given support by allowing them to collaborate to plan and create meaningful and impactful lessons. The 3-day PD was developed for the very reason of granting teachers the opportunity to work together and share ideas to become better online professionals.

As a scholar and practitioner, I found this experience fulfilling because it allowed me to understand the importance of research and how problems should always be solved through data rather than opinions. Through the data collection process, I put this project together to help CTE teachers become agents of change by having the ability to make an impact to the district's distance education program. The development of the project has also shown me constructive ways to plan and deliver PD.

## Reflection on Importance of the Work

The problem under study was that although online teacher certification is available for teachers in the Western Pacific region, CTE teachers were choosing not to be certified to teach online. Through participant interviews, I was able to gather important information about the problem. The participants shared how they were all experienced teaching online due to the COVID-19 pandemic, and the training they received taught basic navigation skills for the district-approved LMS of BBU. Most of

the teachers shared their frustrations regarding teaching online and their preference for a traditional classroom setting.

Although the experience was challenging, valuable lessons were learned from completing this project study. First, I learned how to design and conduct a qualitative study and plan a 3-day PD. I conducted interviews with 10 participants, allowing them to share their experiences with distance education and the eTeacher certification process. I also learned to listen to the participants and set aside my personal feelings in the matter. Additionally, I learned to code information and set aside responses that needed more analysis. Finally, I learned to categorize the codes into emergent themes.

Providing training for teachers to improve their navigation and teaching skills for distance learning is essential. Numerous educational scholars have focused on and will continue to focus on the improvement of distance education teaching practices and skills. According to Yang (2020), teachers who had received relevant training reported that the training improved their skills in various areas, particularly the application of live streaming technologies and available platforms, multimedia slide show techniques, information search and resource integration skills, online teaching strategies and methods, and lecture recording and production techniques.

Another primary objective of mine is to provide online learning support and training to offer more opportunities for students in the school district. It is one of the reasons why I chose to conduct a 3-day PD. I would also like to assist with the other content areas (e.g., science, social studies, and English language arts) and create similar PD to increase the skills and practices of online teachers in content areas other than CTE.

With PD, teachers can enhance their lessons and motivate students to become active and engaged learners.

My goal in promoting positive social change in the local school district was to achieve the potential for greater access to online courses by students, thereby causing them to be better prepared for the 21st century workforce. Additionally, I would like to continue promoting and encouraging teachers to improve their distance learning practices and participate in the eTeacher certification process. Furthermore, if schools were to close again regardless of the situation, the teachers will be better equipped to provide quality learning experiences online for their students and prevent any loss of instructional time. The project will also allow teachers to explore and work collaboratively to design and create meaningful and impactful lessons.

## Implications, Applications, and Directions for Future Research

In this basic qualitative study, I explored the perceived concerns of CTE teachers regarding the eTeacher certification process and the perceived support needed to increase participation in the eTeacher certification process to teach online CTE courses in the Western Pacific region. The themes that emerged from data analysis concerned CTE teachers' lack of knowledge of the eTeacher certification process and distance education program as well as the need for support through training and PD. Therefore, it was appropriate to plan and design a 3-day PD to assist the CTE teachers in gaining knowledge of the development and opportunities of distance education as well as improve their navigation and teaching skills for distance learning.

The purpose of the 3-day PD is to increase CTE teachers' knowledge of the eTeacher certification process and how the distance education program is conducted in the Western Pacific region public school system. I also intended the PD to increase the teachers' awareness of the value of and opportunities with distance education and allow for collaboration between teachers on developing meaningful and engaging lessons for online learning.

One recommendation for future practices would be to expand the PD to other schools in the district. The same PD framework dedicated to CTE teachers in the current study could be modified to meet the needs of teachers in other content areas. The improvement and participation of teachers providing distance learning opportunities for students could significantly impact students' learning outcomes across the school district.

## Conclusion

I designed this study to gather information to address the problem that although online teacher certification is available for teachers in the Western Pacific region, CTE teachers have not been choosing to be certified to teach online. The process of researching the problem and completing a project opened my eyes to many unknown issues at the local school district and with the eTeacher certification process. In the study, CTE teachers shared their experience and frustrations with distance education, and their responses showed that they hold negative perceptions of distance learning based on their experiences. To change those feelings, I designed a PD to provide them with information, knowledge, and skills they currently do not possess.

Although all the teachers recognized the importance of distance learning as a 21st century educational experience for the students, the participants lacked knowledge and training on how to structure and design their courses appropriately for an online learning environment. The project presented in Appendix A will give CTE teachers the chance to collaborate in planning lessons for their specific content area in CTE and utilize different tools to encourage engagement and interaction amongst students and teachers. This PD provides opportunities for CTE faculty to increase their skills and practices as distance education professionals. With more certified CTE teachers for distance education, more CTE courses can be accessible to all students in the district no matter the public school they are currently attending.

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# Appendix A: The Project

## Day 1: Distance Education: Introduction and Opportunities

**Learning Objectives of the Day:**

- Outline and summarize the development of distance education for the past decades and how it is being conducted in the Western Pacific Region,
- Discuss the eTeacher certification process and monetary compensation for distance education teacher in the Western Pacific Region,
- Evaluate and support the implementation of distance learning justified with the opportunities and impacts it has in education,
- Demonstrate navigation skills and usage of Nearpod and eDynamics applications.

**Timeline for the Day:**

- 8:00am – 8:30am -------- Breakfast and Sign In
- 8:30am – 9:00am -------- Welcoming Remarks CTE and Distance Education Coordinator
- 9:00am – 9:20am -------- Warm Up Activity: Group Discussion
- 9:20am – 10:00am ------ Lesson 1: Introduction to Distance Education
- 10:00am – 10:10am ----- BREAK
- 10:10am – 10:40am ----- Lesson 2: Opportunities with Distance Education
- 10:40am – 11:15am ----- Lesson 3: The eTeacher Certification Process
- 11:15am – 11:30am ----- Group Discussion
- 11:30am – 12:00pm ----- Whole Group Discussion
- 12:00pm – 1:00pm ------- Lunch
- 1:00am – 2:00am --------- Lesson 4: Distance Education in the District – Compensation, Timeframe, Policies.
- 2:00am – 2:24am --------- Lesson 5: Introduction and Demonstration of Nearpod
- 2:45pm - 3:00pm --------- PRACTICE: Navigate through Nearpod
- 3:00pm - 3:10pm --------- BREAK
- 3:10pm - 3:30pm --------- Lesson 6: Introduction and demonstration of eDynamics
- 3:30pm - 4:00pm --------- PRACTICE: Navigate through eDynamics
- 4:00pm - 4:30pm --------- WRAP UP! Complete Day 1 Evaluation and Sign out

## Day 2: Classroom Management and Teaching Strategies

**Learning Outcomes of the Day:**

- Plan and design the structure of an online learning environment/course,
- Identify and implement classroom management and teaching strategies that is appropriate for online learning,
- Provide and explain samples of structured lessons for difference online CTE courses such as music, art, and agriculture.

**Timeline of the day:**

- 8:00am - 8:30 am ------- Breakfast and Sign In
- 8:30am - 9:00am -------- Welcoming Remarks: Distance Education Program Coordinator
- 9:00am - 9:20am -------- Warm Up Activity: Recap of what was learned in Day 1
- 9:20am - 10:40am ------- Lesson 7: How do we Strengthen Online Learning?
- 10:40am - 11:00am ----- BREAK
- 11:00am - 11:30am ----- Group Discussion - Activity : 4 Corners Posters
- 11:30am - 12:00am ------ Whole Group Activity: Stay and Stray
- 12:00am - 1:00am -------- LUNCH
- 1:00pm - 2:00pm -------- Lesson 8: Different CTE online courses setup
- 2:00pm - 2:45pm ---------- An online Lesson in MUSIC
- 2:45pm - 3:00pm ---------- Explore different courses
- 3:00pm - 3:10pm ---------- BREAK
- 3:10pm - 3:30pm ---------- Group Discussion: How would you implement management in your online classroom
- 3:30pm - 4:00pm ---------- Whole Group: Share thoughts!
- 4:00pm - 4:30pm ---------- WRAP UP! Complete Day 2 Evaluation and Sign out

## Day 3: Linking It All Together

**Learning Outcomes of the Day:**

- Demonstrate how to link different online learning applications with Blackboard Ultra,
- Create and design lessons and multimedia presentations for their specific content and class.

**Timeline for the Day:**

- 8:00am - 8:30 am ------- Breakfast and Sign In
- 8:30am - 9:00am -------- Warm Up Activity: Whole Group Discussion on Day 2 (recap)
- 9:00am – 10:00am ------ Lesson 9: Linking with Black Board Ultra
- 10:00am - 10:10am ----- BREAK
- 10:10am - 12:00pm ----- Work on Course Design and Lessons
- 12:00am – 1:00pm ------ LUNCH
- 1:00pm - 3:00pm -------- Work on Course Design and Lessons
- 3:00pm - 3:10pm -------- BREAK
- 3:10pm - 4:00pm -------- Whole Group Activity: Share/Present Course
- 4:00pm - 4:30pm -------- WRAP UP! Complete Day 3 Evaluation and Sign out

# Distance Education in the Western Pacific Region Public School System

by : Benjamin B. Seman

1

## Please use the link to sign-in:

Sign In Link
You may use to QR code to access the sign in form

2

# Welcoming Remarks

CTE Program Coordinator

# DAY 1
# Distance Education: Introduction and Opportunities

## AGENDA

| DAY 1: DISTANCE EDUCATION INTRODUCTION AND OPPORTUNITIES | |
|---|---|
| 8:00am - 8:30 am | Breakfast and Sign In |
| 8:30am - 9:00am | Welcoming Remarks: CTE and Distance Educaiton Coordinator |
| 9:00am - 9:20am | Warm Up Activity: Group Discussion |
| 9:20am - 10:00am | Introduction to Distance Education |
| 10:00am - 10:10am | BREAK |
| 10:10am - 10:40am | Opportunities with Distance Education |
| 10:40am - 11:15am | The eTeacher Certification Process |
| 11:15am - 11:30am | Group Discussion |
| 11:30am - 12:00am | Whole Group Discussion |
| 12:30am - 1:30am | LUNCH on you own |
| 1:30pm - 2:00pm | Distance Education in the District: compensation, timeframe, policies |
| 2:00pm - 2:45pm | Introduction and demonstration of Nearpod |
| 2:45pm - 3:00pm | PRACTICE: Navigate through Nearpod |
| 3:00pm - 3:10pm | BREAK |
| 3:10pm - 3:30pm | Introduction and demonstration of eDynamics |
| 3:30pm - 4:00pm | PRACTICE: Navigate through eDynamics |
| 4:00pm - 4:30pm | WRAP UP! Complete Day 1 Evaluation and Sign out |

5

## PROFESSIONAL DEVELOPMENT GOALS

* Introduce and provide information on the distance education program offered by the Western Pacific Region public school system.

* Provide information on the eTeacher certification process and compensation rates that are in place for teachers in the distance education program

* Introduce and increase teacher knowledge of the evolution and opportunities made possible due to distance education,

* Provide teachers a demonstration of how to navigate through the Blackboard Ultra and its tools,

* Provide teachers with instructional strategies that is productive and encourages student engagement for distance education,

* Provide teachers with the opportunity to design an online learning lesson for their particular CTE course.

6

## DAY 1 LEARNING OUTCOMES

- Outline and summarize the development of distance education for the past decades and how it is being conducted in the Western Pacific Region,
- Discuss the eTeacher certification process and monetary compensation for distance education teacher in the Western Pacific Region,
- Evaluate and support the implementation of distance learning justified with the opportunities and impacts it has in education.
- Demonstrate navigation skills and usage of Nearpod and eDynamics applications.

## WARM UP ACTIVITY (20mins)

GROUP DISCUSSION:

- INTRODUCE YOURSELF, YOUR SCHOOL, GRADE LEVEL, CONTENT AREA
- EXPERIENCE WITH DISTANCE EDUCATION
  - ACCOMPLISHMENT
  - CHALLENGES

## Let's Watch a Video on Distance Learning

Video on Distance Learning

13

## Break Time


14

## OPPORTUNITIES WITH DISTANCE EDUCATION

15

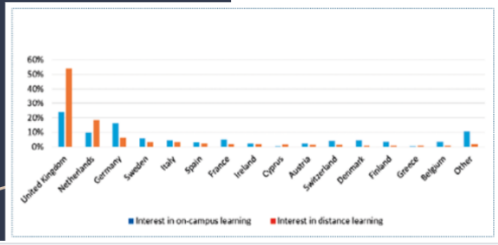
## NEED TO KNOW

- Demand for Distance learning increased tremendously since 2013 and continues to increase.
- Increase in degree offerings by community colleges and universities.
- Distance learning complements traditional learning (HYBRID).
- Increase is student registration = increase in demand for distance learning teachers.
- Students who took all or part of their class online performed better, on average, than those taking the same course through traditional face-to-face instruction.

http://www.ed.gov/rschstat/eval/tech/evidence-based-practices/finalreport.pdf

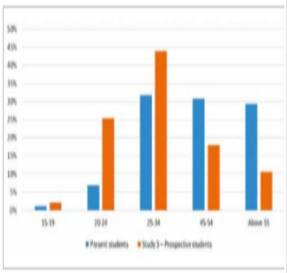
16

## DEMAND OF ON CAMPUS VS I LEARNING




17

## Percentage of student age



18

## eTeacher Certification Process

- If you are currently a teacher is the district, you have already fulfilled two of the three requirements.
- eTeacher training course length of five weeks.
- $225 per student enrolled in a semester. (Do the math)

| | | | | |
|---|---|---|---|---|
| PSS-2022-074 | Distance Education Online Teacher<br>1. High School LOTE Teacher (Carolinian Heritage Studies) - 1 Position (Amendment) | Pay Differential | $225 Per Pupil Enrolled Per Semester | MINIMUM QUALIFICATION REQUIREMENTS:<br>• Must possess a Valid CNMI State Board of Education Teaching Certification in Secondary Education with endorsement in the related content area.<br>• Must have completed the CNMI PSS Distance Education eTeacher Training Course<br>• Must hold a valid employment contract with the CNMI Public School System |

## GROUP DISCUSSION ON WHAT WAS LEARNED

## BE PREPARED TO SHARE WITH WHOLE GROUP

LUNCH TIME
12:30PM - 1:30PM

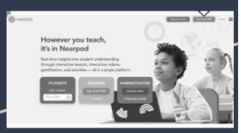
21

INTRODUCTION WITH NEARPOD

22

## What is NEARPOD?

NearPod offers real-time insights into student understanding through interactive lessons, interactive videos, gamification, and activities in a single platform.




Nearpod lessons are built in partnership with trusted brands

## What is NEARPOD?

- Uses insights from 20+ formative assessment and dynamic media features to guide teaching and improve student outcomes.
- Adapt instruction or address misconceptions on the fly.
- Differentiate, enrich, or provide extra support to meet students where they are at from wherever they are learning.
- Choose from thousands of ready-to-teach, customizable, standards-aligned lessons from teacher favorite brands.
- Create active video experiences or choose from a library of standard aligned videos.

## SEE HOW IT WORKS!!!

LINK: See How Nearpod Works!!

25

## Nearpod Supported by Research

- Nearpod may easily be implemented into the classroom to help students learn and manipulate content while also helping teachers collect data (Dunbar, 2016).
- Nearpod is a cheap and easy to use interactive student engagement-learning tool where faculty can support active learning through quizzing, polling, gamified activities, interactive video, and collaborative broads (Sarginson & MaPherson, 2011).
- The data showed that all students found this form guided reading helpful and inspiring in learning the application's content. Students also discussed how they could apply their learning in their own work. However, great study and planning must be done to ensure the technology works effectively during guided reading. The Nearpod app is recommended for guided reading lessons because it is user-friendly, engaging, and tracks student progress(Delacruz, 2014).

26

## EXPLORE NEARPOD

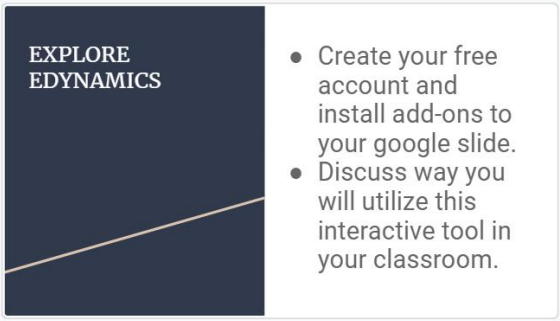
- Create your free account and install add-ons to your google slide.
- Discuss way you will utilize this interactive tool in your classroom.

## Break Time


29


30


31




32

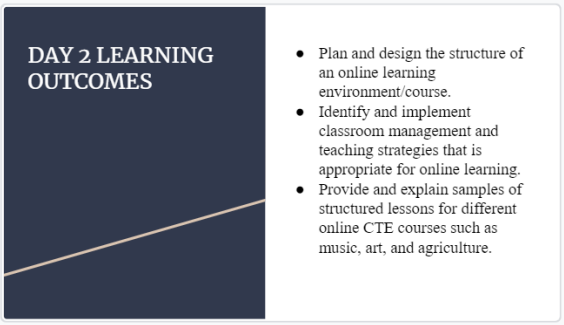

33


34


DAY 2: CLASSROOM MANAGEMENT AND TEACHING STRATEGIES

| | |
|---|---|
| 8:00am - 8:30 am | Breakfast and Sign In |
| 8:30am - 9:00am | Welcoming Remarks: Distance Educaiton Program Coordinator |
| 9:00am - 9:20am | Warm Up Activity: Recap of what was learned in Day 1 |
| 9:20am - 10:40am | How do we Strengthen Online Learning? |
| 10:40am - 11:10am | BREAK |
| 11:10am - 11:30am | Group Discussion - Activity 4 Corners |
| 11:30am - 12:00am | Whole Group Activity: Stay and Stray |
| 12:30am - 1:30am | LUNCH on you own |
| 1:30pm - 2:00pm | Different CTE online courses setup |
| 2:00pm - 2:45pm | An online Lesson in MUSIC |
| 2:45pm - 3:00pm | Explore different courses |
| 3:00pm - 3:10pm | BREAK |
| 3:10pm - 3:30pm | Group Discussion: How would you implement management in your online classroom |
| 3:30pm - 4:00pm | Whole Group: Share thoughts! |
| 4:00pm - 4:30pm | WRAP UP! Complete Day 2 Evaluation and Sign out |


37

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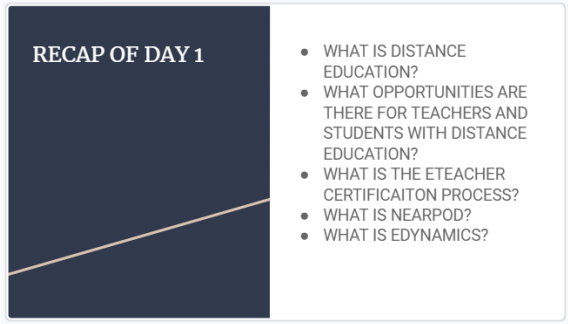


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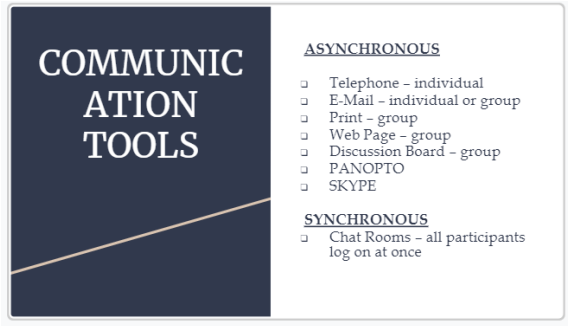


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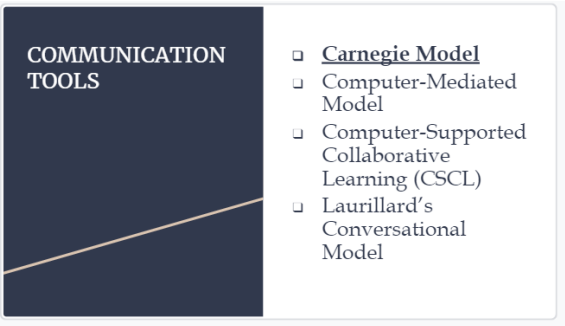


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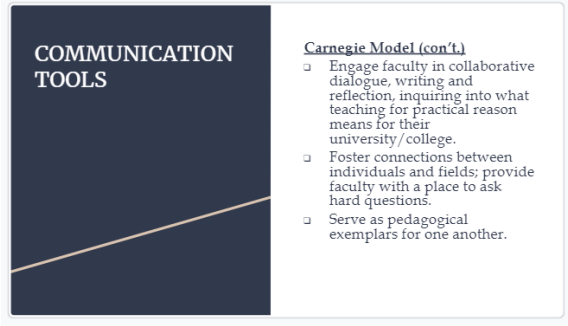


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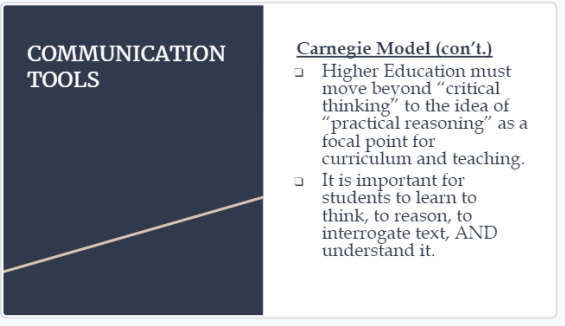


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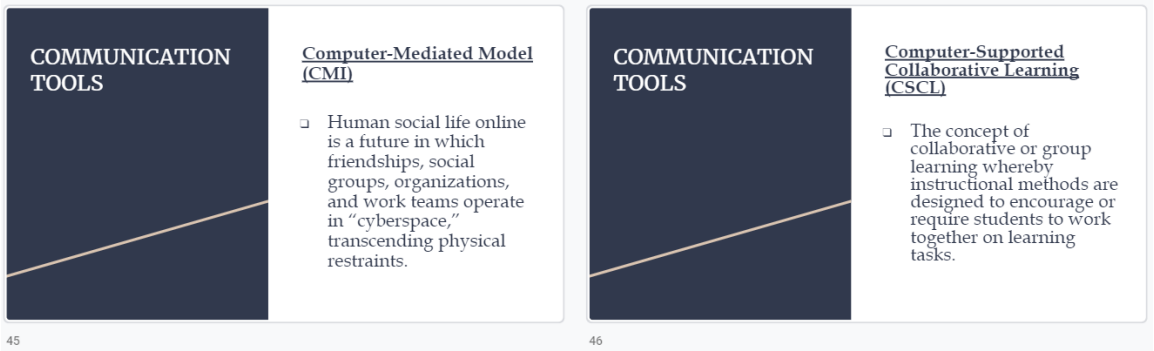
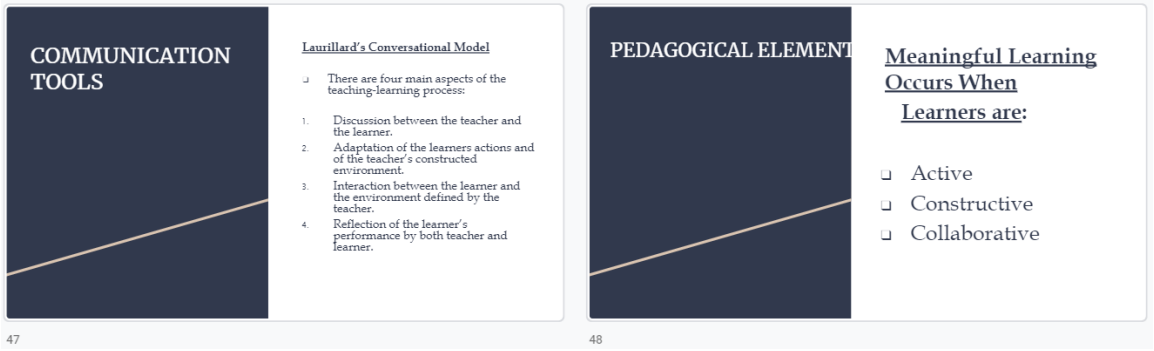
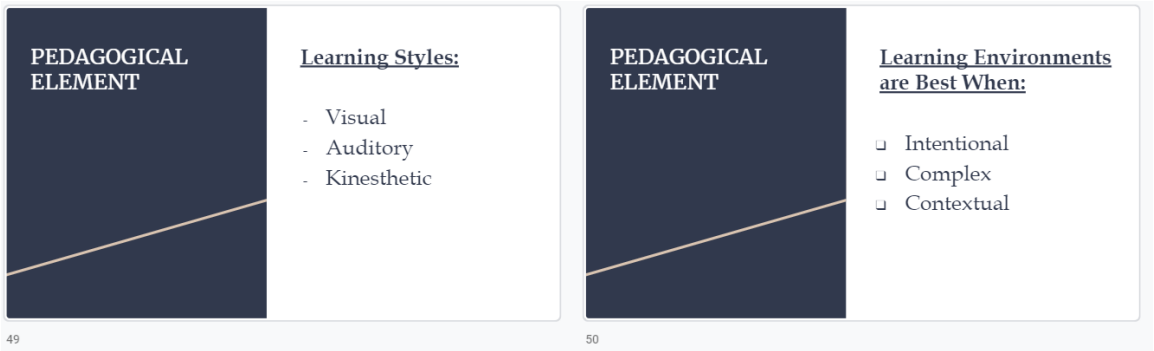
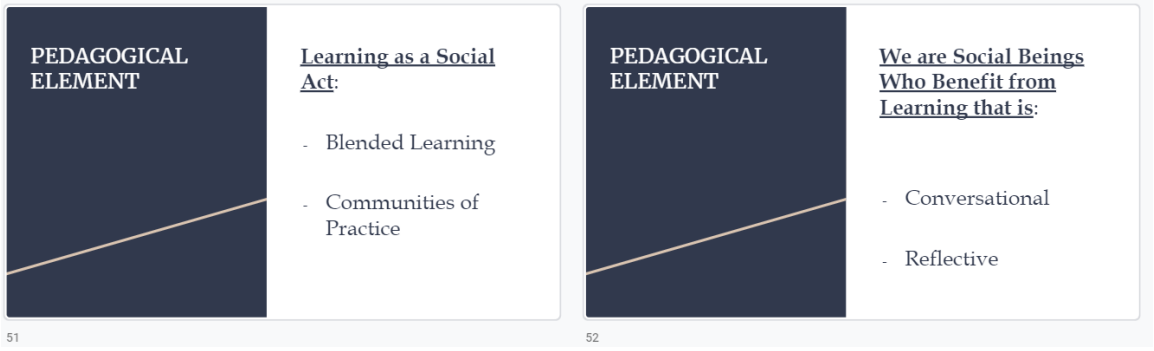

COMMUNICATION TOOLS
Computer-Mediated Model (CMI)
Human social life online is a future in which friendships, social groups, organizations, and work teams operate in "cyberspace," transcending physical restraints.
45
COMMUNICATION TOOLS
Computer-Supported Collaborative Learning (CSCL)
The concept of collaborative or group learning whereby instructional methods are designed to encourage or require students to work together on learning tasks.
46


COMMUNICATION TOOLS
Laurillard's Conversational Model
There are four main aspects of the teaching-learning process:
1. Discussion between the teacher and the learner.
2. Adaptation of the learners actions and of the teacher's constructed environment.
3. Interaction between the learner and the environment defined by the teacher.
4. Reflection of the learner's performance by both teacher and learner.
47
PEDAGOGICAL ELEMENT
Meaningful Learning Occurs When Learners are:
Active
Constructive
Collaborative
48


PEDAGOGICAL ELEMENT
Learning Styles:
Visual
Auditory
Kinesthetic
49
PEDAGOGICAL ELEMENT
Learning Environments are Best When:
Intentional
Complex
Contextual
50


PEDAGOGICAL ELEMENT
Learning as a Social Act:
Blended Learning
Communities of Practice
51
PEDAGOGICAL ELEMENT
We are Social Beings Who Benefit from Learning that is:
Conversational
Reflective
52

## INSTRUCTOR CONCERN

**Evaluation:**

1. Provide opportunities for
   - students to reflect on their own learning and contribution.
2. Feedback on the learning experience.
3. Evaluation of your performance.

53

## STUDENT CONCERN

- Distance education students often feel very isolated
- Overcoming this isolation is a big challenge – "Get to know me!"
- Good access to a tutor is essential i.e., some face-to-face time with the Instructor.
- And, it is most helpful if students can communicate with each other, building their own learning community
- **Turning in an Assignment!**

54

## SUMMING IT UP

- Sound Foundational Pedagogy
- Student-Centered, Active Learning
- Synchronous & Asynchronous
- Relevant, Authentic Content
- Visual, Auditory, and Kinesthetic Learning Styles
- Collaborative, Reflective, Problem-Solving

55

## SUMMING IT UP

**"Students who took all or part of their class online performed better, on average, than those taking the same course through traditional face-to-face instruction."**

http://www.ed.gov/rschstat/eval/tech/evidencee-based-practices/finalreport.pdf

56

## SUMMING IT UP

## BLENDED LEARNING

Combining both asynchronous and synchronous elements!

57

## Break Time


58

## GROUP ACTIVITY: 4 CORNERS

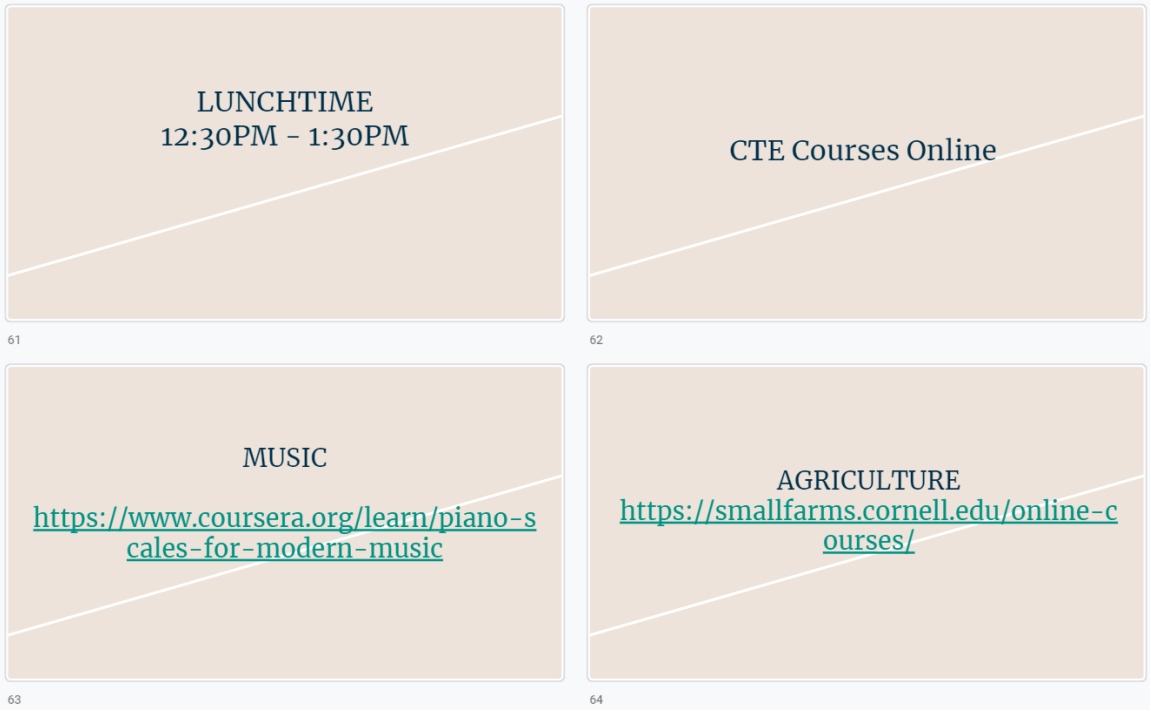
FORM GROUPS OF 5 MEMBERS

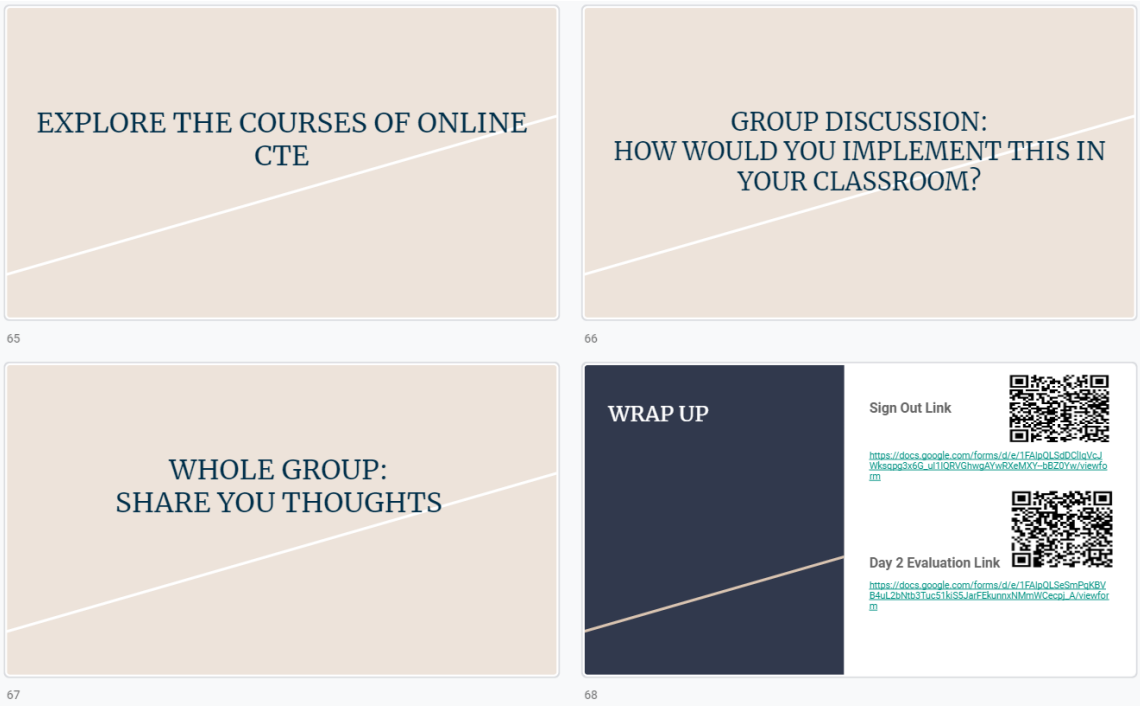
59

## WHOLE GROUP ACTIVITY: STAY AND STRAY

- Number each member of your group 1 - 5.
- Facilitator will announce "IF you are a 1, you may STAY, everyone else it's time to STRAY".
- All number 1's will remain at their table, other members in the group will stray to the next table.
- The number that stays will present the content shared on the 4 CORNERS poster.

60


LUNCHTIME
12:30PM - 1:30PM
61
CTE Courses Online
62
MUSIC
https://www.coursera.org/learn/piano-scales-for-modern-music
63
AGRICULTURE
https://smallfarms.cornell.edu/online-courses/
64


EXPLORE THE COURSES OF ONLINE CTE
65
GROUP DISCUSSION:
HOW WOULD YOU IMPLEMENT THIS IN YOUR CLASSROOM?
66
WHOLE GROUP:
SHARE YOU THOUGHTS
67
WRAP UP
Sign Out Link
https://docs.google.com/forms/d/e/1FAIpQLSdDCllqVcJWksqpq3x6G_ul1IQRVGhwgAYwRXeMXY-bBZ0Yw/viewform
Day 2 Evaluation Link
https://docs.google.com/forms/d/e/1FAIpQLSeSmPqKBVB4uL2bNtb3Tuc51kiS5JarFEkunnxNMmWCecpLA/viewform
68

## DAY 3: LINKING IT ALL TOGETHER

69

## Please use the link to sign -in

https://docs.google.com/forms/d/e/1FAIpQLSdDClIqVcIWksqpg3x6G_uI1IQRVGhwgAYwRXeMXY--bBZoYw/viewform

70

| DAY 3: LINKING IT ALL TOGETHER | |
|---|---|
| 8:00am - 8:30 am | Breakfast and Sign In |
| 8:30am - 9:00am | Warm Up Activity: Whole Group Discusison on Day 2 (recap) |
| 9:00am - 9:20am | Group Discussion |
| 9:20am - 10:00am | Linking with Black Board Ultra |
| 10:00am - 10:10am | BREAK |
| 10:10am - 12:30pm | Work on Course Design and Lessons |
| 12:30pm - 1:30pm | LUNCH on you own |
| 1:30pm - 3:00pm | Work on Course Design and Lessons |
| 3:00pm - 3:10pm | BREAK |
| 3:10pm - 4:00pm | Whole Group Activity: Share/Present Course |
| 4:00pm - 4:30pm | WRAP UP! Complete Day 3 Evaluation and Sign out |

71

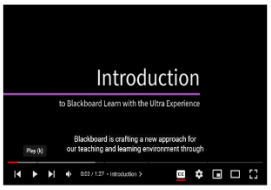
## DAY 3 LEARNING OUTCOMES

- Demonstrate how to link different online learning applications with Blackboard Ultra.
- Create and design lessons and multimedia presentations for their specific content and class.

72

## LINKING WITH BLACKBOARD ULTRA

https://www.youtube.com/watch?v=dm0MGnG64_E&list=PLontYaReEU1tCbsCDP-u_wsKdkDBeqlhH




73

## CREATE COURSE AND LESSON

74

## BREAK INTO CONTENT SPECIFIC GROUPS

WORK COLLABORATIVELY IN DESIGNING YOUR COURSE AND LESSONS

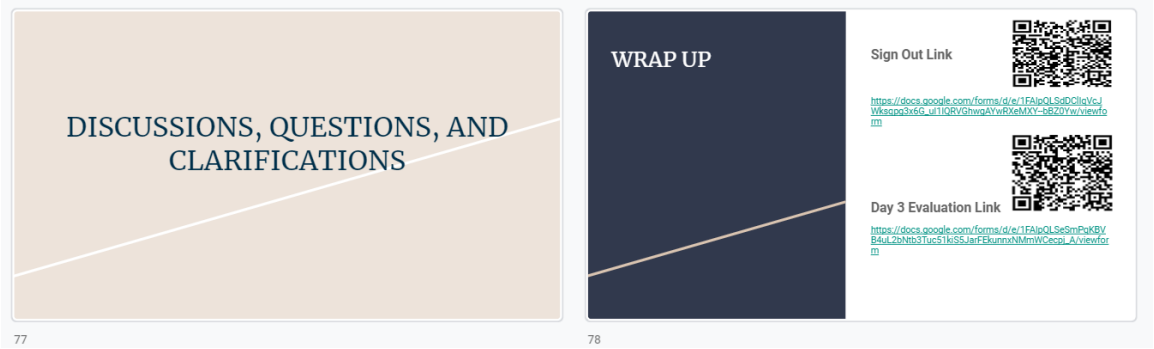
WHEN PLANNING, CONSIDER;

- INCLUSION
- ENGAGEMENT
- SOCIAL INTERACTION
- CRITICAL THINKING
- COLLABORATIVE GROUP LEARNING
- REFLECTIVE OPPORTUNITIES
- RELEVANT AND AUTHENTIC CONTENT
- VISUAL, AUDIO, KINESTHETIC LEARNING STYLE

75

## PRESENT YOUR ONLINE COURSE/LESSON

76

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Sarginson, D., & McPherson, S. (2021). Nearpod: an innovative teaching strategy to engage students in pathophysiology/pharmacology. *Journal of Nursing Education, 60*(7), 422-423.

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Appendix B: Letter to the Commissioner of Education

**To:** Dr. Alfred Ada, Western Pacific region Commissioner of Education

**From:** Benjamin Borja Seman

**Subject:** Request to Conduct Doctoral Research within School district

Hafa Adai yan Tirow Woomi Sir,

My name is Benjamin Borja Seman, and I am currently in pursuit of my doctoral Degree with Walden University. I am writing to you to request your approval to conduct a qualitative research study within the school district. The research is a crucial part of my capstone project, in which I will be seeking access to several CTE teachers at the secondary school level within the school district. Being that I am currently an employed staff member of the school district, I am well acquainted with several staff members and able to reach out to possible participants via email using the district's email account. I will await your response and approval before moving forward with gaining access to the CTE teachers in the district as possible participants for my study. If you have any questions or concerns, please feel free to contact me at 670-234-2345 or via email at benjamin.seman@waldenu.edu.

With Gratitude,

Benjamin Borja Seman

# Appendix C: Research and Interview Questions

## Research Questions

RQ1: What are the perceived concerns of secondary CTE teachers regarding their participation in the eTeacher certification process to teach online CTE courses in the Western Pacific region?

RQ2: What are the perceived supports needed to encourage secondary CTE teachers to participate in the eTeacher certification process to teach online CTE courses in the Western Pacific region?

## Interview Questions for Noncertified CTE Distance Education Teacher.

1) Tell me about your experiences with distance learning/education either as a teacher or student.
2) Based on your knowledge/experience on distance education, from the perspective of a distance education teacher, what are your concerns with its implementation?
3) Describe how you utilize an online learning platform to teach a CTE course in distance education?
4) How is the quality of instruction when teaching a CTE course in distance education?
5) What certification programs does the district offer to become a certified distance education teacher?
6) What would motivate you to participate in the eTeacher certification process?

7) Why or why not should the certification process to become a certified CTE teacher for distance education be mandated by the district?

**Interview Questions for Certified CTE Distance Education Teacher**

1) Tell me about your experiences with distance learning/education either as a teacher or student.
2) Describe how you utilize an online learning platform to teach a CTE class?
3) How is the quality of instruction important when teaching a CTE course in distance education?
4) What motivated you to become certified to teach CTE courses at a distance?
5) How does the certification process help you become an effective CTE distance education teacher?
6) What do you think would be a motivating factor for non-certified teachers to participate in the certification process to become a certified CTE distance education teacher?
7) Why or why not should the certification process to become a certified CTE teacher for distance education be mandated by the district?

Appendix D: Informed Consent Form

**INFORMED CONSENT FORM**

Hafa Adai yan Tiroow! You are invited to take part in a research study about the motivation of CTE teachers pertaining to their lack of participation in the eTeacher certification process to teach online CTE courses in the Western Pacific region. This form is part of a process called "informed consent" to allow you to understand this study before deciding whether to take part.

This study seeks 10 volunteers who are:

- Must be employed by the district and be highly qualified CTE teachers of the Western Pacific region.
- Teach at the secondary level from grades $7^{th}$ thru $12^{th}$.

This study is being conducted by a researcher named Benjamin B. Seman, who is a student at Walden University. Being from a small island community, you may be acquainted with Benjamin; however, for the purpose of this study, his role will strictly be recognized as the researcher and not as a friend, family member, or educational colleague. The same will be applied to you as a participant.

**Study Purpose:**
The purpose of this study is to explore the perceived concerns of CTE teachers and the perceived support needed to increase participation in the eTeacher certification process to teach online CTE courses in the Western Pacific region.

**Procedures:**
This study will involve you completing the following steps:

Confirm interest to participate in research as a participant by email and/phone call (10 minutes).
Read and sign the informed consent form (10 minutes).
Scheduling of date and time of confidential and audio recorded video conference interview (10 minutes).
Participate in a confidential and audio-recorded video conference interview (1 hour).
Speak one more time with the researcher after the interview to hear the researcher's interpretations and share your feedback (this is called member checking and may take 30 minutes; a phone call is an option)

Here are some sample questions:

Tell me about your experiences with distance learning/education in general?
What is your opinion on the quality of instruction when teaching a CTE course in distance education?
What is your opinion on utilizing an online learning platform to teach a CTE class?

Do you think that a certification process is necessary in order to teach CTE in distance education? Please explain.

**Voluntary Nature of the Study:**
Research should only be done with those who freely volunteer. So everyone involved will respect your decision to join or not. No one in your school will treat you differently based on whether you volunteer or not.
If you decide to join the study now, you can still change your mind later. You may stop at any time. The researcher will follow up with all volunteers to let them know whether or not they were selected for the study.

**Risks and Benefits of Being in the Study:**
Being in this study could involve some risk of the minor discomforts that can be encountered in daily life, such as sharing sensitive information. With the protections in place, this study would pose minimal risk to your wellbeing. Although the researcher does not believe that this study will do any harm, numbers to certain agencies that may assist, such as Systems of Care – 664-5604 and the Community Guidance Center at 323-6560.

This study offers no direct benefits to individual volunteers. The aim of this study is to benefit society by investigating the motivation of CTE teachers pertaining to their lack of participation in the eTeacher certification process to teach online CTE courses in the Western Pacific region. Once the analysis is complete, the researcher will share the overall results by emailing you the link to the summary of the study.

**Privacy:**
The researcher is required to protect your privacy. Your identity will be kept confidential, within the limits of the law. The researcher is only allowed to share your identity or contact info as needed with Walden University supervisors, who are also required to protect your privacy, or with authorities if court-ordered. The researcher will not use your personal information for any purposes outside of this research project. Also, the researcher will not include your name or anything else that could identify you in the study reports. If the researcher were to share this dataset with another researcher in the future, the dataset would contain no identifiers, so this would not involve another round of obtaining informed consent. Data will be kept secure by the researcher where all documents pertaining to this research, including the participants' responses to the interview questions, will be kept confidential and secured on my laptop that is not only password protected but also requires a thumbprint identification. Any hard copy of the study, such as the interview questions and letters to participants, will be secured in my file cabinet at home, which can be locked with a key. None of the collected data will be linked to any for the participants and will only be used for this research. Data will be kept for at least five years, as required by the university.

**Contacts and Questions:**
You can ask questions of the researcher by phone at 670-783-8984 or email at benjamin.seman@waldenu.edu. If you want to talk privately about your rights as a participant or any negative parts of the study, you can call Walden University's Research Participant Advocate at 612-312-1210. Walden University's approval number for this study is **IRB will enter approval number here**. It expires on **IRB will enter the expiration date.**

You might wish to retain this consent form for your records. You may ask the researcher or Walden University for a copy at any time using the contact info above.

**Obtaining Your Consent**

If you feel you understand the study and wish to volunteer, please indicate your consent by signing below.

| |
|---|
| Printed Name of Participant _____ |
| Date of consent _____ |
| Participant's Signature _____ |
| Researcher's Signature _____ |

# Appendix E: Participant Invitation Letter

Dear Invitee,

My name is Benjamin Seman, and I am a doctoral student at Walden University. I am currently in pursuit of a doctorate's Degree in Educational Technology. I am kindly requesting your participation in a doctoral research study that I am conducting titled: Career and Technical Education Teachers for Online CTE in the Western Pacific Region Public School System: A Qualitative Study. The intention is to investigate the motivation of CTE teachers pertaining to their lack of participation in the eTeacher certification process to teach online CTE courses in the Western Pacific region.

The study involves participating in a confidential and audio-recorded interview which will be through a video conference platform. Your participation is voluntary, and you may withdraw from the study at any time. Your personal information and responses to interview questions will be confidential and secured from others to access.

If you would like to participate in the study, please read the Informed Consent letter provided below, then sign the document and write in the date as well. Your participation in the research study will be of great importance to assist in the motivation of CTE teachers pertaining to their lack of participation in the eTeacher certification process to teach online CTE courses in the Western Pacific region.

Thank you for your time and participation

Sincerely,

Benjamin B. Seman, M. E.D., Doctoral Student, Walden University

Appendix F: Distance Education Student eLearning Gateway Catalog

Commonwealth of the Northern Mariana Islands
PUBLIC SCHOOL SYSTEM
STUDENTS FIRST


# Distance Education
# Student eLearning Gateway
# Fall 2018 Course Catalog

## Student eLearning Gateway Overview

The Student eLearning Gateway is an online learning program that offers high school courses for highly motivated students who are interested in advancement and who want to experience online learning. The courses are taught by Highly Qualified Teachers of the Public School System through the Student eLearning Gateway: cnmipss.blackboard.com.

**Interested in online learning? Here's your opportunity.**
**Follow the steps below to see if online learning is right for you!**

STEP 1: Online Readiness Checklist

**Check the box if you can answer yes to the following statements**

- [ ] I own or have regular access to a computer.
- [ ] I know how to create, save, find, and open different kinds of files and programs on a computer.
- [ ] I have access to reliable internet on a regular basis.
- [ ] I have an email account that I can access regularly to check for new messages and communicate with others.
- [ ] I am able to stay on task and avoid distractions while studying.
- [ ] I am good at planning and managing my time so that my work is on-time and complete.
- [ ] I have little to no trouble expressing myself in writing.
- [ ] I consider myself an independent learner.
- [ ] I can learn from a variety of formats (written text, multimedia presentations, lectures, videos, online discussion/conferencing).
- [ ] If I can't figure out something, I am comfortable asking my classmates or the instructor for help via email, discussion board, or chat.

If you checked yes to all the boxes, you can proceed to the next step.

## STEP 2: Parent/Guardian Consent

Discuss with your parents/guardian about your interest in taking online courses. You will need to have them complete and sign the Parent/Guardian Consent Form for online courses. The consent form is located on the last page of this brochure.


## STEP 3: Selecting your Online Courses

Browse through the course catalog to determine which online course(s) you might be interested in taking. You may select up to two (2) courses.

## STEP 4: Register with Your Counselor

After completing the steps above, you are now ready to visit your school counselor to register for online courses. Your counselor will review your academic record and decide if online courses are a right fit for you. Please provide your counselor with the completed parent consent form upon registration.

# Important Dates

| | |
|---|---|
| **Registration Period:** | August 06- August 24, 2018 |
| **Withdrawal Deadline:** | September 08, 2018 (counselor approval needed) |
| **1st Quarter:** | September 02, 2018 – October 20, 2018<br>Weeks 1-7 |
| **2nd Quarter:** | October 21, 2018 – December 08, 2018<br>Weeks 8-14 |

## Important Information

- Students should expect to receive course enrollment confirmation a week before the term begins.
- Online courses that do not meet the minimum enrollment requirement or do not have an assigned eTeacher may be cancelled.
- Course sections are capped at 30 students per eTeacher.
- The online fall semester will run for a total of 14 instructional weeks.
- Online courses are not intended for credit recovery.
- Student eLearning Portal can be accessed at cnmipss.blackboard.com

# Course Catalog

## Language Arts

### LA 1 Integrated Literature & Composition (Semester 1) 1 credit course

This course requires students to read various genres of literature, delving into various literary categories to develop critical thinking as it applies to literature and composition. Students engage in the study and discussion of narrative, expository, analytical, argumentative, and creative literature, in which vocabulary development will be heavily integrated.

### LA 2 World Literature (Semester 1) 1 credit course

This course will allow students to become skilled readers while exploring a variety of written works from different literary periods and to become skilled writers for a variety of purposes (such as essays, short stories, and poetry). In addition, this course will allow students to continue to practice their grammar skills, study skills, literature appreciation, spelling, vocabulary building, research skills, and reading strategies.

### LA 3 American Literature (Semester 1) 1 credit course

This course focuses on critical analysis of American Literature and complements U.S. History. The ultimate goals for this class are to expose students to American culture, heritage, and history through study of our literature; and, to continue advancement towards more mature, refined writing skills.

### LA 4 British Literature (Semester 1) 1 credit course

The entirety of this course will focus on one of humanity's greatest and most profound achievements—British Literature. Students will focus on literature from the Middle Ages up to the Renaissance. Students will demonstrate and develop their ability to determine and analyze the themes/ideas found in a text, compose narrative/informative/ explanatory texts and support their claims logically with evidence from the text, and present said information clearly to an audience while strategically using digital resources.

### Pre AP English (Semester 1) 1 credit course

This course is designed to help students become critical and analytical readers, skilled writers, and clear oral communicators. The main objective of this course is to facilitate students in becoming effective and confident writers in preparation for Advanced Placement courses.

### AP Language & Composition (Semester 1) 1 credit course

The AP English Language and Composition course is a highly challenging course that allows students to explore the exciting and controversial world of rhetoric. Students will develop critical reading skills that move beyond mere comprehension and into the realm of analysis, qualification, and evaluation.

### AP Literature and Composition (Semester 1) 1 credit course

This course will follow the curricular requirements outlined by the College Board in the AP English Literature and Composition Course Description which focuses on building skills necessary for college-level reading, writing, and critical thinking. The texts include works from a variety of time periods and genres, and the writing assignments include in-class essays as well as formal process essays with several opportunities for revision.

## Science

### Environmental Science 1 credit course

This course is project based and is designed using the Next Generation Science Standards to develop higher order thinking skills through problem solving, critical thinking, and data analysis. Students will examine environmental science concepts using projects, interviews, surveys, data collection, field research, reports, evaluation, and presentations.

### Biology 1 credit course

This course is designed to have students study the cell, the molecular basis of heredity, biological evolution, interdependence of organisms, matter and energy, and organization in living systems and the behavior of organisms.

### Chemistry 1 credit course

This course will address the Next Generation Science Standards in scientific inquiry & thinking skills, nature of science and technology, and structure of properties of matter. Students will learn concepts, theories and development of scientific knowledge. Students will also develop critical thinking and problem solving skills through analysis of science, technological and environmental issues that affect our local society and global community.

## Mathematics

### Algebra 1 (Semester 1) — 1 credit course

This course will provide opportunities for students to develop and communicate an understanding of algebraic representation as a prerequisite to all higher mathematics courses. The content for this course is aligned to the common state standards (traditional pathway). The fundamental purpose of this course is to formalize and extend the mathematics that students learned in the middle grades.

### Geometry (Semester 1) — 1 credit course

The course is designed to have students make sense of problems and persevere in solving them, reason abstractly and quantitatively, construct viable arguments and critique the reasoning of others, model with mathematics, use appropriate tools strategically, attend to precision, look for and make use of structure, and look for and express regularity in repeated reasoning through the content of geometry.

### Algebra 2 (Semester 1) — 1 credit course

This course is designed for students to develop advanced algebra skills in algebraic operations and functions. Students will examine concepts such as linear equations and equalities, exponential, quadratic, polynomial, rational functions through online tools such as documents, tutorials, and videos.

### Pre-Calculus — 1 credit course

This course allows students to finish honing their algebra skills before moving on to calculus. Many of the topics covered in Advanced Algebra, such as functions, transformations, and trigonometry, will be revisited but with much greater depth. Graphing, and graphical manipulation will also be covered extensively as the calculator is introduced as a tool for complex problem solving beyond simple arithmetic, division, and multiplication.

### AP Statistics (Semester 1) — 1 credit course

AP Statistics involves the study of four main areas: exploratory analysis; planning a study; probability; and statistical inference. Students are expected to have mathematical maturity and quantitative reasoning ability. In contrast to many math classes, this course will require reading of the text. This AP Statistics course is taught as an activity-based course in which students actively construct their own understanding of the concepts and techniques of statistics.

## Social Studies

### NMI History — 1 credit course

This course offers an overview of the Northern Mariana Islands' history in its global context from ancient times to the Covenant and Constitution establishing the CNMI. In addition to the content area, students will work on the literacy proficiency areas of Common Core Standards relative to Social Studies. The purpose of this goal is to ensure that students develop the necessary skills for post-secondary life, that is, college and career readiness.

### US History 1 credit course

This course provides a general overview of the history of the United States. In chronological order, students will explore America's past through examining the cultural, political, geographical, economical and technological changes that have taken place and have helped to shape and guide us as a nation today. Topics will include issues relating to social, government, economic, and philosophical issues throughout US History

### US Government 1 credit course

This course involves the study of democratic ideas, balance of powers, and tension between the practical and ideal in national policymaking. Students will be involved in the rigorous study and analysis of the importance of various constitutional principles, rights and procedures, institutions, and political processes that impact us as citizens of the United States, and as residents of Commonwealth of Northern Marianas Islands. This class will also involve a study of the structure of the U.S. economy, and the ways in which the government and the economy are inexplicably tied.

## Language Other than English (LOTE)

### Chamorro Language and Heritage Studies 1 credit course

This course is designed to help students develop fundamental knowledge of the official Chamorro Orthography (spelling rules and grammar) comprising of 14 rules. It is designed for both speakers and non-speakers of the Chamorro Language and includes sections on Language and Orthography; Reading and Writing. The course mostly consists of project-based learning.

### Carolinian Language and Heritage Studies 1 credit course

This course is designed for high school students who want to learn the Carolinian language; both verbal and written. Students will have the opportunity to study the fundamentals to the advance concepts surrounding the Carolinian language and culture.

### Japanese 1 1 credit course

The Japanese 1 course will introduce the basic grammatical structure of the language as well as introduce cultural and historical aspects of Japan. Students will also learn how to read the Japanese characters (hiragana and katakana).

### Japanese 2 1 credit course

The Japanese 2 course will continue on the Japanese 1 grammar introduction as well as introduce cultural and geography of Japan. This class will also introduce students to the third Japanese characters of Kanji (also known as the Chinese Characters).

## Electives

### Intro to Photography 1 credit course

This course is designed for students interested in digital fine art photography. The content of the course will allow students an opportunity to learn basic to intermediate photography skills, digital/ manual camera operation, and graphic editing software. This course includes basic photography concepts, techniques and hands-on-training. The focus for this course is photography as an art form and for vehicles of self –expression

### Creative Writing 1 credit course

This course is designed to have students create original essays, poems and short stories in this course. They will read professionally written forms of creative writing as models and integrate their impressions of these works with personal experiences as they compose their own writings. Students are encouraged to write about topics they find engaging as they practice writing on the following themes: narration, cause and effect, and comparison/contrast.

## Physical Education/Health

### Health 1 credit course

This is an introductory health course that is meant to introduce students to important topics that affect health and welfare. Students are expected to learn concept and theories to foster a development of health knowledge. Students will develop critical thinking and problem-solving skills though real life project-based learning experiences using the CNMI PSS Health Standards.

*"Online learning is not the next big thing, it is the NOW big thing."*

*– Donna J. Abernathy*

## Frequently Asked Questions

**How many courses can I take online during the semester?**

- Your counselor will work with you to decide how many courses you should complete online. Students can take up to two (2) online courses in a regular semester.

**When will I meet my eTeacher(s)?**

- After registering with your counselor, your eTeacher(s) will communicate with you about attending the orientation for the online course. The orientation is mandatory and you will learn about course navigation and the other necessary information to successfully complete your online course.

**Will my online course grade affect my academic record?**

- Yes, all grades earned from online courses will be recorded in your transcript.

**How do I withdraw from an online course?**

- Your counselor must approve your request to withdraw. Once approved, your counselor will communicate with your eTeacher to withdraw you from the course. The deadline to withdraw for the Fall 2018 term is September 08, 2018.

## Need more information?

For more information about the Distance Education Program or online courses, please contact the Distance Education Program at: distance.education@cnmipss.org or visit the CNMI Public School website at www.cnmipss.org

notes

# PARENT/GUARDIAN CONSENT FORM

Student Name: _____

I understand that my child is intending to enroll in an online course(s) through the CNMI PSS Distance Education Program. As in any online course, strong organizational skills, study habits, and discipline will serve the student well in striving for academic success. Note, too, that online coursework is delivered in an accelerated instructional format. I understand that my child needs to have regular access to reliable internet and a computer to complete online coursework. By signing this form, I am allowing the student, named above, to enroll in course(s) provided through the CNMI PSS Distance Education Program.

For more information about the online courses, please contact the Distance Education Program at: distance.education@cnmipss.org or call Tel. 670-322-6760.

Parent/Guardian Name: _____

Parent/Guardian Signature: _____

Date: _____ Contact Number: _____

Email Address: _____

**Note: THIS FORM NEEDS TO BE PROVIDED TO THE STUDENT'S COUNSELOR PRIOR TO ENROLLMENT IN AN ONLINE CLASS.**

Appendix G: Student Portal Program Catalog

Commonwealth of the Northern Mariana Islands
PUBLIC SCHOOL SYSTEM
STUDENTS FIRST

**Office of Instructional Technology & Distance Education**

# Student Portal Program
# Fall 2020 Course Catalog

# Student Portal Program Overview

The Office of Instructional Technology & Distance Education's Student Portal Program offers online courses for high school students in both public and private schools for the purpose of advancement and enrichment.

It is important to note that Student Portal online courses are not the same as Remote Learning courses that students are completing at their schools. Student Portal online courses serve as a supplement course a student's regular course schedule. Before electing to participate in Student Portal courses, students should carefully consider their ability to handle additional coursework.

Courses are taught by highly qualified online teachers of the CNMI Public School System. In addition, upperclassmen will be given priority enrollment for online courses that have reached maximum capacity.

## STEP 1: Online Readiness Checklist

### Check the box if you can answer yes to the following statements

- I own or have regular access to a computer.
- I know how to create, save, find, and open different kinds of files and programs on a computer.
- I have access to reliable internet on a regular basis.
- I have an email account that I can access regularly to check for new messages and communicate with others.
- I am able to stay on task and avoid distractions while studying.
- I am good at planning and managing my time so that my work is on-time and complete.
- I have little to no trouble expressing myself in writing.
- I consider myself an independent learner.
- I can learn from a variety of formats (written text, multimedia presentations, lectures, videos, online discussion/conferencing).
- If I can't figure out something, I am comfortable asking my classmates or the instructor for help via email, discussion board, or chat.

If you checked yes to all the boxes, you can proceed to the next step.

## STEP 2: Parent/Guardian Consent

Discuss with your parents/guardian your interest in taking online courses. You will need to have them complete and sign the Parent/Guardian Consent Form for online courses. The consent form is located on the last page of this brochure.


## STEP 3: Selecting your Online Courses

Browse through the course catalog to determine which online course(s) you might be interested in taking. You may select up to two (2) courses.

## STEP 4: Registering for Online Courses

After completing the steps above, you are now ready to register for Student Portal Courses. The registration link can be accessed at: http://bit.ly/StudentPortal_Fall2020Form

## Important Dates

| | |
|---|---|
| **Registration Period:** | September 08, 2020 – September 25, 2020 |
| **Term Dates:** | Courses begin on October 04, 2020<br>and end on January 09, 2020<br>for a total of 14 weeks of instruction |
| **Withdrawal Request Deadline:** | Students may request to withdraw from an online course by October 09, 2020. After this deadline, late withdrawals will not be considered unless there is an extenuating circumstance. |

## Important Information

- Students will receive course enrollment confirmation a week before the term begins.
- Online courses that do not meet the minimum enrollment requirement or do not have an assigned eTeacher may be cancelled.
- Course sections are capped at 30 students per eTeacher.
- Student Portal courses will run for a total of 14 instructional weeks.
- Online courses are not intended for credit recovery.
- Student Portal can be accessed at cnmipss.blackboard.com

# Course Catalog

## Language Arts

### LA 2 World Literature (Semester 1) — 1 credit course

This course will allow students to become skilled readers and writers while exploring a variety of written works from different literary periods. In addition, students will continue to hone their grammar skills, study skills, literature appreciation, spelling, vocabulary building, research skills, and reading strategies.

### LA 3 American Literature (Semester 1) — 1 credit course

This course focuses on critical analysis of American Literature and complements U.S. History. The ultimate goals for this class are to expose students to American culture, heritage, and history through study of our literature; and, to continue advancement towards more mature, refined writing skills.

### LA 4 British Literature (Semester 1) — 1 credit course

This course will focus on one of humanity's greatest and most profound achievements—British Literature. Students will demonstrate and develop their ability to determine and analyze the themes/ideas found in a text, compose narrative/informative/ explanatory texts and support their claims logically with evidence from the text, and present said information clearly to an audience while strategically using digital resources.

### AP Language & Composition (Semester 1) — 1 credit course

The AP English Language and Composition course is a highly challenging course that allows students to explore the exciting and controversial world of rhetoric. Students will develop critical reading skills that move beyond mere comprehension and into the realm of analysis, qualification, and evaluation.

### AP Literature and Composition (Semester 1) — 1 credit course

This course will follow the curricular requirements outlined by the College Board in the AP English Literature and Composition Course Description which focuses on building skills necessary for college-level reading, writing, and critical thinking. The texts include works from a variety of time periods and genres, and the writing assignments include in-class essays as well as formal process essays with several opportunities for revision.

## Science

### Biology — 1 credit course

This course is designed to have students study the cell, the molecular basis of heredity, biological evolution, interdependence of organisms, matter and energy, and organization in living systems and the behavior of organisms.

### Chemistry — 1 credit course

This course will address the Next Generation Science Standards in scientific inquiry & thinking skills, nature of science and technology, and structure of properties of matter. Students will learn concepts, theories and development of scientific knowledge. Students will also develop critical thinking and problem solving skills through analysis of science, technological and environmental issues that affect our local society and global community.

### Health — 1 credit course

This is an introductory health course that is meant to introduce students to important topics that affect health and welfare. Students are expected to learn concept and theories to foster a development of health knowledge. Students will develop critical thinking and problem-solving skills though real-life project-based learning experiences using the CNMI PSS Health Standards.

## Mathematics

### Algebra 1 (Semester 1) — 1 credit course

This course will provide opportunities for students to develop and communicate an understanding of algebraic representation as a prerequisite to all higher mathematics courses. The content for this course is aligned to the common state standards (traditional pathway). The fundamental purpose of this course is to formalize and extend the mathematics that students learned in the middle grades.

### Geometry (Semester 1) — 1 credit course

The course is designed to have students make sense of problems and persevere in solving them, reason abstractly and quantitatively, construct viable arguments and critique the reasoning of others, model with mathematics, use appropriate tools strategically, attend to precision, look for and make use of structure, and look for and express regularity in repeated reasoning through the content of geometry.

### Algebra 2 (Semester 1) — 1 credit course

This course is designed for students to develop advanced algebra skills in algebraic operations and functions. Students will examine concepts such as linear equations and equalities, exponential, quadratic, polynomial, rational functions through online tools such as documents, tutorials, and videos.

### AP Statistics (Semester 1) — 1 credit course

AP Statistics involves the study of four main areas: exploratory analysis; planning a study; probability; and statistical inference. Students are expected to have mathematical maturity and quantitative reasoning ability. In contrast to many math classes, this course will require reading of the text. This AP Statistics course is taught as an activity-based course in which students actively construct their own understanding of the concepts and techniques of statistics.

Appendix H: Interview Response Table for Certified CTE Distance Education Teachers

| INTERVIEW RESPONSE TABLE – CERTIFIED CTE DISTANCE EDUCATION TEACHER Participant: _____ | | | | |
|---|---|---|---|---|
| **A Priori Code** | **Code Description** | | | |
| **UNCONCERNED** | The teacher is concerned about other educational concerns rather than the CTE certification. | | | |
| **SELF** | The teacher describes personal feelings of uncertainty in whether they should participate in the eTeacher certification program. They might voice supervisor support related to online teaching. | | | |
| **TASK** | The teacher is concerned about time, logistics, schedules, and fitting everything in that must be done related to eTeacher certification. | | | |
| **IMPACT** | The teacher is focused on how the eTeacher certification is affecting their ability to serve students and what can be done to increase outcomes. | | | |
| **Research Questions** | **Interview Questions** | **Participant Response** | **Categories** | **Subcodes** |
| RQ1: What are the perceived concerns of secondary CTE teachers regarding their participation in the eTeacher certification process to teach online CTE courses in the Western Pacific region?<br><br>RQ2: What are the perceived supports needed to encourage secondary CTE teachers to participate in the eTeacher certification | Tell me about your experience with distance learning/education wither as a teacher or student. | | | |

| | | | | |
|---|---|---|---|---|
| process to teach online CTE courses in the Western Pacific region? | | | | |
| RQ1: What are the perceived concerns of secondary CTE teachers regarding their participation in the eTeacher certification process to teach online CTE courses in the Western Pacific region? | Describe how you utilize an online learning platform to teach a CTE class? | | | |
| RQ1: What are the perceived concerns of secondary CTE teachers regarding their participation in the eTeacher certification process to teach online CTE courses in the Western Pacific region? | How is the quality of instruction important when teaching a CTE course in distance education? | | | |
| RQ2: What are the perceived concerns of secondary CTE teachers regarding | What motivated you to become certified to | | | |

| | | | | |
|---|---|---|---|---|
| their participation in the eTeacher certification process to teach online CTE courses in the Western Pacific region? | teach CTE courses in distance education? | | | |
| RQ2: What are the perceived supports needed to encourage secondary CTE teachers to participate in the eTeacher certification process to teach online CTE courses in the Western Pacific region? | How does the certification process help you become an effective CTE distance education teacher? | | | |
| RQ1: What are the perceived concerns of secondary CTE teachers regarding their participation in the eTeacher certification process to teach online CTE courses in the Western Pacific region?<br><br>RQ2: What are the perceived supports needed to encourage secondary CTE teachers to participate in the eTeacher certification | What do you think would be a motivating factor for non-certified teachers to participate in the certification process to become a certified CTE distance education teacher? | | | |

| | | | | |
|---|---|---|---|---|
| process to teach online CTE courses in the Western Pacific region? | | | | |
| RQ1: What are the perceived concerns of secondary CTE teachers regarding their participation in the eTeacher certification process to teach online CTE courses in the Western Pacific region?<br><br>RQ2: What are the perceived concerns of secondary CTE teachers regarding their participation in the eTeacher certification process to teach online CTE courses in the Western Pacific region? | Why or why not should the certification process to become a certified CTE teacher for distance education be mandated by the district? | | | |

Appendix I: Interview Response Table for Noncertified CTE Distance Education Teachers

| INTERVIEW RESPONSE TABLE – NON-CERTIFIED CTE DISTANCE EDUCATION TEACHER<br>Participant: _____ | | | | |
|---|---|---|---|---|
| **UNCONCERNED** | | The teacher is concerned about other educational concerns rather than the CTE certification. | | |
| **SELF** | | The teacher describes personal feelings of uncertainty in whether they should participate in the eTeacher certification program. They might voice supervisor support related to online teaching. | | |
| **TASK** | | The teacher is concerned about time, logistics, schedules, and fitting everything in that must be done related to eTeacher certification. | | |
| **IMPACT** | | The teacher is focused on how the eTeacher certification is affecting their ability to serve students and what can be done to increase outcomes. | | |
| | | | | |
| **Research Questions** | **Interview Questions** | **Participant Response** | **Categories** | **Subcodes** |
| RQ1: What are the perceived concerns of secondary CTE teachers regarding their participation in the eTeacher certification process to teach online CTE courses in the Western Pacific region?<br><br>RQ2: What are the perceived supports needed to encourage secondary CTE teachers to participate | Tell me about your experience with distance learning/education wither as a teacher or student. | | | |

| | | | | |
|---|---|---|---|---|
| in the eTeacher certification process to teach online CTE courses in the Western Pacific region? | | | | |
| RQ1: What are the perceived concerns of secondary CTE teachers regarding their participation in the eTeacher certification process to teach online CTE courses in the Western Pacific region? | Based on your knowledge/experience on distance education, from the perspective of a distance education teacher, what are you concerns with its implementation ? | | | |
| RQ2: What are the perceived supports needed to encourage secondary CTE teachers to participate in the eTeacher certification process to teach online CTE courses in the Western Pacific region? | Describe how you utilize an online learning platform to teach a CTE course in distance education? | | | |
| RQ1: What are the perceived concerns of secondary CTE teachers regarding their participation in | How is the equality of instruction when teaching a CTE course in | | | |

| | | | | |
|---|---|---|---|---|
| the eTeacher certification process to teach online CTE courses in the Western Pacific region? | distance education? | | | |
| RQ2: What are the perceived supports needed to encourage secondary CTE teachers to participate in the eTeacher certification process to teach online CTE courses in the Western Pacific region? | What certification programs does the district offer to become a certified distance education teacher? | | | |
| RQ1: What are the perceived concerns of secondary CTE teachers regarding their participation in the eTeacher certification process to teach online CTE courses in the Western Pacific region?<br><br>RQ2: What are the perceived supports needed to encourage secondary CTE teachers to participate in the eTeacher certification process to teach online CTE courses in the Western Pacific region? | What would motivate you to participate in the eTeacher certification process? | | | |

| | | | | |
|---|---|---|---|---|
| RQ1: What are the perceived concerns of secondary CTE teachers regarding their participation in the eTeacher certification process to teach online CTE courses in the Western Pacific region?<br><br>RQ2: What are the perceived supports needed to encourage secondary CTE teachers to participate in the eTeacher certification process to teach online CTE courses in the Western Pacific region? | | | | |

# Appendix J: JVA Master List

**November 2, 2021**

**COMMONWEALTH OF THE NORTHERN MARIANA ISLANDS**
**STATE BOARD OF EDUCATION, PUBLIC SCHOOL SYSTEM, P.O. BOX 501370 CK, SAIPAN, MP 96950**
***HUMAN RESOURCES OFFICE***
JOB VACANCY ANNOUNCEMENT

**IT IS THE POLICY OF THE BOARD OF EDUCATION, COMMONWEALTH OF THE NORTHERN MARIANA ISLANDS, THAT THE PUBLIC SCHOOL PERSONNEL SYSTEM SHALL BE APPLIED AND ADMINISTERED ACCORDING TO THE PRINCIPLES OF EQUAL EMPLOYMENT OPPORTUNITY AS DEFINED BY THE NORTHERN MARIANAS COMMONWEALTH PUBLIC LAW 6 – 10, REGARDLESS OF AGE, RACE, SEX, RELIGION, POLITICAL AFFILIATION OR BELIEF, MARITAL STATUS, DISABILITY OR PLACE OF ORIGIN. APPLICANTS FOR THIS POSITION MUST BE A U.S. CITIZEN OR IS ELIGIBLE AND AUTHORIZED TO WORK IN THE U.S., INCLUDING THE COMMONWEALTH OF THE NORTHERN MARIANA ISLANDS.**

**➔CONTINUOUS & UNTIL FILLED JOB VACANCY ANNOUNCEMENTS:**

| *Announcement #* | *Position/Title* | *Pay Level /Step* | *Per Annum* | *Minimum Requirements* | *Closing Date* | *Location* |
|---|---|---|---|---|---|---|
| PSS 2016-003 | Instructor – Sign Language Interpreting<br>(1 Position) (Amendment IV)<br>(Re-Announcement) | Ungraded | $18,588.82 - $46,766.59 | MINIMUM QUALIFICATION REQUIREMENTS:<br>• Graduation from High School or equivalent plus twenty-four (24) college credits OR<br>• Graduation from a U.S. accredited college or university with an AA/AS degree plus one (1) year related work experience.<br>OTHER REQUIREMENTS<br>• Must possess a valid Specialized Sign Language Interpreter Certification. | September 9, 2021 – Until Filled | Special Education Program |
| PSS 2015-294 | Speech Language Pathologist (Amendment III) | Ungraded | $32,133.16 - $76,529.74 | MINIMUM QUALIFICATION REQUIREMENTS:<br>• Graduation from a U.S. accredited college or university with a MA/MS degree in Communicative Disorder, Speech Language Pathology or related field.<br>OTHER REQUIREMENTS:<br>• ASHA Certification Required. | June 28, 2019 – Until Filled | Special Education Program |
| PSS-2019-062 | JROTC Army Instructor (Re-Announcement) | Per MIP | Per MIP | MINIMUM QUALIFICATION REQUIREMENTS:<br>• Graduation from High School<br>• Must be a retired non-commissioned officer under pay grade E-6 to E-9.<br>• Certified as an Army Instructor by U.S. Army Cadet Command.<br>• Must have favorable result of current background check.<br>• Have no personal habits or character traits that are questionable from a security or social standpoint (financial irresponsibility, violation of standard of conduct in accordance with AR 600-50). | Oct 2, 2019 – Until Filled | JROTC Program, Dr. Rita H. Inos Jr. Sr. High School |
| PSS 2019-079 | Director of Army Instruction<br>(Re-Announcement II) | Per MIP | Per MIP | MINIMUM QUALIFICATION REQUIREMENTS:<br>• Be a retired field grade commissioned officer (Lieutenant Colonel or Colonel) with a minimum of a baccalaureate degree.<br>• As a matter of policy, personnel retired under Title 10, USC, CHAPTER 1223 (Reserve Service), are not eligible for employment in JROTC Program.<br>• Be of good moral character and have the mental ability, positive attitude, physical appearance and condition, and neatness required for favorable representation of the program and the Army in the school and civilian community.<br>• Demonstrate the professional ability to lead, motivate, and influence young men and women to learn and develop leadership, self-reliance and discipline, responsiveness to constituted authority, and attributes of good citizenship and patriotism.<br>• Have no record of conviction by court martial, no record of time lost-to-be-made-good under Title 10 USC, Section 972 and no record of civil convictions except for minor traffic offenses.<br>• Exceptions may be granted by the CG, USACC, using AR 601-210 as a guide.<br>• Have general knowledge of course subject matter and demonstrated instructional ability.<br>• Meet retention medical fitness standards of AR 40-501 and the initial Army procurement table of weight standards of AR 40-501.<br>• Possess sufficient medical, physical, and mental fitness, and be willing to perform, participate in, | March 11, 2020 – Until Filled | Junior Reserve Officer's Training Corps Program |

**INTERESTED APPLICANTS MAY OBTAIN DETAILED JOB DESCRIPTION WITH QUALIFICATION REQUIREMENTS AND SUBMIT COMPLETED APPLICATION FORMS AND ALL REQUIRED DOCUMENTS TO THE PSS HUMAN RESOURCES OFFICE AT CAPITOL HILL, BUILDING 1202, ISLETA COURT, SAIPAN or VIA EMAIL TO: LUCRETIA DELEON GUERRERO AT LUCRETIA.DELEONGUERRERO@CNMIPSS.ORG, THE HUMAN RESOURCES OFFICE AT PSSHR@CNMIPSS.ORG or MAILED TO: CNMI PUBLIC SCHOOL SYSTEM, ATTN: HUMAN RESOURCES OFFICE, P.O. BOX 501370 CK, SAIPAN, MP 96950, TEL. NOS. (670) 237-3037/3052. FREE COPY.**

| | | | | | | |
|---|---|---|---|---|---|---|
| | | | | limited to Speech Language Pathology, Communicative Disorders, Physical Therapy, Occupational Therapy, Audiology, Psychology, Kinesiology, or Special Education- with national or state certification OR a Master's degree in the related services field plus Praxis. | | |
| PSS-2021-031 | Related Service Specialist – Adapted PE<br>(Re-announcement) | 2/3-1/12 | $23,724.56 - $51,787.75 | MINIMUM QUALIFICATION REQUIREMENTS:<br>• **Related Services Specialist I**-Graduation from High School or GED, plus specialized certification such as but not limited to Related Services Technician, American Sign Language, Autism, Audiology or related to special education services.<br>• **Related Services Specialist II**- Graduation from an accredited College or University with an AA/AS degree, plus specialized certification such as but not limited to Related Services Technician, American Sign Language, Autism, Audiology, Psychology, Orientation & Mobility, Occupational Therapy, Physical Therapy or field related to special education services OR a BA/BS in the related services field or special education plus Praxis.<br>• **Related Services Specialist III**- BA/BS degree in a related services field such as but not limited to Speech Language Pathology, Communicative Disorders, Physical Therapy, Occupational Therapy, Audiology, Psychology, Kinesiology, or Special Education- with national or state certification OR a Master's degree in the related services field plus Praxis. | September 22, 2021 – Until Filled | Special Education Program |
| PSS-2021-079 | Distance Education Online Teacher<br>(Amendment)<br>1. LOTE Teachers (Chinese, Korean, Japanese) 1 Position<br>2. CCLHS Teachers (Carolinian) 1 Position<br>3. High School AP Social Studies Teacher 1 Position<br>4. High School Science Teacher (Biology, Chemistry, Environmental Science) 2 Positions<br>5. Digital Skills Online Teacher<br>(High School – 3 Positions) | Pay Differential | $225 Per Pupil Enrolled Per Semester | MINIMUM QUALIFICATION REQUIREMENTS:<br>• Must possess a Valid CNMI State Board of Education Teaching Certification in Secondary Education with endorsement in the related content area.<br>• Must have completed the CNMI PSS Distance Education eTeacher Training Course<br>• Must hold a valid employment contract with the CNMI Public School System | September 28, 2021 – Until Filled | Office of Instructional Technology & Distance Education |
| PSS-2021-103 | Administrative Assistant | Ungraded | $16,100.00 - $26,673.82 | MINIMUM QUALIFICATION REQUIREMENTS:<br>• Graduation from a High School, plus one (1) years work related experience. | September 28, 2021 – Until Filled | Office of Student & Support Service, Athletics Program |
| PSS-2021-107 | Sports Program Coordinator | 05-1/12 | $19,569.65 - $33,470.75 | MINIMUM QUALIFICATION REQUIREMENTS:<br>• Graduation from an accredited college or university with an Associate's degree plus four (4) years' work-related experience. | September 28, 2021 – Until Filled | Office of Student & Support Service, Athletics Program |
| PSS-2021-099 | Teacher Aide – 2 Positions<br>(1 Tinian, 1 Rota)<br>(Amendment) (Re-announcement) | Ungraded | $16,588.00 - $28,363.20 | MINIMUM QUALIFICATION REQUIREMENTS:<br>• Teacher Aide II: Graduation from High School plus minimum of 24 college credits.<br>• Teacher Aide III: Graduation from a US Accredited University with an Associate's Degree or minimum of 60 college credits. | October 18, 2021 – Until Filled | Office of Instructional Technology & Distance Education |
| PSS-2021-102 | Internal Auditor (Amendment)<br>(Re-announcement) | Ungraded | $70,000.00-$80,000.00 | MINIMUM QUALIFICATION REQUIREMENTS:<br>• Bachelor's Degree and work-related experience in large organization finance, accounting, or related fields.<br>• Three (3) to five (5) years demonstrated experience in internal audit or compliance. Graduated degree may be substituted for internal audit experience.<br>• Knowledge of laws and regulatory auditing standards, such as the Generally Accepted Accounting | October 19, 2021 – November 02, 2021 | PSS, Office of the State Board of Education |

**INTERESTED APPLICANTS MAY OBTAIN DETAILED JOB DESCRIPTION WITH QUALIFICATION REQUIREMENTS AND SUBMIT COMPLETED APPLICATION FORMS AND ALL REQUIRED DOCUMENTS TO THE PSS HUMAN RESOURCES OFFICE AT CAPITOL HILL, BUILDING 1202, ISLETA COURT, SAIPAN or VIA EMAIL TO: LUCRETIA DELEON GUERRERO AT LUCRETIA.DELEONGUERRERO@CNMIPSS.ORG, THE HUMAN RESOURCES OFFICE AT PSSHR@CNMIPSS.ORG or MAILED TO: CNMI PUBLIC SCHOOL SYSTEM, ATTN: HUMAN RESOURCES OFFICE, P.O. BOX 501370 CK, SAIPAN, MP 96950, TEL. NOS. (670) 237-3037/3052. FREE COPY.**

# Appendix K: Online Course Evaluation Rubric

Note: There are four major dimensions to the online course evaluation rubric:

- Structure -- Context/Organization/Environment
- Content -- Presentation of Information
- Processes -- Human Aspects/Relationships/Interactions/Quality
- Outcomes -- Mastery of Content and Course Evaluation

There are both quantitative and qualitative measures. Each element within the overall dimension can be scored with 0 to 3 points, with a numerical total summed for each dimension. Qualitative evaluation can be accomplished via comments on each element, each dimension, or overall course design. (https://uncw.edu/jet/articles/vol7_2/online%20course%20construction%20and%20evaluation%20rubric.pdf)

**Structure – Context/Organization/Environment**

| | Element | 0 | 1 | 2 | 3 | Score | Comments |
|---|---|---|---|---|---|---|---|
| STRUCTURE | **Course Design Framework** | No framework for guiding student throughout the course, navigation to course areas is not apparent | Limited framework is apparent – the home page includes beginnings of navigation to course areas | The framework for course delivery is apparent and includes limited guidance for navigation throughout the course | Framework for delivery is apparent<br><br>The home page is designed to ensure ease of navigation throughout the course | | |
| | **Course Design – Segmenting of Content, i.e., Learning Units or Learning Modules** | No modules/course segments exist for content, only assignments are listed | Several course modules exist, but progression between course modules/ information segments is not apparent | Course modules are self-contained and progression is less apparent and not based on learning objectives | Course modules are self-contained and have varying lengths depending on the learning objectives, with apparent progression to facilitate learning | | |
| | **Appearance of Material** | Poor color choice – harsh to eyes/difficult to read<br><br>Icons are "busy" and not uniform in style and appearance | Color scheme minimal<br><br>Minimal uniformity of icon style | Color scheme is acceptable<br><br>Icons are acceptable in uniformity of style | Appearance is appealing/ easy to read<br><br>Appropriate color choice that is easy on the eyes<br><br>All icons are uniform in style and color | | |

| STRUCTURE | Element | 0 | 1 | 2 | 3 | Score | Comments |
|---|---|---|---|---|---|---|---|
| | **Scrolling Within the Course or Within Documents** | Requires extensive scrolling to find information within frames | Framed information somewhat lengthy, requires more than minimal scrolling | Information is appropriately framed with more than minimal scrolling required | Information is appropriately framed with minimal scrolling required | | |
| | **Assignment Navigation** | Assignments within the course are difficult to find | Assignments within the course are found with minimal searching | Assignments are easily found within the course | Assignments are easily discernable within the course<br><br>A site map is available | | |
| | **Accessibility** | There is no evidence that students with disabilities are accommodated in this course | Minimal efforts are obvious related to accommodation of students with disabilities | Limited accommodations are evident with some obvious alternative delivery methods | Accommodations to students with disabilities are evident and alternative delivery methods are available | | |
| | **Variety of Assessments**<br>**- Assignments**<br>**- Discussions**<br>**- Quizzes**<br>**- Surveys** | No variety in assessments is evident<br><br>Instructions for assessments are minimal and unclear | At least two types of assessments are evident<br>Instructions are provided, but are confusing | At least two types of assessments are evident<br><br>Instructions are provided but are limited | At least three types of assessments are evident<br><br>Clear and concise instructions are provided | | |

| STRUCTURE | Element | 0 | 1 | 2 | 3 | Score | Comments |
|---|---|---|---|---|---|---|---|
| | **Use of Online Gradebook** | Online gradebook is not used | Partial use of online gradebook; only some of the assessments are reflected in the gradebook | All assessments are reflected in the gradebook, but only some grades are posted | Online gradebook is fully used<br><br>All of the assessments are reflected in the gradebook and all grades are posted | | |
| | **Learning Resources** | No learning resources are posted | Learning resources are minimal | Learning resources exist in different areas but are not clearly articulated and links may or may not be active | Learning resources and links are comprehensive, clearly articulated, and current/active | | |
| | **Appearance of Learner Support/ Feedback**<br>**- Feedback Methods** | Communication methods with the students are not evident | Communication methods exist but are not well used | Communication methods with the students exist and are used more than 50% of the time | Communication methods with the students are comprehensive via accessibility to email and discussions | | |
| | **Context for Learning Community where students interact with one another and the instructor**<br>**- Discussions**<br>**- Chat Rooms**<br>**- Virtual Classes** | No evidence of the establishment of a learning community | Learning community is established via at least two discussions | Learning community is established via at least three discussions | Learning community is established via regular discussions and virtual classes/chats | | |

| | Element | 0 | 1 | 2 | 3 | Score | Comments |
|---|---|---|---|---|---|---|---|
| STRUCTURE | **Use of Technology/ Course Tools,** (i.e., Email, Asynchronous Discussions, Synchronous Chat Rooms/ Virtual Classes, Calendar, Gradebook, External Links, Quizzes/Surveys, Group Areas, Student Home Pages and Presentations, etc.) | Only one to two course tools are used in course delivery | Only three course tools are used in course delivery | Only four or five course tools are used in course delivery | More than five course tools are used in course delivery | | |
| | **Use of Instructional Media** (i.e. Media Presentations, Animated/ Voiceover Presentations, Learning Modules, Notes, Streaming Video, Internet Links, Case Studies, etc.) | Only one to two varieties of instructional media are used in course delivery | Only three varieties of instructional media are used in course delivery | Only four or five varieties of instructional media are used in course delivery | More than five varieties of instructional media are used in course delivery | | |

**Content – Presentation of Information**

| | Element | 0 | 1 | 2 | 3 | Score | Comments |
|---|---|---|---|---|---|---|---|
| CONTENT | **Content of Learning Modules or Content of Learning Segments** | No learning modules/units in course | Content in modules/units is inconsistent<br><br>Lacks relevant material related to learning objectives and material is not current (resources used > 5 years)<br><br>Does not have an introduction or a summary/ conclusion | Limited consistency from module to module<br><br>Resources current and information relevant to learning objectives<br><br>Only an introduction or summary/ conclusion is included | Modules/units are designed and presented in a uniform and consistent manner<br><br>Resources are current (< 5 years) and information is relevant to learning objectives<br><br>Information presented is manageable with both an introduction and a conclusion | | |
| | **Discussions - Synchronous - Asynchronous** | No new information is presented or ideas previously stated are not reinforced in either asynchronous or synchronous discussions/ interactions | Faculty reinforces student ideas and student-presented information during asynchronous or synchronous discussions/ interactions | Faculty adds limited new information during asynchronous and/or synchronous discussions or interactions with students | Faculty adds to the body of knowledge and information presented during asynchronous and/or synchronous discussions or interactions with students | | |
| | **Links** | No links to Web-based information are added to the learning modules or to the course | Minimal links are apparent in either the learning modules/units or the course; some are irrelevant | An appropriate number of relevant links add to the learning experience | An appropriate number of credible and relevant selected links add to the learning experience | | |

| CONTENT | Element | 0 | 1 | 2 | 3 | Score | Comments |
|---|---|---|---|---|---|---|---|
| | **Course and Unit Learning Objectives** | Learning objectives/goals are not identified | Learning objectives/goals are identified but are not always measurable, behavioral, or appropriate in number for the content and time of the course | Measurable, behavioral learning objectives/goals or unit objectives are identified for the course, and at least one learning objective engages the learner in activities of analysis and synthesis | Measurable, behavioral learning objectives/goals or unit objectives are identified in the introduction to the course and the number is appropriate for the content and time for the course<br><br>More than one learning objective engage the learner in activities of analysis, synthesis, and evaluation | | |
| | **Course Assignments, Readings, Activities and/or Projects** | Assignments, activities, readings, and/or projects within the course are not related to learning objectives | Assignments, activities, readings, and/or projects within the course can be related to the learning objectives | Assignments, activities, readings, and/or projects within the course have a discussion of the purpose of the assignment related to learning objectives | Assignments, activities, readings, and/or projects within the course have a discussion of the purpose of the assignment related to learning objectives and are appropriate and manageable | | |
| | **Writing Style (Syntax, Grammar, Punctuation & Flow)** | Course contains grammatical and sentence structural errors<br><br>Numerous typing errors are present | Basic principles of grammar and sentence structure are present<br><br>Numerous typing errors are present | Information within the course follows principles of grammar and sentence structure, and has few typing errors | Information within the course follows principles of grammar and sentence structure, and is without typing errors | | |

| CONTENT | Element | 0 | 1 | 2 | 3 | Score | Comments |
|---|---|---|---|---|---|---|---|
| | **Multimedia (Photos, Images, Video, Audio, etc.) and Metaphors Within the Context of the Content and Learning Experience** | Multimedia and metaphor not used in the presentation of course content | Minimal use of multimedia and metaphor in the presentation of course content | Multimedia used throughout the course with limited use of metaphor OR<br>A progressive metaphor was developed throughout the course, with a limited use of multimedia to illustrate course content | Multimedia used throughout the course along with a developed metaphor that reflects a progression of course content | | |
| | **Knowledge** | Limited expertise evident in presentation of content | Inconsistent expertise in content area evident in presentation of knowledge | Expertise in content area evident in presentation of knowledge throughout the course | Expertise in content area evident in presentation of knowledge and in interactions with students | | |

**Processes – Human Aspects, Relationships, Interactions, and Quality**

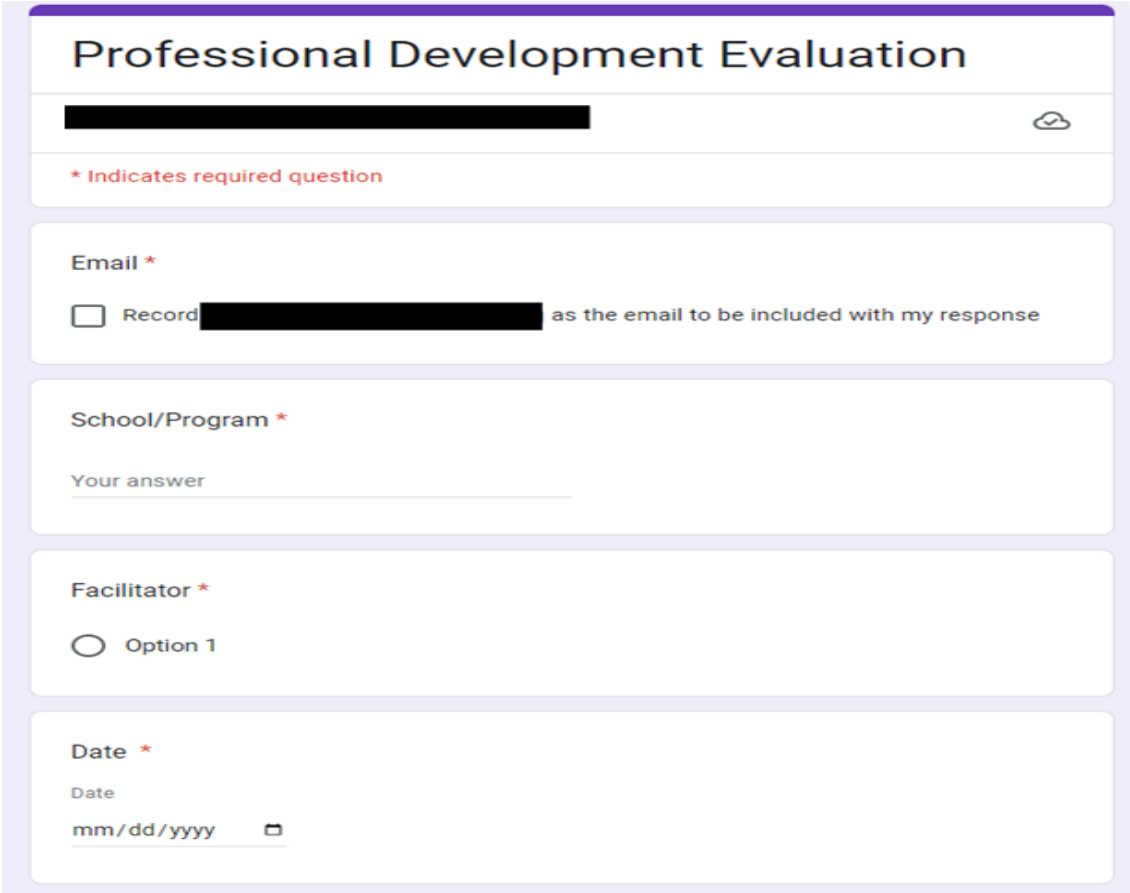
| | Element | 0 | 1 | 2 | 3 | Score | Comments |
|---|---|---|---|---|---|---|---|
| PROCESSES | **Interpersonal Interactions Faculty–Student Student–Student** | No evidence of interactions student-to-student and student-to-faculty | Minimal interactions are evident in either student-to-student or student-to-faculty exchanges | Both student-to-student and student-to-faculty interactions are present, but exchange of information and generation of ideas are superficial | Dynamic and thoughtful interactions are evident in student-to-student and student-to-faculty interactions, adding to a quality learning experience | | |
| | **Access to Faculty (Office Hours)** | No office hours are posted | Office hours are posted | Office hours are posted for both phone, face-to-face, and virtual times<br><br>Times vary to accommodate a variety of work schedules | Office hours are posted for both phone, face-to-face, and virtual times<br><br>Times vary to accommodate a variety of work schedules<br><br>Schedule of office hours increases frequency prior to due dates of major course requirements | | |

| | Element | 0 | 1 | 2 | 3 | Score | Comments |
|---|---|---|---|---|---|---|---|
| PROCESSES | **Assessment of Learning Styles** | No assessment of learning styles is available | Some information is provided about skills and personality required for online learning | Specific information is provided about skills and personality required for successful course completion | Specific information about skills and personality required for completion of the course is presented<br><br>Self-assessment tools are available for the learner, and feedback information regarding potential success with online courses is provided | | |
| | **Instructor and Learner Responsibilities & Guidelines for Online Learning** | No guidelines are established for the learner related to learner and instructor responsibilities | Only guidelines related to learner and instructor responsibilities are evident | Some guidelines exist that establish learner and instructor responsibilities, online communication, and/or techniques to support the online learner; but guidelines are confusing | Clear guidelines are established for the learner that include learner and instructor responsibilities, online communication/ netiquette, and techniques to support the online learner | | |

**Outcomes - Mastery of Content and Course Evaluation**

| | Element | 0 | 1 | 2 | 3 | Score | Comments |
|---|---|---|---|---|---|---|---|
| OUTCOMES | **Student Work Reflects Mastery of Course Objectives** | Student work reflects basic achievement of course objectives | Student work reflects average understanding and achievement of course objectives | Student work demonstrates above average understanding and achievement of course objectives | Student work demonstrates mastery of course content and course objectives | | |
| | **Student Work Reflects Analysis, Synthesis, and Evaluation** | Student work reflects basic knowledge, identification, or understanding | Student work reflects knowledge and some work reflects analysis of information | Student work demonstrates complexity with the majority of assignments below analysis, synthesis, or evaluation | Student work demonstrates progression of complexity from knowledge to the level of analysis, synthesis, or evaluation for major assignments | | |
| | **Online Course Evaluations** | No student evaluation is requested for the course | Student online evaluation input is requested at the end of the course | Student online evaluation input is requested at the midpoint and end of the course | Student online evaluation input is requested at the midpoint, end of the course, and after major assignments are turned in | | |
| | **Learner satisfaction with the online learning experience** | No rating scale for learner satisfaction | Majority of the learners rate the learning experience as not very satisfying | Majority of the learners rate the learning experience as satisfying | Majority of the learners rate the learning experience as highly satisfying | | |

Appendix L: 3-Day Professional Development Evaluation



Professional Development Evaluation

[redacted]

* Indicates required question

Email *

Record [redacted] as the email to be included with my response

School/Program *

Your answer

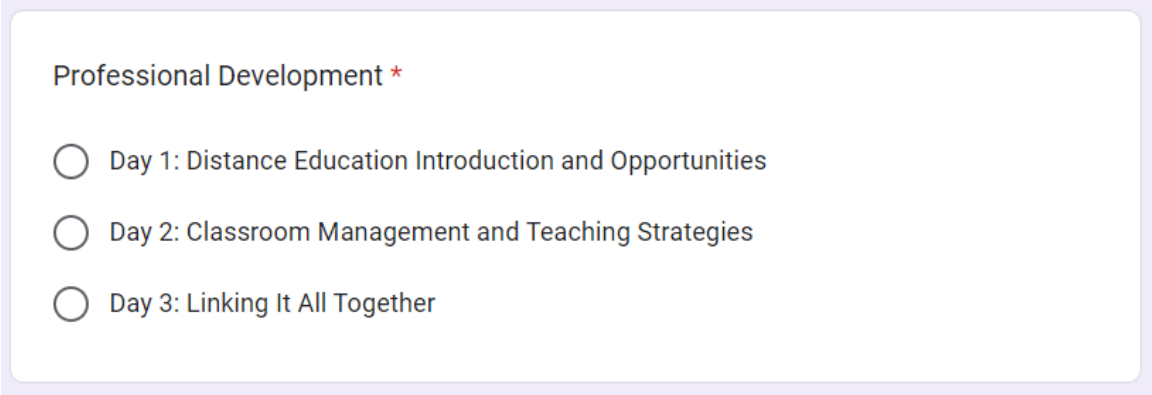
Facilitator *

Option 1

Date *

Date

mm/dd/yyyy



Professional Development *

- Day 1: Distance Education Introduction and Opportunities
- Day 2: Classroom Management and Teaching Strategies
- Day 3: Linking It All Together

Content *

| | Strongly Disagree | Disagree | Neither Agree nor Disagree | Agree | Strongly Agree |
|---|---|---|---|---|---|
| The objectives for today's session were clearly stated. | ○ | ○ | ○ | ○ | ○ |
| Today's session was aligned to its stated objectives | ○ | ○ | ○ | ○ | ○ |
| Today's session was useful and practical | ○ | ○ | ○ | ○ | ○ |
| Today's session advanced the development of my teaching capacity | ○ | ○ | ○ | ○ | ○ |

Process *

| | Strongly Disagree | Disagree | Neither Agree nor Disagree | Agree | Strongly Agree |
|---|---|---|---|---|---|
| Today's presentation increases my capacity to use data to improve my practice | ○ | ○ | ○ | ○ | ○ |
| Today's facilitators effectively modeled appropriate instructional strategies | ○ | ○ | ○ | ○ | ○ |
| The facilitators incorporated our experiences into today activities. | ○ | ○ | ○ | ○ | ○ |
| Time was allocated effectively today to deepen my understanding of the presented material. | ○ | ○ | ○ | ○ | ○ |

Context *

| | Strongly Disagree | Disagree | Neither Agree nor Disagree | Agree | Strongly Agree |
|---|---|---|---|---|---|
| There were opportunities to collaborate on shared activities | ○ | ○ | ○ | ○ | ○ |
| Today's session advanced my understanding of how to engage in a continous improvement cycle | ○ | ○ | ○ | ○ | ○ |
| The organization of the learning environment met my learning needs | ○ | ○ | ○ | ○ | ○ |

What aspects of this professional development were most useful or valuable?

Your answer

How would you improve this professional development?

Your answer

Would you recommend others to attend this professional development in the future? Explain.

Your answer

Submit

Clear form

Appendix M: Identifying Emergent Themes

| Apriori Code | Description of Code | Brief Example for Reference from Interview of Certified CTE Teacher | Brief Example for Reference from Interview of Non-Certified CTE Teacher | Common Categories (Axial Code) | Themes (Axial Code) |
|---|---|---|---|---|---|
| Unconcerned | | | | | |
| Self | | | | | |
| Task | | | | | |
| Impact | | | | | |

Appendix N: A Priori Codes, Categories, Emergent Themes

| A Priori Code | Category | Emergent Theme |
|---|---|---|
| Unconcerned | Navigation | 21st Century Knowledge/Skills |
| | Standard Norm | |
| | Need Immediate Feedback | Student to Student/Student to Teacher Engagement |
| | Peer Interaction | |
| | Teacher to Student Interaction | |
| | Independent Learning | Motivational Factors |
| | Power of Choice | |
| | Monetary Compensation | |
| | Lack of Interest | Quality/Relevant PD |
| | Technology Inclined | |
| | Lack of Knowledge | |
| | Quality Professional Development | |
| | Certification vs. Efficiency | |
| | Accessibility | Accessibility and Parental Involvement |
| | Absenteeism | |
| | Quality of Internet Service | |
| | Age Appropriate | |
| | Time Management | |
| | Hands-On | |

| | | |
|---|---|---|
| Self | College Career Readiness | 21st Century Knowledge/Skills |
| | Student Progress | Student to Student/Student to Teacher Engagement |
| | Student Engagement | |
| | Monetary Compensation | Motivational Factors |
| | Beneficial when away for long periods of time | |
| | Independent Workspace and Time | |
| | Flexible Hours | |
| | Disagree with Policy | Quality/Relevant PD |
| | Well Prepared and Structured | |
| | Parent Involvement | Accessibility and Parental Involvement |
| | Parent Support | |
| | Accessibility Issue | |
| | Resource Availability | |
| | Gained Experience | |
| | Fidelity of Work | |
| Task | | 21st Century Knowledge/Skills |
| | One to One Office Hours | Student to Student/Student to Teacher Engagement |
| | Student Engagement | |
| | | Motivational Factors |
| | Online Learning Platforms | |

| | | |
|---|---|---|
| | Structured Lesson | Quality/Relevant PD |
| | Navigation | |
| | Clear and Concise Expectations and Instructions | |
| | Quality and relevant PD | |
| | Multimedia Tools | |
| | Course relevance/alignment for online learning | Accessibility and Parental Involvement |
| | Internet/Technology Accessibility | |
| | Home/Family Circumstances | |
| | Quality of Media | |
| | Parent Support/Involvement | |
| Impact | Multimedia Tools | 21st Century Knowledge/Skills |
| | Quality of Technology Skills or process | |
| | Student Engagement | Student to Student/Student to Teacher Engagement |
| | Monetary Compensation | Motivational Factors |
| | Self Challenge for Online Teaching | |
| | Online Educational Platforms | Quality/Relevant PD |
| | Lesson Planning | |
| | Appropriate Online Resources | |
| | Assignment Accommodations | |
| | Accessibility | Accessibility and Parental Involvement |
| | Need Hands on Experience | |