

# Individual Adaptability and Availability of ICT Facilities as Predictors of Readiness of Public School Teachers in an Online Teaching Environment

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## ABSTRACT

In an effort to restrict the spread of the COVID-19 pandemic, many schools and institutions are switching to online learning completely in place of face-to-face classes. Many teachers, however, were shown to be not ready to teach online. This study utilized descriptive correlational research design regarding individual adaptability and availability of ICT facilities as predictors of the respondents' readiness in an online teaching environment. The data were generated from the teachers of public secondary schools in Region XI, Philippines. Sets of adapted survey tools with a five-point Likert scale were used to gather data from the respondents. The statistical tools used to treat the data were mean, standard deviation, and multiple linear regression. The results showed that teachers were highly adaptive to online teaching environment. Also, ICT facilities were highly available, and teachers were ready for an online teaching environment. Both teachers' individual adaptability and availability of ICT facilities influenced teachers' readiness in an online teaching environment with the availability of ICT facilities as the best predictor.

**Keywords:** Education, individual adaptability, ICT facilities, teachers' readiness in online teaching environment, Philippines

## INTRODUCTION

### Background of the Study

Even before the COVID-19 pandemic, the readiness of teachers to teach online has become an issue in the education sector in many countries. In fact, it was found out that faculty new to online teaching felt they were not ready to teach online and needed technical and pedagogical support, and time-management strategies (Lichoro, 2015; Martin et al., 2019; Mwapwele et al., 2019).

In the United States, it is disclosed in the study of Lichoro, (2015) that several faculty members had difficulties as they transitioned from face-to-face to online teaching, and several faculty members admitted that they had little idea on how to get started with teaching online and had to rely more or less on guessing on what they believe would work. Moreover, the study of Mwapwele et al. (2019) indicated that there were high levels of discomfort expressed regarding the challenges to teaching learners where a large number (63%) of teachers did not know how to fix technical problems, and more than half (51%) do not have the necessary personal ICT skills.

In addition, another study found out that most of the teachers in different states in India are not favorable in online teaching because of other factors such as slow internet speed and lack of technological skills that hinders in the utilization of technology and lowers the interest and motivation of teachers (Tyagi et al., 2017). In this aspect, the schools should have a plan of action on how the transition will happen since their

teachers need to be equipped with skills and knowledge essential for distance learning (Lapada et al., (2020).

Apparently, the Philippines is not exempted from this issue. Many teachers are not prepared to teach online due to the unexpected change of teaching modality brought by coronavirus pandemic. In fact, it was reported that there were only about 40 percent of public-school teachers have been trained through the Educational Technology Unit of the DepEd's Information and Communications Technology Services (ICTS) to conduct distance learning (Cruz, 2020). Besides, when it comes to digital readiness, Doculan (2016) alluded that the use of technology in the country is still in its infancy stage and shifting to e-learning platforms is still on its planning stage.

Moreover, despite the reality that the Philippines' internet connectivity is considered too slow (Porcala, 2020) several web-based trainings were set by the Department of Education to address the needed competence of teachers in adapting the new modality of teaching and learning. As a matter of fact, in Davao City, teachers have been equipping themselves with online learning skills as classes shift into a largely digital environment (Cudis, 2020). However, it was stated that schools were asked to conduct self-readiness assessments in preparation for the class opening, and those teachers who rated themselves below 50 percent will receive assistance which includes professional development training and physical and psychosocial support (Cua, 2020).

Over the years, the lack of information and communications technology (ICT) infrastructure policies and the expertise of the teachers to teach online have been evident as barriers to effectively implement the online teaching and learning as revealed in many studies. Yusuf et al. (2013) disclosed that the non-availability of ICT facilities hinders access and inadequate training of teachers on the application affect the productivity. However, Ghavifekr and Rosdy (2015) emphasized that if the technology integration is given emphasis from the start of the implementation, then it will result in huge success and benefits for both teachers and students.

As reported, 48% of public schools or 22,645 schools have Internet connections and 18 % or 8,478 public schools are in areas with ISPs or Internet Service Providers but have yet to be connected (Llego, 2020). Further, Party-list Representative pointed out that virtual classes would be a challenge, particularly in areas that do not have stable internet connections (Dela Cruz, 2020). Likewise, the proposed blended learning is still a challenge to both parents and teachers since aside from there are areas with no steady internet connection, the teachers do not have their own laptops to be used for online teaching (Torres, 2020) that would impact readiness of teachers in online teaching.

Furthermore, in providing the facilities, teachers must be able to adapt to rapid technological changes and required technological skills (Ertmer & Ottenbreit, 2010). Additionally, most literature discussed teachers' adaptability or flexibility as a central factor in effective teaching and learning (Bransford et al., 2005; Corno, 2008; Kunter et al., 2013; Parsons et al., 2011). Besides, Collie et al. (2018) stressed that teachers need to adapt in unexpected situations, diverse range of learners, interact with colleagues and integrate new and changing knowledge in order to successfully navigate the demands of their work. Thus, adaptability is highly relevant to teachers given that teaching work involves responding to and managing constant change (Collie & Martin, 2015).

Several studies were conducted and countless surveys commissioned investigating teachers' readiness in online teaching (Callo & Yazon, 2020; Cutri et al., 2020; Gay, 2016; Lichoro, 2015; Markle, 2016; Martin et al., 2019; Ncube et al., 2014; Ventayen, 2018) however, most of the researches conducted were centered on its perception, performance, and competences. There are also studies focused on the assessment of the availability and utilization of ICT for teaching and the adaptability of teachers for effective teaching and level of readiness as influenced by demographic factors, attitudes, and commitment. The intensive review of literature reveals the dearth of researches focused on the subject of teachers' readiness in online teaching environment as influenced by individual adaptability and availability of ICT facilities specifically in this time of pandemic and in public school sector specifically in Region XI. Thus, the researcher was inspired to achieve such endeavor to contribute to the body of literature.

In addition, another aspect that the researcher dealt with in conducting this study is the possibility of instituting a helpful set of guides on online involvement and strategies and improvement since several teachers have been observed to have depreciating readiness in terms of online teaching integration due to low assessment on teacher's readiness. Further, this study may possibly strengthen the integration of ICT in their respective schools through the availability of suitable ICT facilities. Moreover, the need to enhance teaching competencies in an online environment is particularly highlighted to attract attention from the education authorities through school leaders who will provide substantial learning in the educational system for teachers and students.

More importantly, the findings of this relevant investigation will be disseminated through research conferences, seminars and training in clusters and division level, school meetings, and sessions and to be submitted and published for a wider range of information. Moreover, copies will also be sent to the library of the University of the Immaculate Conception and to the Department of Education Region XI as way of sharing the significance of this endeavor.

### **Purpose Statement**

The intent of this study was to address the relationship of individual adaptability and availability of ICT facilities on the readiness of teachers in an online teaching environment. A survey questionnaire was used to get the data to predict the influence of individual adaptability and availability of ICT facilities on the readiness of public-school teachers in an online teaching environment in Region XI. Consequently, to validate the findings of this study, it involves collecting, analyzing and interpreting data that reflect the participants' viewpoint, which strengthen and enriches the findings of the study.

### **Research Questions**

This study was conducted to determine if the individual adaptability and availability of ICT facilities predict the readiness of teachers in an online teaching environment in Region XI. Specifically, it sought answers to the following research questions:

1. What is the status of individual adaptability, availability of ICT facilities, and teacher's readiness in an online teaching environment?
2. Do individual adaptability and availability of ICT facilities significantly influence the readiness of teachers in an online teaching environment?

## **LITERATURE REVIEW**

Perceptions and views of experts on significant related topics that have extensive contributions to the conceptualization of this study are presented below. This section is focused on two variables covers a review of the related literature and studies that were conducted in the international and local settings.

### **Individual Adaptability**

Most employers want to hire people who are versatile to changing circumstances and work courses. Having adaptability skills signifies one is receptive and willing to learn new things, embrace more challenges and make adjustments to conform to changes within the work environment (Indeed Career Guide, 2020). Individual adaptability is a requisite for teachers that requires flexibility in handling student concerns and demonstrating quick response to new roles. Collie & Martin (2016) emphasized adaptability as an important to teachers in order to effectively manage changes in classroom, staffroom and beyond. Also, Corno (2008) emphasized on teaching adaptability that the teachers must be able to address the needs of the students.

Individual Adaptability is a collection of skills that includes a person's ability to adapt to changes in his or

her environment. Being flexible in one's job entails being able to adjust rapidly to shifting conceptions, obligations, opportunities, developments, policies, and other workplace advancements. Soft skills such as interpersonal, communication, and creative thinking may also be required (Indeed Career Guide, 2020; Willkomm, 2019;).

Also, several scholars have voiced uncertainty for this type of research, despite the fact that the literature on adaptation is just beginning to grow (Ployhart & Bliese, 2006; Baard et al., 2014; Pulakos et al., 2006). They said that the definitions of its ideas were vague, and that the researchers had yet to figure out how to hypothesize and quantify adaptability.

Furthermore, a new set of scholars considers adaptability to be a distinct characteristic, defining it as an individual's ability to change to varied undertaking, social, and environmental systems, including his or her talent, viewpoint, readiness, and/or drive (Ployhart & Bliese, 2006). However, another body of research views adaptation as being specific to a single job and out of context (Ivancic & Hesketh, 2000).

Moreover, Ployhart and Bliese (2006) recently developed the "I-Adapt" theory of individual adaptability. Individual adaptability was characterized as an individual's ability in this notion. It also takes into account the person's ability, viewpoint, willingness, and/or motivation to adapt to diverse work, social, and environmental structures. For these reasons, the traditional definition of individual adaptability will be used in this study, such as being necessary in response to relative or situational changes such as the online teaching environment.

Additionally, one of the benefits of working in an increasingly globalized and interconnected world is being aware of the potential conflicts that can arise when various teams from different cultures collaborate. Individual and organizational productivity may be harmed by dysfunctional groups. It may also have an impact on the company's culture and ability to recruit. It is for this reason that personnel must be culturally adaptable.

**Cultural Adaptability.** Culture shapes behavior and leads to a convergence of miscommunication and misperception. Leaders and practitioners in any business who grasp the characteristics of culture, are aware of its influence on behavior, and identify ways to be more adaptable have a significant edge over those who have only a rudimentary awareness of these notions (Johnson et al., 2019).

According to Ellevsen (2018), cultural adaptability is defined as a person's willingness and ability to change how they communicate, motivate, and manage across nations and cultures. In today's increasingly globalized society, cultural adaptation is seen as a critical leadership talent and a must-have personal commitment. Cultures are fascinating and complex, and anyone communicating must understand and appreciate the cultural lens through which the audience will recognize the message.

Likewise, Cromarty (2020) defines cultural adaptability as a person's ability to change his or her communication and management style depending on the culture and setting in which he or she is employed. It's also known as cultural intelligence, and it's defined as the belief and acceptance that everyone has various perspectives, approaches, and attitudes depending on their cultural background. Cromarty further underlined that cultural adaptability helps people to recognize and respect one another's differences. People will be enabled to work around these potential obstacles and provide a superior result in this manner.

In addition, boosting a worker's cultural flexibility can lead to a healthier and more productive workplace. It also lowers the possibility of inciting conflict between different cultures inside an organization (Naeem, 2019; Nesbit & Lam, 2014).

However, teachers who are adaptive to different cultures have high level of social support such as they are

very comfortable when interacting with other individuals who have different values and customs. Zhou & Lin (2016) which found that social support strengthened the relationship of adaptability and life satisfaction. Further, the individuals who possess high level of adaptability skills are receptive and are prepared to learn new things, undertake new challenges, and make adjustments to conform to transitions in the workplace Ployhart and Bliese (2006), and that they are always willing to adapt to the changes in their work environment.

**Work Stress Adaptability.** Adaptability is a soft skill that demonstrates the ability to learn new abilities and behaviors rapidly in response to changing circumstances. Recent studies (Ployhart & Bliese, 2006; Wang et al., 2011) have begun to look into individual adaptability as a trait related to work stress situations in general, rather than as a performance or task-related characteristic of individuals or teams, or as a trait only relevant to specific work contexts. It's uncertain how much adaptive performance on one task can be applied to other tasks. If, on the other hand, an individual views individual adaptability as an individual-level trait, he or she is more likely to behave in this manner under a variety of job stress conditions.

Pulakos et al. (2000) proposed an eight-dimensional taxonomy of adaptive job performance, one of which is dealing with work stress. Handling crisis scenarios covers how employees should act in an emergency, as well as how they should assess, create priorities, stay focused, and make judgments in unforeseen events.

Evidently, in every business, a week barely goes without some significant adjustments that may have an impact on employee performance. Most businesses currently regard adaptability as part of the job description when hiring new employees (Wilson & Walters, 2017), because they believe it is crucial for the employee's growth and progression. An individual that displays work stress adaptation is malleable and capable of adapting successfully to any working environment, even if things do not go as planned. These employees are usually able to operate independently or as part of a team. Furthermore, Agai-Demjaha, et al. (2015) and Maphalala (2016) found in their research that teachers can effectively manage work-related stress if they feel the support of co-workers, friends and family, and if they have better relationship with colleagues

Moreover, Fiori et al. (2015) showed results that employees with higher career adaptability experienced job satisfaction and lower work stress. Likewise, this statement was strengthened the study of Kabito & Wami (2020) which revealed the association of job relationship with work-related stress. Teachers normally isolate themselves from things that may trigger stress.

**Interpersonal Adaptability.** According to Wilson (2018), adaptability exists within a larger context of interpersonal and interactive skills, implying a link between individual and team adaptability. In a situation marked by instability, ambiguity, intricacy, and indistinctness, adaptability is essential. It necessitates taking into account both positive and negative aspects; it also necessitates anticipating rather than reacting to changes. Receptiveness, suppleness, pliability, and dexterity are all different types of dexterity.

Furthermore, Wilson emphasized that adaptability is prompted by one's creativity rather than being imposed on one's surface by requirements from one's organization or superior, or by an external unforeseen event. It can lead to significant shifts in performance, reasoning abilities, and perspectives. In some cases, minor adjustments are all that is required. Furthermore, human resource interests might influence an employee's ability to contribute to the company's medium and long-term success.

On the same note, scholars have postulated interpersonal adaptability as a unique aspect of individual adaptability (Oliver, 2014; Ployhart and Bliese (2006); Pulakos, et al. 2000). It can include the flexibility to act authoritative and gregarious depending on the situation (Paulhus & Martin, 2018), as well as the ability to adapt to a new communication structure in a team (Kozłowski et al., 2017). The similarity between both definitions stems from the idea that interpersonal adaptability is an abstraction of interpersonal effectiveness

that takes into account the importance of persons' interpersonal beliefs and emotional states within a certain interpersonal reciprocity.

Likewise, Baard et al. (2014) claim that research on individual variations and adaptability has concentrated on different conceptualizations of adaptive performance. First, as a performance construct (Pulakos et al., 2000), and then as a construct of individual interpersonal differences (Pulakos et al., 2000). (Ployhart & Bliese, 2006). The notion that adaptability is a quality, on the other hand, is not new. It was shown to be a universal flexibility attribute that aided in the learning of one's social surroundings. According to Baard et al., (2014) an adaptable individual encountering a new social group would adapt to the group's conventions and change his or her actions to blend in. While Allport's focus was on the sociological nature of humans rather than adaptability, his view of adaptability is significant since it established it as a skill that assists individuals in adjusting behaviors when required by changing circumstances.

Diamantidis and Chatzoglou (2019) revealed results that employee-related factors impact employee performance. Also, the very high level of adaptability skills allows workers to establish a stable relationship (Oliver and Lievens, 2014). These authors emphasized that employees could adapt easily to a new workplace and easily work with their peers.

**Learning Adaptability.** People are expected to enhance their ability to adapt to new conditions and acquire new abilities as skill petitions continue to adapt to new technology and employment requirements. Employees are expected to be more accountable for their skill development as the working environment grows more diverse. Also, Morgan (2016), a Forbes contributor, forecasts that the benefits of entering a firm with a broad variety of knowledge will become a thing of the past with the existence of more learning adaptability with technologies in the workplace. Being a flexible and productive employee will become a top goal.

Similarly, one of the first to define adaptive performance at work were Allworth and Hesketh (1999), who defined it as behaviors exhibiting the ability to cope with change and transfer learning from one activity to another as job needs change. In addition, Pulakos et al. (2010) expanded on their definition of adaptability as a performance component, describing it as "anything that changes behavior to match the needs of the environment, an event, or a new circumstance."

Likewise, individual flexibility was also given by Zorzie (2012) in the job context. Adaptability is required as today's workers grow more migratory and have fewer links with their employers, as it aids employees in a variety of jobs and professions. Individual adaptability is a meta-competency, according to Morrison and Hall, and mastery of it paves the way for mastery of other abilities. The authors distinguish between adaptability and adaptation, which they define as "the ability to acclimate or adjust" and "the method or activity involved in adjusting to a new condition." Individual adaptability is made up of four components, according to them. The first two are standard response learning and adaptive motivation definitional elements, which refer to monitoring the environment and adapting behaviors to deal with changing situations, as well as having the motivation to apply adaptive competence and exhibit these behaviors.

Moreover, Baard et al. (2014) provided a complete definition of workplace adaptability in a recent article review evaluating all organizational methods to adaptation. "Cognitive, affective, motivational, and behavioral adaptations made in response to the demands of a new or changing environment, or situational demands," they characterized it. Their definition, on the other hand, excludes adjustments that occur in anticipation of new or changing events. Individuals' tendency to adjust behaviors before an actual change is ignored when adaptability is viewed solely as a response to change. If a promotion opportunity emerges, for example, employees may begin to learn new responsibilities that will put them in a better position. Although no change has occurred, the employees' behaviour have changed as a result of their anticipation of change. Individual adaptability will be defined in this paper by Ployhart and Bliese (2006), who define it as an

individual's inclination to adapt to match the environment before or after a change.

Shoss et al. (2011) claimed that adaptive performance reflects effectiveness and gains new competencies. Such competencies are the acquisition of new methods and skills relevant for a job. Similarly, Soe (2018) concluded that the professional development of teachers is a very important factor for improving teachers' classroom practices.

**Uncertainty Adaptability.** Phegan (2013) stressed that in managing uncertainty, the key principle of "survival of the fittest" postulated by Charles Darwin in his *On the Origin of Species* published in 1869. With the current state of affairs, an indefinite workplace creating the company from the past poses an unwelcome threat. The workplace will no longer be a stable setting where a hierarchical structure, policy manuals, and thorough processes for each possibility are the right responses.

Employees who are burdened by old institutions and dogmas can respond quickly and effectively in a changing, unpredictable, and chaotic environment. As a result, being highly adaptive to these unknown shifts is critical to fast responding to a changing work environment. Although it is impossible to forecast where changes will occur, the risk can be reduced if every person is completely dedicated and engaged, quickly responding to change by feeding information into the organization, which they receive on a regular basis through their participation. The capacity to adapt well to change is a quality that most businesses look for in their employees.

Likewise, Prince (2020) asserted that each of us has the basic ability to adapt. She also mentioned that the beauty of life is found in the constant change of the environment. To be adaptive in the face of uncertainty, an employee must focus his or her energy on things that are within his or her control, such as daily routine duties, self-care, and the type of job one can take on or reflect on the current situation honestly.

In addition, rather than focusing on the paradigm of individual adaptation, subsequent studies have concentrated on the framework of individual adaptability. Some researchers have moved their focus to adaptive or flexible leadership, which is defined as a leader's ability to cope with unpredictability (De Meuse et al., 2010; Kaiser & Overfield, 2010; Nelson et al., 2010; White & Shullman, 2010; Yukl & Mahsud, 2010). This has been defined as a leader's tolerance for uncertainty (White & Shullman, 2010), changing leadership styles as contexts change (Kaiser & Overfield, 2010; Yukl & Mahsud, 2010), leaders' learning and application of knowledge to new conditions (DeMeuse et al., 2010), and the previously conferred theory of adaptive capability (Nelson et al., 2010). Although the details of these definitions differ, they nonetheless center on leaders and how they deal with difficult or dynamic situations.

Furthermore, individuals who are able to effectively respond to uncertainties demonstrate capacity which is important for them (Collie & Martin, 2016). Baloran & Hernan (2020) opined that the ability of the teachers to manage uncertainties at work during this time of pandemic contributes to their high level of commitment which could lead to provide continuous quality education for students. Thus, individuals who are oftentimes committed to their work and are fully engaged to respond to whatever uncertain situations in the school which is important in minimizing the risks of the said unpredictable situations.

**Crisis Adaptability.** The majority of people presently believe that the current scenario is similar to a huge war, which most have never witnessed. While attempting to grasp and adjust to constantly changing situations, such as working remotely, home-schooling the children, and the feeling of being shut down, a highly long-term adaptability appears.

As a result, in order to remain flexible at this time of crisis, people must focus their efforts on things they can control, such as their daily activities, self-care, and jobs that they can realistically undertake during this crisis. To adjust successfully to this crisis, one must focus on tiny things that one can manage (Prince,

2020). Congruently, in a study comparing edge-teams with functional teams, Jobidon et al. (2013) discovered that edge teams perform better before a key event, whereas functional teams can effectively react shortly after the incident. It also showed that after crucial events, the coordination of operations through edge-like teams appears to lose some stability.

Consequently, Girneata (2014) emphasized the necessity for employees and organizations to have the flexibility to adapt to unforeseen events and develop new skills. As a result, crisis adaptation is a necessary capability for the organization's survival in challenging times. Similarly, Muller & Goldenberg (2020) discovered that the well-being of teachers has been significantly impacted by the epidemic at this moment of crisis. As previously stated, issues such as increased workload, technological obstacles, and worries brought on by scenarios are driving forces for the aforementioned detrimental influence on well-being.

**Physical Adaptability.** Physical ability, according to Rothman (2014), is the ability to adjust one's environment. It emphasizes a person's ability to control his or her own body in order to accomplish what he or she desires. Pulakos et al. (2006) have proposed eight dimensions of adaptable performance, one of which is physically oriented adaptability. Physical ability is defined as "physically modifying one's nature to better suit the job environment" in their study.

Likewise, physical adaptability is a facet of adaptive performance that incorporates one's ability to adapt to a variety of physical variables (Pulakos et al., 2006). Noise, inclement weather, and a difficult environment are among these causes. Most jobs nowadays demand individuals to adjust rapidly and successfully to a variety of physical settings in the workplace, making it an important part of good performance in any position. Furthermore, when it comes to adjusting in a demanding situation, this component analyzes how physically focused and successful a teacher is.

In the same note, Rothman (2014) opined that physical adaptability refers to a person's ability to adjust to their current environment through their physical strength. As a result, it encompasses resiliency and self-efficacy, which refers to a person's ability to quickly rebound from change or adversity. Teachers' physical adaptation is important while contemplating the new teaching method. As a result, teachers must be adaptable and have enough time to provide meaningful learning to their students.

**Creativity Adaptability.** The ability to generate outstanding task-appropriate, consistent concepts is frequently defined as creativity (Sternberg, 2001). Creativity, in contrast to inventiveness, fosters creative creativity, whilst innovation is more expressive and beneficial in practical employment.

In the same way, Olsen (2020) said that today's management culture and style is generally based on teamwork rather than following the line of command. Furthermore, brainstorming, a unique problem-solving strategy, necessitates creativity, adaptability, and emotional intelligence. As a result, individuals who are unable or unwilling to participate will not advance in the organization. Also, Chapman and Clark (2020) also agreed that part of being creative is being able to adapt. Adaptability via innovation, on the other hand, gives more room for an individual to advance quickly within a corporation. Adaptability also entails creativity and the ability to think strategically, such as developing new concepts to advertise products or figuring out alternative ways to adapt to a changing market and using approaches to grow and improve inventive strategies. All of these demonstrate one's adaptive abilities (Gerrish, 2009; Gleib, 2009; Kok, 2018).

Moreover, the study of Orkibi (2021) revealed that creative adaptability has positive correlation with well-being. Further, creative individuals who have the capacity to adapt and cope with changing conditions display positive attitudes towards work. As pointed out by Runco (2014), creative individuals may sometime maintain psychological health.

As a result, the aspects of adaptability, as well as several traits of highly flexible and adaptable people



includes intellectual flexibility, receptivity to change, innovativeness and creativity are being highlighted (Keating, 2021; Kim & Pierce, 2013). When confronted with adversity, a creative person always comes up with new ideas. Moreover, adaptable people are resourceful. As a result, in every case, a contingency plan is required (Boss, 2015). Mitchell (2015) defines resourcefulness as the ability to identify and utilize available resources in order to attain a goal. Teachers must be resourceful, original, and creative in order to function well in a variety of contexts.

### **Availability of ICT Facilities**

Information and communication technologies (ICT) have evolved into essential tools that have had a transformative impact on how people perceive the world and live. The importance of ICTs in education and the world at large cannot be overstated nowadays. Communication technology such as telephones, fax machines, and computers connected to the internet are used to guide and expedite business nowadays. As a result of this situation, modern e-education, e-commerce, e-machine, e-government, and e-banking have emerged, among other technological advancements (Apagu & Wakili, 2015).

As such, several academics (Anya, 2017; Bamidele, 2016; Ofodu, 2017) define ICT as an invention including the use of electronic computers and other telecommunication technology, such as the internet, in all aspects of human life. Furthermore, According to Ofodu (2017) and Anya (2017), these technologies are being used to change the way people manage and process information, as well as the interaction in teaching and learning. Ansari & Khan (2020) pointed out that thorough utilization of advanced technology in teaching pedagogical facilitates student-teacher interaction.

Moreover, the availability of ICT facilities and services can be assessed based on the quantity of ICT facilities available in academic libraries for students to access and use when conducting research. The inability of students and other users to enhance their knowledge with educational software and earn valuable technology skills is hampered by their lack of access to these services. It should also be noted that the term “availability” does not only imply that these services are available; it also implies that they are accessible to users (Agim et al., 2018).

Similarly, Yusuf (2015) stated that the availability of ICT facilities in academic settings has influenced the quality and quantity of teaching, learning, and research in traditional and distance education institutions by providing dynamic, interactive, and engaging content as well as real opportunities for individualized instruction. The availability and use of these facilities can help students accelerate, improve, and expand their abilities, as well as influence and captivate them in their learning. They can also help students connect school experiences to work applications, contribute to significant changes in schools, and provide opportunities for students to connect school and the real world (Amin, 2013). According to Agi (2013) having ICT facilities can revolutionize and improve the learning environment.

As a result, Babajide and Bolaji (2018), Bryers (2004), Bamidele (2016), and Ofodu (2017) claimed that radio, television, computers, overhead projectors, optical fibers, fax machines, CD-ROM, internet, electronic notice board, slides, digital multimedia, video/VCD machine, and other ICT facilities are available for use in the teaching and learning process in technical colleges. Unfortunately, several of these resources are underutilized in technical colleges for teaching and learning methods. This could explain why teachers are hesitant to use them in the classroom. According to Ajayi (2008), these capabilities are used in a variety of ways, including a systematized feedback system, computer-based operation/network, video conferencing and voice conferencing; internet/global websites; and computer-aided instruction. It should be highlighted that the effectiveness of ICT-based approaches to teaching and learning is dependent on the availability and accessibility of these tools, as well as the teachers’ competence to use them.

In the same way, Ahammad (2019) asserted that learning how to utilize a computer successfully has become

critical for everyone. Spreadsheets, word processors, databases, CorelDraw, and other works related to accountancy, clerical and executive work, and science-technological fields today form an independent compendium of electronic operations that form the basic IT skills package. As employees recognize that technology puts their jobs in jeopardy and that the only way to feel safe is to know how to utilize it, the need for literacy in the use of ICT or computers grows. This has now become a source of anxiety among those who will be teaching and learning these abilities (Ahammad, 2019). ICT application shows a beneficial impact in the educational system, providing pupils with a better education.

Similarly, Ogunsola (2014) claimed that the use of communication tools such as e-mail, fax, computer, Internet, video conferencing, World Wide Web, and CD-ROM removes barriers of space and time, and opens up new learning opportunities. Through two-way video over terrestrial broadband networks, technology expands the ability of providing training to a large number of people. E-mail and an electronic conference system that streams across the telephone network allow students and lecturers to communicate. The use of the internet is required to acquire access to resource materials, people, and resources, as well as to display web sites generated by teachers and students.

Furthermore, according to Hornby (2010), Computer Aided Instruction (CAI) is a self-instructing method that combines the student's integration with pre-programmed educational resources and can be done either offline or online. It is an interactive teaching method in which a computer is utilized to provide instructional content and track student progress. CAI offers opportunities in the classroom for drill and practice, tutorials, simulations, demonstrations, designing, data collecting and retrieval, and game analysis, all of which are critical skills for technical teachers. Increased educational capability is also a result of technological advancement. Teachers now have better tools to work with thanks to the availability of affordable computer technology and mass storage media such as optical video discs and compact discs. Large amounts of data, such as encyclopedias or motion pictures, are stored on compact discs and flash memory sticks. The efficient use of ICT facilities in teaching and learning, according to Ajayi (2018), is dependent on the availability of these facilities and the teachers' capacity to use them.

Moreover, effective use of ICT for instructional purposes strengthens the teacher's ability to accommodate individual differences and fosters learners' involvement, participation, and understanding, which aids them in grounding their thoughts and feelings and, as a result, contributes to good academic performance in schools. ICTs are now recognized as quality assurance measures in curriculum administration. When ICT facilities are available and accessible for instructors to use in their lessons, this can be seen. This will assist kids in remembering and learning what has been taught (Hussain et al., 2010).

Mardiana (2020) accented that the qualified lecturers must have the attitudes to learn technology, knowledge in technology, ability, and skills. In the same vein, incorporating ICT into the teaching-learning process helps teachers to supervise and execute teaching and learning in a flexible manner, ensuring a learner-friendly learning environment (Tella et. al., 2017). The use of ICT facilities allows teachers to prepare the current generation for the workplace by presenting future-oriented technologies (Adeyemi, 2010; Yusuf & Onansanya, 2004). Yusuf (2015) further said that schools that use ICT in their teaching-learning process are more effective and productive, stimulating a variety of instruments to maintain and expedite instructors' professional growth. ICTs are seen as tools in the hands of instructors to revolutionize teaching and drive students to become enthusiastic and autonomous learners who work independently and collaboratively.

Furthermore, Ayeni and Ogunbameru (2013) claimed that maintaining ICT facilities is necessary to guarantee that they remain in excellent working order to satisfy the demands of teacher-student utilization. The teaching-learning environment will become more productive and successful as a result of this.

On the other hand, the study of Olaore (2014) on the impacts of ICT on education that ICT has a positive impact on education. Akingbade and Olaop (2019) discovered that numerous teachers have not taken use of

the benefits of specialization and instruction. Inadequate ICT facilities for the overcrowding of instructors and students, inadequate and insufficient infrastructural support, weak internet connection, low bandwidth, and poor maintenance of ICT facilities were all cited as causes for the low use of ICT in teaching and learning.

However, the mere presence of ICT facilities, on the other hand, does not imply that they will be used properly. Principals and school administrators must ensure that these facilities are in good working order and that they are constantly available for use, as any school's successful teaching-learning environment is dependent on the proper use of ICT and other school equipment. As a result, Ololube (2006) believes that when ICT facilities are used effectively, a higher percentage of educational goals are met.

### **Teacher's Readiness in Online Teaching Environment**

With the advancement of information technology and the penetration of telecommunications equipment into communities, teaching and learning tools and methods have evolved. The usage of information technology tools and the Internet in educational settings is quickly growing. Development of tools and procedures in such a way that each person, at any time and in any location, can engage in learning in the time frame that suggests him or her (Shahkraki & Heidarzadegan, 2017). Any substantial educational venture would be incomplete without taking into account the teacher's technical skills, experience, attitudes, time management, and commitment (Ajitha, 2020).

Moreover, the status of faculty preparedness was described by Martin et al. (2019) as readiness to teach online. The findings revealed that attitudes and perceptions play a significant effect in how online teachers conceptualize programs. In online teaching, four topics were highlighted: course design, course communication, time management, and technology.

On the other hand, a study by Lapada et al. (2020), revealed that numerous basic schools in metropolitan areas lack the essential infrastructure and training for distant learning, particularly in this tough situation. They also proposed that schools provide training and workshops to their teachers, which are essential for distance teaching and learning. As a result, learning institutions must carefully plan the program to ensure that distant learning is implemented successfully.

In addition, Cutri et al. (2020) emphasized that teachers can produce good quality of online teaching if they are willing to revise their teaching strategies that would fit to online teaching delivery. As what Phan and Dhang (2017) pointed out in their study that e-readiness is the teacher's willingness and the way how they prepare specifically in the aspects of technical, communication, and teaching methodology for online learning.

**Technical Skills.** Summak et al. (2010) looked at how instructors are prepared to use technology in the classroom. Teachers' computer use and software proficiency are moderate, according to the findings. Similarly, Al-Zaidiyeen et al. (2010) found that while a small percentage of teachers use technology for instructional purposes, their attitudes toward it are possible. However, there is a link between instructor's attitudes and how much technology is used in the classroom. Mardiana (2020) highlighted lecturers or teachers that must have knowledge and skills in technology such as video conferencing in engaging classes.

Moreover, technical skills development is essential for online teaching. According to Phan and Dang (2017) technical skills have strong impacts on the teacher e-readiness; the more they are familiar with the technology, the more ready they are for an online teaching environment. Also, Ncube et al. (2014) recommended that lecturers or teachers must have training interventions aligned to their level of skills.

Additionally, preparedness in instruction placed greater emphasis on the teacher's knowledge of ICT as well

as his or her experience, confidence, and attitude (Akaslan & Law, 2011). According to Sammak et al. (2010), instructional preparation is linked to attitudes about electronic learning technologies. This includes determining whether or not teachers have a proclivity for using modern technologies to fulfill a variety of interrelated activities. According to Gay (2012), determining if a teacher prefers a chalk-and-talk approach to the best use of technology is critical.

Also, according to Johnson (2013), teachers' technical skills should be enhanced. It's also worth noting that no set of competencies will last forever, since both technology and ideal teaching practices evolve. As a result, instructors should continually seek for professional advancement. Similarly, Al-Awidi and Aldhafeeri (2017) found that teachers in Kuwaiti schools are fairly prepared for the adoption of an online learning environment in terms of both technical and pedagogical aspects.

**Experience with online teaching environment.** In the same note, Martin et al. (2019) looked into the elements that influence faculty members' readiness to employ electronic learning systems. Resistance to change, perceived value, computer self-efficacy, and attitudes were all studied as effective factors. All variables were shown to be effective in the study. Gender, age, amount of expertise, and college teachers' proclivity for using electronic learning methods were also found to have no bearing.

Similarly, Kim (2020) found that pre-service instructors benefit from online teaching experiences since they get to interact with students. Not only that, but they were also able to foster thinking on the best ways to use online communication and teaching tools to stimulate students' development and learning. However, a study by Spoel et al. (2020) found that teachers' prior experiences with online learning only had a little effect on their expectations.

**Attitudes toward online learning.** Farzkish and Montazer (2019) investigated selected universities in Iran on the readiness of teachers and students on e-learning environment. The findings revealed that academics have the highest degree of correct attitude toward e-learning and the lowest level of proper approach to the circumstances that trigger e-learning. Similarly, research (Kisanga, 2016; Wassermann and Migdal, 2019) indicated that teachers have favorable attitudes toward online learning, and that their computer experience has a significant impact on their optimism.

Likewise, Krishnakumar and Kumar (2011) found that teachers have a positive attitude toward online learning in their study. Teachers who are comfortable with computers and other technology have a different attitude toward online learning than teachers who are not familiar with technology, according to their research. It is also stressed that attitudes are crucial in bringing about good change in the teaching-learning environment.

Furthermore, the Department of Education's computerization advocacy may influence instructors' attitudes toward online education, since one study found that organizational preparedness variables have the greatest impact on e-Learning outcomes. In one study, instructors' motivation and training were found to be the most critical component in their views toward e-Learning (Hung, 2016). Likewise, Spoel et al. (2020) asserted that instructors' professionalization, as well as their qualities and aspirations to use technology in teaching, had positive and bad experiences with online teaching. Shahraki and Heidarzadegan (2017) also did a feasibility analysis for the Ministry of Education's electronic learning in-service training facilities. In the sphere of electronic learning, the study discovered a poor level of preparation in terms of knowledge, attitudes, and skills.

**Time management and time commitment.** Though technologically supported learning scenarios provide flexibility and provide tailored teaching, they have a significant impact on teachers' workload (McRae et al., 2012; Spector 2007; Thompson, 2004; Bonk, 2002; Kearsley & Blomeyer, 2011; Fuller et al., 2010).

However, Khan et al. (2016) discovered that teachers who used superior time management approaches in class performed better. As a result, one of the most critical aspects determining class success is time management. Similarly, McRae et al. (2012) discovered that the most significant factor limiting a teacher's ability to offer training is a lack of time. Teachers have less time to prepare for courses since they have other responsibilities, such as tracking students' progress online, designing tailored program plans, organizing extracurricular activities, and often communicating with parents via e-mail or other electronic means. Teachers who teach in an online setting spend less time directly instructing pupils than teachers who teach face-to-face. This allows them to devote the majority of their time to grading or interacting with parents. However, large classrooms, both online and in person, severely limit the amount of time and help that teachers can devote to each student.

Similarly, a study in Turkey found that teachers' overall technology readiness was moderate, with no significant differences in terms of technology readiness across age and subject area, but a significant difference in technology readiness and gender (Summak et al., 2010). However, Khan et al. (2016) stressed that teachers who have better time management techniques, showed high performance in class. It was accentuated by Farooqi (2016) that positive relationship between teachers' time management techniques and their class performance. Thus, time management skills are recommended to be included in teacher training programs.

### **Relationships of Individual Adaptability to Teachers Readiness in Online Teaching Environment**

Several research on teacher preparation for online learning and teaching have been undertaken. According to a study by Ventayen (2018), the majority of Department of Education teachers have a favorable attitude toward online delivery and are prepared to teach online. Teachers are clearly the pillars of the academe when it comes to education because they are responsible for increasing their expertise. Distance education, as defined by Dela Pena-Bandalaria (2009), is the online delivery of instructional content and accompanying support to students in lieu of a physical meeting, demonstrating that this mode of instruction is a core way of teaching and learning.

In a similar vein, Winardi and Prianto (2016) discovered that adaptability had a significant impact on teacher's readiness. It was also discovered that a positive work environment has a significant impact on teachers' willingness to adapt to changes in the teaching-learning environment. Another study (Zorzic, 2012) found that teachers' flexibility to changes in the classroom environment is influenced by their personal experiences and technical knowledge.

Furthermore, Martin et al. (2019) discovered substantial disparities in faculty perceptions of the value of online teaching preparedness based on creativity, online teaching experience, gender, attitudes, and technical capabilities. There were also significant disparities in the amount of years spent teaching online and the mode of delivery compared to their adaptability in teaching online.

Correspondingly, Scherer et al. (2020) discovered that cultural and learning adaptation have a significant impact on teachers' preparation in an online teaching-learning environment. Adaptability is also a determinant of instructors' readiness to deploy an e-learning environment, according to Tahereh et al. (2010). Concluded by Nacario et al. (2014) that the availability of ICT facilities and the provision of initial ICT trainings to faculty and students in schools contributed to the preparedness of teachers in online teaching environment. Relationships of Availability of ICT Facilities to Teachers Readiness in Online Teaching Environment

As Finger et al. (2013) point out, the use of technology in education has a significant impact on pedagogical aspects, as the application of ICT leads to successful learning with the help and support of ICT elements and

components. As a result, in an online teaching and learning environment, it is critical.

The availability of ICT facilities and the provision of initial ICT training to faculty and students in schools (Nacario et al., 2014), contributed to instructors' preparation in an online teaching environment. Similarly, Barde (2017) reported that teachers' attitudes toward using ICT in the classroom were positive, but that they were hampered by a lack of appropriate equipment to utilize to aid learning. Likewise, Mndzebele (2013) found that teachers who have access to available ICT facilities are more likely to use online instruction. As a result, there is a favorable association between teacher readiness and the availability and accessibility of ICT facilities. The report also encourages pre-service institutions to include basic computer literacy and ICT-integrated teaching and learning in their curricula, allowing pre-service teachers to have hands-on experience with technology.

However, according to Barde (2015), instructors' positive attitudes about adopting online instruction are hampered by a lack of suitable ICT infrastructure. As a result, it is suggested that teachers' ICT skills be emphasized more, in tandem with the supply of necessary equipment and training. It is also suggested that frequent and consistent technical assistance be available to teachers whenever they require it.

### **Issues on Teachers' Readiness**

All aspects of teaching and learning in all levels of education are affected by online education. Several empirical research have been undertaken to study challenges with online course delivery and student ready; however, few have probed into the discourse of teacher readiness (Ajitha, 2020; Kebritchi et al., 2017), especially at the height of pandemic. The examination of teachers' readiness for online mode of education can be thought of as a pre-assessment of their ability to produce and deliver online instruction (Cutri et al., 2020).

Similarly, Kariyev et al. (2017) stated that an empirical assessment of teacher preparedness for the e-learning environment is required. This is because it is the teacher's role to regulate everything that happens in the classroom in order to assist the kids' growth. This, however, has proven difficult for instructors, particularly in this time of crisis. Despite the fact that most teachers have a favorable attitude toward the new normal, they have low expectations about their readiness to teach in an online context (Tumanduk et al., 2020). As a result, they advised that further teacher readiness research be performed.

Moreover, the barrier of effectively transitioning from face-to-face instruction to online instruction remains a problem (Kebritchi et al., 2017). In addition, multiple research (Limperos et al., 2015; Anderson et al., 2011; Lion & Stark, 2011) have revealed that the majority of face-to-face teachers are not prepared to teach online.

As a result, teachers who teach online can be classified as novice to expert based on their aptitude, which includes their years of experience teaching online. The design and facilitation of online courses are influenced by this experience (Martin et al., 2019). Teachers with little to no online teaching experience had lower discernments of their ability to teach online than those with more than five years of expertise, according to their research. Furthermore, these professors were unsure about their ability to teach online due to the constant changes in technology (Varvel, 2007).

Surprisingly, most institutions are not assessing teachers' preparation before to the development and implementation of online courses in this time of COVID-19 epidemic. Teachers were instead requested to construct online editions of their subjects with only a rudimentary assessment of their readiness. This precedent of a lack of thorough assessment of instructors' preparation has undoubtedly been exacerbated by the hurried transition to an online method of instruction (Cutri et al., 2020).

It is argued that the COVID-19 pandemic's rapid move to online teaching diverted previous research's

attention and went beyond the paradigm of thinking and measuring teachers' preparation for online teaching (Cutri & Mena, 2020). The established notion of online ready does not consider the emotive domain of change to online teaching, nor the cultural dimensions of adopting it in institutions, as a result of these numerous facts.

The literature reviewed in this section establishes that individual adaptability and availability of ICT facilities are predictors of teacher's readiness in online teaching environment. Doing the literature review of different articles and journals, the researcher was able to see new perceptions and expanded her knowledge on the subject investigated. In general, the review has broadly helped the researcher in asserting reliability to investigate the topic and in evaluative choice of research methods that will help determine the factors and causes that can be a strong predictor to public school teacher's readiness in online teaching environment which is very substantial in the conduct of the study.

### Worldview and Theoretical Lens

The researcher personally believed that readiness in online teaching requires competence, embracing the power of communication through utilizing available ICT resources and responding to constant change which are necessary in today's new normal situation. Moreover, the teachers will become more effective in online teaching if they manifest individual adaptability skills and motivated to do the task, such as provision with necessary ICT tools and adequate technology trainings since shifting to online learning requires a robust preparation.

This study has its perspective on the philosophical view of pragmatism. As a pragmatist, the researcher was able to seek better understanding and look for real-world solutions to the research through using quantitative data collection of sources.

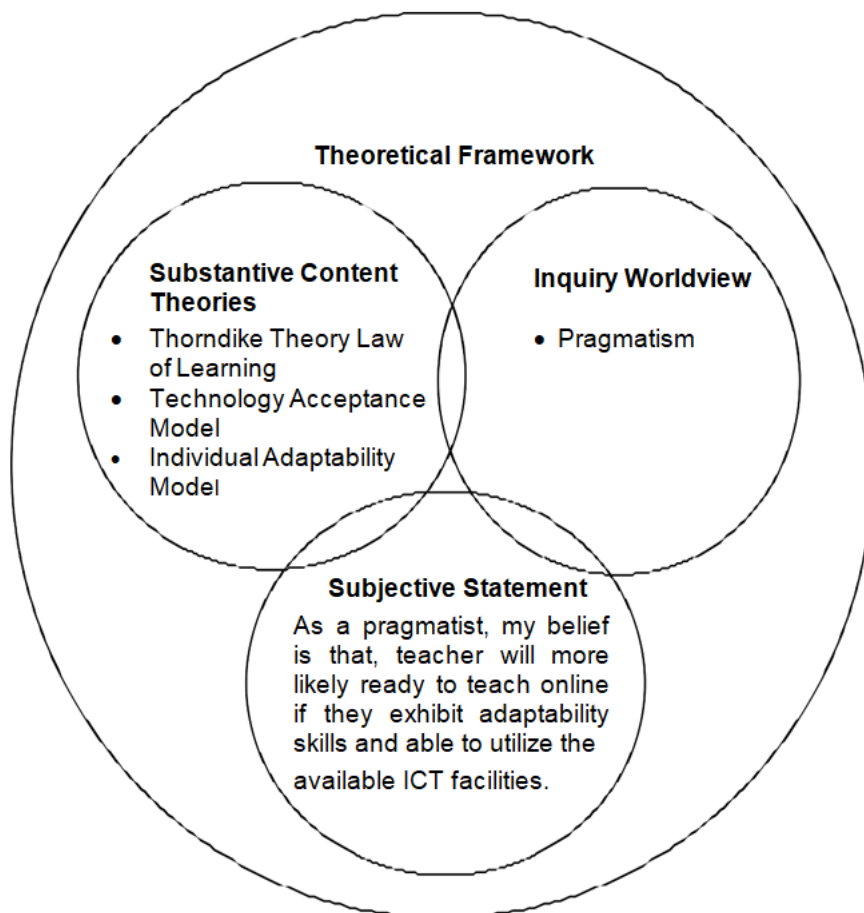


Figure 1. Conceptual Framework of the Study

## Theoretical Framework

Pragmatism is an American methodological approach originating from the work of William James (1842-1910), John Dewey (1859-1952), Charles Sanders Peirce (1839-1914) and Herbert Mead (1863-1931) as cited by Parvaiz et al. (2016). Pragmatism as a worldview arises out of actions, situations, and consequences rather than antecedent conditions. It opens the door to multiple methods, different worldviews, and different assumptions, as well as different forms of data collection and analysis (Creswell, 2008). Instead of focusing on methods, researchers emphasize the research problem and use all approaches available to understand the problem (Creswell, 2008). Moreover, mixed methods research literatures have often identified pragmatism as the appropriate paradigm for conducting mixed method research (Brierley, 2017).

This study was anchored on Thorndike's Law of learning theory (1932). Edward Thorndike developed the "Laws of learning" which are Readiness, Exercise, Effect, Recency, Primacy and Intensity. The principle of readiness states that learning will be more certain to occur and more efficiently accomplished if the learners are ready to tackle the task at hand. More so, the learners are ready and capable of learning if they are satisfied with the basic needs. Consequently, in the concept of online environment, this model was grounded on the belief that teachers will be more likely ready to teach online if they have enough orientation with the task given and provided with substantial facilities to enhance their teaching competence.

To further understand this study, it was also anchored on Technology Acceptance Model (TAM) theory developed by Davis et al. (1989). This theory is comprised of various parts which represent the process of ICT acceptance by the users including behavioral intention, perceived usefulness, and perceived ease of use. Behavioral intention points out to aspects that impact behavior where it shows that the stronger the intention to perform such behavior, the more possible to be executed. Hence, in order to make the effective implementation of an online teaching-learning environment, teachers must be ready and competent to utilize available ICT facilities. TAM theory was developed to determine success and understand the usefulness and describing the task of explaining and predicting user acceptance of new computer and information technology in the organizational context (Venkatesh & Davis, 2000).

Another theory that supports this study is the Individual Adaptability theory developed by Ployhart and Bliese in 2006, which is defined as an individual's ability, skills, disposition, willingness, and/or motivation, to change or fit different task, social and environmental features. This theory stresses that adaptability allows individuals to quickly and effectively respond to circumstances even if things do not go as planned. Being adaptable is a part of workplace readiness as it is centered on how an individual handles changes and acts according to the circumstances. Hence, an individual is adaptable if he or she is not affected by sudden changes in plans or projects and accepts these changes instead of being hostile.

Further, this study was also supported by the following propositions. First, Msila (2015) proposed that readiness is related to teachers' awareness, knowledge of use, perceptions, and attitudes toward their capabilities and skills for technology integration as well as gaining experience in the use of educational technology. It also emphasized that technological readiness includes technical and pedagogical readiness, which means that an individual must be competent in both to ensure the effectiveness of its implementation across disciplines.

Also, Klimov (2002) claimed that readiness entails the competence of an individual to perform and the correct usage of knowledge. It also stressed that experience and training play a great role in an individual's readiness to adapt to changes and any unforeseen obstacles. Aside from technical readiness, an individual's psychological and mental condition should also be good to embrace these changes.

Moreover, Collie and Martin (2015) strongly emphasized individual adaptability as highly relevant to teachers' readiness in responding and managing constant changes in the workplace. Likewise, Hargreaves



(2005) and Mansfield et al. (2012) considered the role of adaptability beyond instructional adaptation and other functions of teachers at work.

## **METHODOLOGY**

This section stated the information related to research design, research locale, research respondents, research instruments, data gathering procedure, data analysis, anticipated methodological issues, trustworthiness, validity and its ethical considerations.

### **Research Design**

The researcher used a descriptive correlation design with an analysis using regression. Correlation is a statistical association or relationship between variables (Warner, 2013) and a valid use of regression correlation is prediction (Cohen et al., 2003; Creswell, 2003; McCombes, 2019). Further, it is used to predict the variance of one or more variables based on the variance of another variable. In addition, this study aims to determine the domain that influences the teacher's readiness in an online environment as well as the association between variables. This study desires to determine if the individual adaptability and availability of ICT facilities predict the teacher's readiness in online environment.

### **Place of Study**

This study was conducted in Region XI which consists of different public secondary schools (Department of Education) in Region XI, namely, Davao Oriental, Mati City, Davao del Norte, Tagum City, Panabo City, Davao City, Digos City, and Davao del Sur.

Specifically, this study was conducted in public secondary schools in Region IX These schools were chosen since the Department of Education had just launched the alternative learning delivery modalities where online education is part of it. Apart from new to online learning, these public secondary schools need to have access to devices such as computers and other necessary software which are often a challenge for them.

### **Respondents**

There were 200 teachers as respondents from Public Secondary Schools in Region XI who answered the quantitative survey. They were chosen through a purposive sampling technique. This technique was used to achieve a homogeneous sample whose units share the same characteristics or traits (Creswell, 2014; Crossman, 2020). After determining the population per division in Region XI, the quota sampling procedure with proportional allocation was utilized to obtain a sampling frame. To attain homogeneity, the following criteria were observed: the participants are full-time teachers of public secondary schools in Region XI-Southern Mindanao, male or female, have at least one year of experience in teaching, and currently handling online classes. Excluded from the study are teachers whose teaching experience is less than one year and not having online classes.

They helped determine the degree of relationship between individual adaptability, availability of ICT facilities, and teacher's readiness in online environment by means of the three-part survey questionnaire that was administered to them. The study was conducted during the second semester of school year 2020 – 2021.

### **Instruments**

The researcher provided three sets of adopted survey questionnaires as tools for gathering the data. The first set of questionnaires is individual adaptability adopted from Murphy (2015) with eight indicators namely:

cultural adaptability, work stress adaptability, interpersonal adaptability, learning adaptability, uncertainty adaptability, physical adaptability, crisis adaptability, and creativity adaptability. The second set of the instrument is availability of ICT facilities which focused mainly on the availability of ICT facilities was adopted from Yusuf et al. (2012). While, the third set of the instrument is teacher's readiness in online teaching environment which focused on the teachers' readiness in an online environment that was adapted from Ventayen's (2018) with four indicators such as technical skills, experience with online teaching and learning, attitudes toward online learning and time management and time commitment. These questionnaires were validated by experts in their field for face and content validity.

All items in the questionnaire asked the participants to indicate a response on a 5-point Likert-scale namely: 1 as strongly disagree, 2 as disagree, 3 as moderately agree, 4 as agree, and 5 as strongly agree. For interpretation of the levels, the researcher used the range of means, description, and interpretation presented below.

**Individual Adaptability Questionnaire.** The questionnaire on individual adaptability is adapted from Murphy's (2015) which contains 55 items with eight indicators. Cultural adaptability is composed of 5 items; work stress adaptability has 5 items; interpersonal adaptability with 7 items; learning adaptability has 9; uncertainty adaptability with 9 items; crisis adaptability has 6 items; physical adaptability is composed of 9 items and creativity adaptability with 5 items. The instruments obtained reliability of .95 cumulative adaptability scale.

**Availability of ICT Facilities Questionnaire.** The questionnaire on availability of ICT facilities is adopted from the study of Yusuf et al. (2013) which contains 10 items and has a reliability coefficient of 0.88.

**Teachers Readiness in Online Teaching Environment Questionnaire.** The last part of the questionnaire is to determine the level of teacher's readiness in online teaching environment. The tool is adopted from the study of Ventayen (2018) with 35 items distributed in its 4 areas such as technical skills which is composed of 12 items; experience with online teaching and learning with 8 items; attitudes toward online learning with 9 items; and time management and time commitment which has 6 items. Furthermore, the questionnaire was first administered as a form of pilot testing before the actual participants took the test. Subsequently, the scale has gone through reliability testing which scored an overall Cronbach's Alpha of 0.925 described as excellent, indicating high internal consistency.

## Data Gathering Procedure

The researcher had undertaken certain procedures in conducting the study as follows; the researcher sent a letter to the Dean of the Graduate School to seek permission to conduct the study. Upon approval of the permission letter, the proposal was submitted for review to the Research Ethics Committee (REC) to assess the ethical soundness of the paper. After done reviewing, the REC furnished a copy of ethics compliance certificate. The process was done through virtual communication due to new normal condition. After which, the endorsement letter from the Dean was forwarded formally to the Department of Education, Region XI for the permission and endorsement of the conduct of the study. After obtaining the approval, the researcher forwarded the letter to the schools' division superintendents through online platforms to formally inform them regarding the study. The endorsement letter and approval letter were submitted to the district supervisors and school heads to ask for the schedule as to when the gathering of data will be done.

In administering the questionnaires, after obtaining the necessary approvals from authorities, the researcher made use of the enumerators to coordinate with the school heads in securing the consent from the participants through online platforms as well as the administration of the survey questionnaires through google sheet-online survey to take precautionary measures due to COVID-19 pandemic. The participants

were assured of the confidentiality of the survey. Thus, their participation in this study was voluntary. All information gathered remained confidential at the highest level of protection by the researcher. Any questions or clarifications related to the survey questionnaires were entertained. The data gathered were tallied based on the sub-problems of this study and treated with appropriate statistical tools. The ethical principles were not violated and no classes were interrupted during the conduct of the study.

### **Data Analysis**

This section presents the process in analyzing the data; the researcher used the following statistical treatment to analyze and interpret the data.

The **Mean** was used to determine the levels of individual adaptability, availability of ICT facilities and teacher's readiness in online teaching environment of public-school educators in Region XI. **Standard Deviation** on the one hand, was utilized to tell how measurements for a group are spread out from the average (mean), or expected value among indicators. On the other hand, **Regression Analysis** was applied to determine which among the independent variables has the most significant influence towards teacher's readiness in online environment.

### **Trustworthiness of the Study**

Trustworthiness in research involves four components: credibility, transferability, dependability, and confirmability. Credibility is achieved through surveys, methodological integration, and expert validation. Transferability is achieved through detailed research context descriptions. Dependability is established through participant consent, recording activities, and data validation. Confirmability is achieved through data analysis and rechecking, ensuring validity and support by gathered data.

### **Ethical Considerations**

The researcher conducted a study to ensure ethical standards and confidentiality, providing an informed consent form to participants. They minimized physical and psychological risks, and adhered to the Data Privacy Act of 2012. Participants were treated equally regardless of gender, religion, socio-economic status, or faculty rank. The study's purpose was clearly explained, and expenses were reimbursed after answering survey questionnaires. Transparency was maintained through open methods and procedures. The findings may help schools strengthen ICT integration, improve teacher performance, and make students more engaged during the pandemic. The findings will be shared with school libraries and the community through meetings, conferences, and journal publications.

## **RESULTS**

This chapter presents the results of the study on individual adaptability and availability of ICT facilities as predictors of readiness of public-school teachers in online teaching environment based on the analysis of the quantitative data. The presentation of quantitative results starts with the quantitative descriptive results of the independent and dependent variables.

### **Level of Individual Adaptability of Teachers**

Shown in table 1 is the level of individual adaptability of teachers and in this study, adaptability is measured in terms of cultural adaptability, work stress adaptability, interpersonal adaptability, learning adaptability, uncertainty adaptability, crisis adaptability, physical adaptability, and creative adaptability. Computations yield an overall mean score of 4.18 with a high descriptive equivalent. Based on the results, the responses of

the respondents are homogeneous as evidenced by the standard deviation of .45 which means that most of the mean scores are close to the average, indicating that the data are not dispersed.

**Cultural Adaptability.** This indicator has garnered a category mean of 4.60 described as very high. The actual mean scores in the items range from 4.36 to 4.96. The item *enjoying the learning about cultures other than their own* has a mean score of 4.36 which described as very high. The item *respecting the* Table 1

Level of Individual Adaptability of Teachers

Indicators/Items		Mean	SD	Description
<b>A. Cultural Adaptability: I am...</b>				
1	Enjoying learning about cultures other than my own.	4.36	.90	Very High
2	Working well with diverse others	4.55	.67	Very High
3	Respecting the cultures of others is important to me.	4.96	.18	Very High
4	Enjoying the variety and learning experiences that come from working with people of different backgrounds.	4.73	.49	Very High
5	Feeling comfortable interacting with others who have different values and customs.	4.42	.66	Very High
<b>Category Mean</b>		<b>4.60</b>	<b>.38</b>	<b>Very High</b>
<b>B. Work Stress Adaptability: I am...</b>				
1	Reacting usually calmly to stressful news.	4.12	.69	High
2	Feeling equipped to deal with too much stress.	3.91	.78	High
3	Easily managing my schedule even if it is too full.	3.85	.96	High
4	Knowing how to manage work stress due to large workload.	3.86	.92	High
5	Managing my emotions when I am under great deal of stress.	4.09	.76	High
<b>Category Mean</b>		<b>3.96</b>	<b>.67</b>	<b>High</b>
<b>C. Interpersonal Adaptability: I am...</b>				
1	Believing that it is important to be flexible in dealing with others.	4.67	.68	Very High
2	Reading others and understanding how they are feeling at any particular moment.	4.34	.63	Very High
3	Working effectively with others with the help of my insight.	4.50	.62	Very High
4	Being open-minded person in dealing with others.	4.56	.57	Very High
5	Being perceptive of others and use that knowledge in interactions.	4.39	.61	Very High
6	Trying to be flexible when dealing with others.	4.52	.52	Very High
7	Adapting my behavior to get along with others.	4.49	.52	Very High
<b>Category Mean</b>		<b>4.49</b>	<b>.47</b>	<b>Very High</b>
<b>D. Learning Adaptability: I am ...</b>				
1	Taking responsibility for acquiring new skills.	4.58	.52	Very High
2	Enjoying learning new approaches for conducting work.	4.57	.54	Very High
3	Taking action to improve work performance deficiencies.	4.55	.54	Very High
4	Learning new information and skills to stay at the forefront of my profession.	4.48	.60	Very High
5	Learning quickly new methods to solve problems.	4.25	.60	Very High

6	Being trained to keep my work skills and knowledge current.	4.46	.55	Very High
7	Learning new skills continually for my job.	4.55	.59	Very High
8	Taking responsibility for staying current in my profession.	4.61	.57	Very High

9	Trying to learn new skills for my job before they are needed.	4.42	.65	Very High
	<b>Category Mean</b>	<b>4.49</b>	<b>.45</b>	<b>Very High</b>
<b>E. Uncertainty Adaptability: I am...</b>				
1	Needing for things to be black and white".	4.20	.65	Very High
2	Being flexible when things are unpredictable.	4.11	.72	High
3	Making effective decisions without all relevant information.	3.62	1.01	High
4	Performing best in stable situations and environments.	4.29	.71	Very High
5	Changing gears in responses to something happening unexpectedly	4.07	.79	High
6	Adapting to changing situations.	4.27	.72	Very High
7	Performing well in uncertain situations.	3.99	.71	High
8	Responding to changing conditions	4.02	.77	High
9	Adjusting my plans to changing conditions.	4.22	.73	Very High
	<b>Category Mean</b>	<b>4.09</b>	<b>.58</b>	<b>High</b>
<b>F. Crisis Adaptability: I am...</b>				
1	Managing to focus even during emergencies.	4.02	.75	High
2	Putting aside emotional feelings to handle important tasks during emergency situation.	4.10	.67	High
3	Thinking clearly in times of urgency.	4.08	.65	High
4	Being able to be objective during emergencies.	4.14	.69	High
5	Stepping up usually and taking action during crisis.	4.07	.74	High
6	Making excellent decisions in times of crisis.	3.96	.72	High
	<b>Category Mean</b>	<b>4.06</b>	<b>.62</b>	<b>High</b>
<b>G. Physical Adaptability: I am</b>				
1	Adapting at using my body to complete relevant tasks.	4.09	.72	High
2	Utilizing my muscular strength well.	4.03	.72	High
3	Working only in an orderly environment.	3.75	.98	High
4	Managing to perform well is my environment is not comfortable.	3.83	.93	High
5	Being determined to finish a job even if it would require me to be physically stronger.	4.08	.80	High
6	Physically pushing myself to complete important tasks.	4.26	.73	Very High
7	Working effectively even when I am tired.	3.36	1.08	Moderate
8	Working well regardless of if the environment is too hot or cold.	3.42	1.05	High
9	Keeping working even when I am physically exhausted.	3.21	1.19	Moderate
	<b>Category Mean</b>	<b>3.78</b>	<b>.66</b>	<b>High</b>

H. Creative Adaptability: <i>I am...</i>				
1	Seeing connections between seemingly unrelated information.	3.70	.94	High
2	Being good at developing unique analyses for complex problems.	3.89	.86	High
3	Being an innovative person.	3.99	.71	High
4	Thriving on developing innovative solutions when resources are insufficient	4.02	.71	High
5	Looking at problems from a multitude of angles.	4.13	.76	High
<b>Category Mean</b>		<b>3.95</b>	<b>.69</b>	<b>High</b>
<b>Overall Mean</b>		<b>4.18</b>	<b>.45</b>	<b>High</b>

*cultures of others is important to me* and has a mean score of 4.96 also described as very high. This means that individual adaptability is always evident among these respondents.

**Work Stress Adaptability.** The computed category mean for this indicator is 3.96 or described as high level. The responses of the respondents on the items of this indicator are ranged from 3.85 to 4.12. The item *easily managing my schedule even if it is too full* has a mean score of 3.85 described as high. The item *reacting usually calmly to stressful news* has a mean score of 4.12 described as high. This suggests that the individual adaptability of the respondents is oftentimes evident.

**Interpersonal Adaptability.** The computed category mean for this indicator is 4.49 described as very high level. This value is based on the actual mean scores ranging from 4.34 to 4.67. The item *reading others and understanding how they are feeling at any particular moment* has a mean score of

4.34 which described as very high, same manner with the item *believing that it is important to be flexible in dealing with others that has a mean score of 4.67 described as very high.* This means that the individual adaptability of teachers is always evident.

**Learning Adaptability.** This indicator has garnered a category mean of 4.49 which is obtained based on the itemized responses ranging from 4.25 to 4.61 with very high descriptive equivalent. The item *learning quickly new methods to solve problems has a mean score of 4.25* described as very high. The item *taking responsibility for staying current in my profession* has a mean score of 4.61 also described as very high. This implies that the individual adaptability of teachers is always evident.

**Uncertainty Adaptability.** The category mean score for this indicator is 4.09 described as a very high level and this value is derived based on the actual means ranging from 3.62 to 4.22. The item *making effective decisions without all relevant information has a mean score of 3.62* whose descriptive equivalent is high, while *performing best in stable situations and environments* has 4.29 mean score whose descriptive equivalent is very high. This means that the individual adaptability of the respondents is oftentimes evident.

**Crisis Adaptability.** The category mean of this indicator is 4.06 whose descriptive equivalent is high level. It is generated from the actual mean scores ranging from 3.96 to 4.14. The item that has a 3.96 mean score is *making excellent decisions in times of crisis* which is described as high. Also, the item *being able to be objective during emergencies* has a mean score of 4.14 described as high. This suggests that the individual adaptability of the respondents is oftentimes evident.

**Physical Adaptability.** The indicator reveals a category mean of 3.78 with descriptive equivalent of high and derived based on the mean scores ranging from 3.21 to 4.26. *Keeping working even when I am physically exhausted*

is the item that has a 3.21 mean score which is described as moderate while *physically pushing myself to complete important tasks* is the item that has a 4.26 mean score which is described as very high. This indicates that the respondents sometimes can work effectively even when they tired, and always physically push themselves to complete important tasks.

**Creative Adaptability.** This indicator has garnered a category mean score of 3.95 with a high descriptive equivalent. It is computed based on the actual mean scores ranging from 3.70 to 4.13. The item *seeing connections between seemingly unrelated information* has a mean score of 3.70 described as high and the item *looking at problems from a multitude of angles* has a mean score of 4.13 describes as high. This means that the individual adaptability of the respondents is oftentimes evident.

### Status of Availability of ICT Facilities

Shown in Table 2 is the data on the status of availability of ICT facilities in the public schools. Computations yield an overall mean score of 3.51 with high descriptive status. Based on the results, the standard deviation is .90 indicating that the ratings of the respondents on the different items in ICT facilities are not dispersed. Additionally, the overall mean for availability of ICT facilities is 3.51 based on the mean scores ranging from 2.91 to 3.93 whose descriptive equivalents are from moderate to high level. The item *having interactive Boards* has a mean score of 2.91 described as moderate while the item *having available Educational Software for teaching* has a mean score of 3.93 described as high. This means that the availability of ICT facilities is sometimes observed.

Table 2. Status of Availability of ICT Facilities

Availability of ICT Facilities in School		Mean	SD	Description
Our school is...				
1	Having enough computers.	3.87	1.04	High
2	Having available Educational Software for teaching.	3.93	1.04	High
3	Having computers connected to the internet.	3.70	1.07	High
4	Having interactive Boards.	2.91	1.30	Moderate
5	Having television sets used for teaching.	3.21	1.29	Moderate
6	Having enough printers.	3.45	1.18	High
7	Having photocopiers.	3.75	1.08	High
8	Having multimedia facilities for teaching.	3.57	1.20	High
9	Having projectors.	3.70	1.25	High
10	Having a virtual library or e-library.	3.02	1.33	Moderate
<b>Overall Mean</b>		<b>3.51</b>	<b>.90</b>	<b>High</b>

### Level of Teachers' Readiness in Online Teaching Environment

Presented in Table 3 is the level of teachers' readiness in an online teaching environment. The overall mean score for teachers' readiness in an online teaching environment is 4.14 described as high level. Based on the results, the standard deviation is .62 which is less than 1 indicating that the data are not dispersed.

**Technical Skills.** The category mean for this indicator is 4.24 described as very high. The calculated mean is based on the mean scores ranging from

2.89 to 4.67. This indicates that the item *being able to create wikis or web sites* has a mean score of 2.89 described as moderate while the item *being able to download files from the internet and attach files to e-mail* has a mean score of

4.67 which is described as very high. Results indicate that teachers' readiness in online teaching in terms of technical skills is very high level.

**Experience with online teaching and learning.** This indicator has a category mean of 4.02 or high level. This value is calculated based on the mean

Table 3. Level of Teachers' Readiness in Online Teaching Environment

<i>Indicators/Items</i>		Mean	SD	Description
<b>A. Technical Skills: I am...</b>				
1	Being confident to use the computer available at home or in the office.	4.55	.69	Very High
2	Being able to easily access my files on a computer even when I travel.	4.17	.99	High
3	Accessing the internet easily in search of information that I need.	4.11	1.07	High
4	Being competent in using e-mail.	4.55	.69	Very High
5	Being competent in using word processing software.	4.49	.72	Very High
6	Being able to download files from the internet and attach files to e-mail.	4.67	.65	Very High
7	Being competent in using PowerPoint software for presentation.	4.67	.70	Very High
8	Being able to create a blog.	3.66	1.12	High
9	Being able to create wikis or web sites.	2.89	1.37	Moderate
10	Using social networking technologies, such as Facebook and Twitter.	4.57	.82	Very High
11	Being competent in using a learning management system.	4.16	.84	High
12	Using technology applications to support my face-to-face teaching.	4.42	.81	Very High
<b>Category Mean</b>		<b>4.24</b>	<b>.63</b>	<b>Very High</b>
<b>B. Experience with Online Teaching and Learning</b>				
<i>I have experienced ...</i>				
1	teaching at least one online course.	4.15	1.20	High
2	attending a training in online instruction.	4.49	.69	Very High
3	using online quizzes in teaching a class.	4.22	1.09	Very High
4	using online discussions in teaching a class.	4.26	1.09	Very High
5	using virtual classroom tools like GoToMeeting, Adobe Connect, WebEx, or Skype in teaching a class.	3.94	1.24	High
6	using chat application in teaching a class.	4.20	.99	Very High
7	using a publisher web site in teaching a class.	3.17	1.32	Moderate
8	using the school's learning management system to supplement my classroom teaching.	3.75	1.31	High
<b>Category Mean</b>		<b>4.02</b>	<b>.83</b>	<b>High</b>
<b>C. Attitudes toward Online Learning: I am...</b>				



1	Considering online teaching as rigorous classroom instruction.	4.05	.92	High
2	Being positive that high quality learning experiences can occur with face-to-face online interaction with students.	4.28	.80	Very High
3	Supporting the use of on-line discussion as a means of on-line learning.	4.49	.74	Very High
4	Supporting learner-to-learner interaction and collaborative activity as a central means of on-line learning.	4.44	.69	Very High
5	Recognizing that community building is an important component of online learning.	4.49	.64	Very High
6	Encouraging students to bring life experiences into the on-line classroom and create activities that draw on those experiences.	4.43	.69	Very High
7	I considering an on-line lecture as the best way to convey content in mind discipline.	4.19	.89	High
8	Feeling comfortable to convey who I am through online written communication.	4.19	.89	High
9	Developing online assignments that encourage critical thinking among my students.	4.28	.86	Very High
	<b>Category Mean</b>	<b>4.31</b>	<b>.62</b>	<b>Very High</b>
<b>D. Time Management and Time Commitment</b>				
I am usually ...				
1	Logging in to an online course at least once a day.	3.80	1.24	High
2	Posting my online class at least four to five times per week.	3.64	1.25	High
3	Managing well my time spent in online activities.	4.20	.96	Very High
4	Dealing flexibly on issues such as due dates, absences, and makeup on online assignments with my students	4.25	.83	Very High
5	Planning well my online teaching.	4.28	.88	Very High
6	Managing to respond to e-mails of my students within 48 hours	4.04	.96	High
7	Managing to return online assignments within one week.	3.89	.92	High
	<b>Category Mean</b>	<b>4.01</b>	<b>.81</b>	<b>High</b>
	<b>Overall Mean</b>	<b>4.15</b>	<b>.62</b>	<b>High</b>

scores ranging from 3.17 to 4.49. The specific item *using a publisher web site in teaching* has a mean score of 3.17 described as moderate. Meanwhile, the item *attending a training in online instruction* has a mean score of 4.49 described as very high. This indicates that the readiness of teachers in online teaching is oftentimes manifested.

**Attitudes Towards Online Learning.** As indicated, the category mean of this indicator is 4.31 which is described as very high. It is calculated based on the actual means ranging from 4.05 to 4.49 whose descriptive equivalents are from high to very high level. The item *considering online teaching as rigorous classroom instruction* has a mean score of 4.05 described as high while the item *supporting the use of on-line discussion as a means of on-line learning* has a mean score of 4.49 which described as very high.

**Time Management and Time Commitment.** The category mean of this indicator is 4.01 labeled as high and obtained based on the itemized responses ranging from 3.80 to 4.28. The specific item that has a mean score of 3.80 described as high is *logging in to an online course at least once a day*, while the item *planning well my online teaching* has a mean score of 4.28 which is described as very high. This suggests that the

readiness of teachers in online teaching in terms of time management and time commitment is oftentimes manifested.

### Significance of the Influence of the Predictors of Teachers Readiness in Online Teaching Environment

Presented in Table 4 are the results of the significance of the influence of the individual adaptability of teachers and the availability of ICT facilities on teachers' readiness in an online teaching environment. The results divulge that individual adaptability and availability of ICT facilities have significant relationships with the teachers' readiness as indicated in the computed probability value of less than

( $p < .05$ ). Specifically, the individual adaptability of teachers predicts teachers' readiness in an online teaching environment with a p-value of less than 0.001 and a positive standardized beta value of 0.292. This denotes that for every unit increase in the value of individual adaptability, there is a corresponding increase of .292 in the school readiness of teachers in an online teaching environment.

Table 4. Significance of the Influence of the Predictors to Teacher's Readiness in Online Teaching Environment

Predictors	Beta Coefficient	t	p-value	Remarks
Individual Adaptability	.292	5.069	.000	Significant
Availability of ICT Facilities	.486	8.436	.000	Significant

R=.638

R-Square = .417 (40.7%) Degree of Influence

F-value = 67.539

P-value = 0.000

Similarly, the influence of the availability of ICT facilities has a p-value of less than 0.001 and a positive standardized beta value of 0.486. This denotes that the regression weight for the availability of ICT facilities in the prediction of teachers' readiness in online teaching is significantly different from zero at the 0 .05 level. Thus, for every unit increase in the value of availability of ICT facilities, there is a corresponding increase in the teachers' readiness in online teaching by 0.486. This implies that the availability of ICT facilities predicts teachers' readiness in an online teaching environment.

Lastly, the combined capacity of two independent variables, individual adaptability and availability of ICT facilities was significant ( $p < .05$ ) with an F-value (ANOVA) of 67.539 which is higher than the critical value confirming the significant influence of individual adaptability and availability of ICT facilities on teachers' readiness in online teaching. In terms of influence, the model explains the combined findings are apparent in the regression analysis in which 40.7 percent of the variance of teachers' readiness in online teaching can be explained by the model as indicated by  $R^2 = .407$ . This would mean that 59.3 percent of the variation can be attributed to other factors aside from the independent variables in the model.

## DISCUSSION

This chapter presents the discussion of results which focused on individual adaptability and availability of ICT facilities as predictors of readiness of public secondary school teachers in an online teaching environment. Further, the discussions of the data are centered on the major topics in the study which are as follows: level of individual adaptability of teachers; level of availability of ICT facilities; level of teachers'

readiness in online teaching environment; influence of individual adaptability of teachers and availability of ICT facilities on teachers' readiness in online teaching environment.

### **Level of Individual Adaptability of Teachers**

The level of individual adaptability of public secondary school teachers is high which means that the individual adaptability of public school teachers is oftentimes evident. This implies that teachers are very adaptive to changing conditions. This ability is essential for them to be effective in adjusting the new challenges, for instance, the new demand of teaching methodology specifically in an online modality of learning, school policies, and to become used to new situations. This finding conforms to the study of Collie & Martin (2016) revealed that adaptability is important to teachers in order to effectively manage changes in the classroom, staffroom, and beyond. Further, this supports the study of Corno (2008) which emphasized teaching adaptability that the teachers must be able to address the needs of the students. Thus, individual adaptability is a requisite for teachers that require flexibility in handling student concerns and demonstrating quick responses to new roles.

**Cultural Adaptability.** The level of cultural adaptability of teachers is very high. It has an implication that their cultural adaptability is always evident. This indicates that the teachers are very capable of adapting to the different cultures of the people in the workplace. The very high level of cultural adaptability also emphasizes that teachers are enjoying the benefits of having diverse cultures in the workplace to share different approaches to teaching. This finding conforms to the study of Zhou & Lin (2016) which found that social support strengthened the relationship of adaptability and life satisfaction. This means that teachers who are adaptive to different cultures have a high level of social support such as they are very comfortable when interacting with other individuals who have different values and customs, and they are always willing to adapt to the changes in their work environment. Further, this coincides with the statements of Ployhart and Bliese (2006) that individuals who possess a high level of adaptability skills are receptive and are prepared to learn new things, undertake new challenges, and make adjustments to conform to transitions in the workplace.

**Work Stress Adaptability.** The results described a high level of descriptive equivalent implying that teachers' work stress adaptability is oftentimes evident. This means that teachers effectively manage work-related stress in school and they are highly capable of managing their emotions when they are under a great deal of stress. This also implies that teachers are not greatly affected by the stress brought about by teaching careers since they are equipped with knowledge on how to deal with stress. This result is in consonance with the study of Fiori et al. (2015) showed result that employees with higher career adaptability experienced job satisfaction and lower work stress. Likewise, the results strengthened the study of Kabito & Wami (2020) which revealed the association of job relationship with work-related stress. They found out that teachers who have harmonious and positive relationship between teachers exhibited isolation from work-related stress. They normally isolate themselves from things that may trigger stress. This further implies that teachers who are flexible in dealing with others and being adaptable to manage workloads can respond effectively to all school concerns.

**Interpersonal Adaptability.** The present study found a very high level of interpersonal adaptability in public school teachers indicating that the said adaptability is always evident to teachers who demonstrate flexibility in dealing with others and are very much concerned with establishing harmonious relationship with everyone in school. This further implies that teachers always feel comfortable with others and their strong and healthy relationship increases the likelihood of accomplishing their individual and organizational objectives since they work as a team where everyone is stimulated to support the schools' various programs and activities. This claim corroborates with the research conducted by Diamantidis & Chatzoglou (2019) showed result that employee-related factors impact employee performance. This also agrees with the findings of Oliver and Lievens (2014) that a very high level of adaptability skills allows workers to establish

a stable relationship. These authors emphasized that employees can adapt easily to a new workplace and easily work with their peers.

**Learning Adaptability.** The learning adaptability of teachers is very high. It has an implication that their learning adaptability is always evident. This implies that the respondents always find joy in learning new teaching approaches for them to effectively translate their knowledge and skills to students and other individuals in school. Besides, teachers are always competitive, and they always do not want to be left behind in terms of skill acquisition, thus they always take action in school to improve work performance. These findings coincide with the claim of Shoss et al. (2011) that adaptive performance reflects effectiveness and gain new competencies. Such competencies are the acquisition of new methods and skills relevant for a job. The very high level of learning adaptability is also aligned with the study of Soe (2018) which concluded that the professional development of teachers is a very important factor for improving teachers' classroom practices. Hence, the effectiveness of teachers in implementing the learning process depends on the quality of skills they acquire from professional development training. Thus, teachers need to be regularly trained to acquire relevant knowledge and skills which are helpful in their work.

**Uncertainty Adaptability.** The level of individual adaptability of the respondents in terms of uncertainty adaptability is high. This indicates that uncertainty adaptability is oftentimes evident among teachers. The results of the present study imply that teachers oftentimes effectively adapt to issues, uncertain situations, or changing conditions. The high level of the respondents' uncertainty adaptability also implies that they are oftentimes flexible and determined to find solutions to whatever problems in the school instead of quitting.

The discussions on favorable uncertainty adaptability of the respondents are parallel with what Collie & Martin (2016) averred teachers who are able to effectively respond to uncertainties demonstrate capacity which is important for them. Further, the respondents who are oftentimes committed to their work and are fully engaged to respond to whatever uncertain situations in the school which is important in minimizing the risks of the said unpredictable situations. This also coincides with the study conducted by Baloran & Hernan (2020) opined that the ability of teachers to manage uncertainties at work during this time of pandemic contributes to their high level of commitment which could lead to providing continuous quality education for students.

**Crisis Adaptability.** On one hand, crisis adaptability has favorable descriptive equivalent or high level indicating oftentimes evident to teachers. The discussions pertaining to crisis adaptability corroborate with the statement of Prince (2020) and LePine, et al. (2017) that one must focus on tiny things that one can manage. The findings also support this argument showing that teachers suppress their feelings for them to perform their assigned tasks amidst crisis or adversity.

**Physical Adaptability.** On the other hand, the level of teachers' physical adaptability is high, indicating that physical adaptability is oftentimes evident among teachers. This implies that teachers oftentimes work effectively even when faced with tiresome activities or even when they are physically exhausted. It is also evident that the respondents can still manage to perform well even if the environment is not comfortable. This implies that teachers oftentimes adjust with difficult conditions for them to complete important tasks. Pulakos et al. (2006) stated that physical adaptability is an aspect of adaptive performance that involves one's ability to adapt to several physical factors. The high level of physical adaptability further implies that teachers are physically ready to perform the tasks assigned to them.

**Creative Adaptability.** Meanwhile, the creative adaptability of teachers with high level descriptive equivalent is oftentimes evident. This implies that teachers oftentimes develop unique analysis should they encounter complex problems in the workplace. Likewise, teachers are oftentimes capable of contributing solutions to problems related to instructions. In case of insufficient resources, teachers oftentimes think of innovative solutions to ensure better delivery of quality education. The present study affirms the study of

Orkibi (2021) which revealed that creative adaptability has a positive correlation with well-being. This is also in consonance with the statement of Runco (2014) that creative individuals may sometimes maintain psychological health. Further, creative individuals have the capacity to adapt and cope with the changing conditions. Congruently, with positive attitudes of teachers toward creating or developing solutions to problems embedded in their chosen profession, it is more likely that they will grow and develop professionally.

### **Status of Availability of ICT Facilities**

The status of the availability of ICT facilities in public schools in Region XI is in high level, which shows that the availability of ICT facilities in public schools is oftentimes observed. The result implies that the quality of learning can be significantly enhanced when ICT is utilized as intellectual multi-tools. Further, research related to availability of ICT facilities was conducted and results indicated that the availability of ICT facilities in the academic setting has impacted the quality and quantity of teaching and learning. These findings are supported by the study of Yusuf et al. (2013) that in promoting ICT facilities in education as well as to improve the quality of teaching, the teachers must have appropriate ICT facilities, reliable internet connection, as well as technical support from the school. In the same way, data indicates that internet connection, though slow, is highly available in public schools which indicates that teachers can now easily communicate pertaining to students' education. Likewise, the findings also corroborate with the result of the study of Olaore (2014) on the impacts of ICT on education that ICT has a positive impact on education. Therefore, the availability of ICT facilities implies a greater possibility of improving the academic performance or learning outcomes of students.

### **Level of Teachers' Readiness in Online Teaching Environment**

The level of teacher's readiness in online teaching environment of public school teachers is high indicating that the teacher's readiness in online teaching is oftentimes manifested. Based on the result, public school teachers are ready for online teaching as manifested in their technical skills, experience, attitudes, time management, and time commitment. This result has implications that teachers are competent and getting ready when it comes to online teaching as they are provided support from the school. Also, one example of being ready to teach online is being optimistic and adaptive to change. This is in line with the claim of Cutri et al. (2020) that teachers can produce good quality online teaching if they are willing to revise their teaching strategies that would fit to online teaching delivery. In the same way, this finding is related to what Phan and Dhang (2017) pointed out in their study that e-readiness is the teacher's willingness and the way they prepare specifically in the aspects of technical, communication, and teaching methodology for online learning.

**Technical Skills.** The level of readiness of public school teachers in Region XI when it comes to technical skills is very high. This implies that the technical skills of the teachers are always manifested. This implies that teachers are already equipped with basic knowledge and skills in the utilization of computers to aid their teaching and learning. The results also indicate that the respondents are very knowledgeable in terms of technology applications that support them in their teaching. This supports the research findings of Phan and Dang (2017) which highlighted technical skills that have strong impacts on the teachers' e-readiness; the more they are familiar with the technology, the more ready they are for an online teaching environment. Also, Ncube et al. (2014) recommended that lecturers or teachers must have training interventions aligned to their level of skills. With teachers' high level of technical skills, it is more likely that they can effectively improve the students' acquisition of knowledge and skills. Thus, skills development is essential for online teaching.

**Experience with Online Teaching and Learning.** On one hand, the level of readiness of teachers in terms of experience with online teaching and learning is high, which means that the experience of teachers in

online teaching and learning is oftentimes manifested. This implies that teachers are highly prepared for online teaching since they have attended formal training in online instruction. This also implies that teachers oftentimes have rich experiences with online teaching which makes them highly qualified for teaching in online classes. Data further implies that teachers can effectively interact with students since they already have favorable experiences in teaching students online. This finding supports the studies of Kim (2020) and Spoel et al. (2020) that online teaching requires rich experiences of teachers in online and provides them with chances to interact with the students effectively.

**Attitude towards Online Learning.** The readiness of public school teachers in an online teaching environment in terms of attitude towards online learning yields a very high descriptive equivalent, implying that it is always manifested among teachers. These teachers always believe that they can sufficiently provide relevant learning resources to students as these can easily be searched or downloaded from the internet. Data also imply that teachers become more stimulated to regularly meet their students through online since they at the same time learn from the learning resources generated from the internet. This finding conforms to the study of Kisanga (2016) and Wassermann and Migdal (2019) which accented that teachers display positive attitudes to online learning where the experience of using the computer has a substantial influence on their being optimistic. This also affirms the study of Ventayen (2018) concluded that majority of the teachers have positive attitudes toward online teaching, thus, it contributed to their readiness.

**Time Management and Time Commitment.** More so, the level of readiness of teachers in an online teaching environment in terms of time management and time commitment is high. This implies that time management and time commitment is oftentimes manifested among teachers. This implies that teachers oftentimes manage their time effectively to ensure favorable online teaching experiences and it also implies that these individuals are highly committed with their work as teachers. The high level of time management and time commitment of teachers further imply a greater propensity to complete their tasks in less time since their attention is focused and they are not wasting time on distractions. This finding coincides with the result of the study of Khan et al. (2016) that teachers who have better time management techniques showed high performance in class. Also, the same result conforms to the study of Farooqi (2016) revealed a positive relationship between teachers' time management techniques and their class performance. Thus, time management skills are recommended to be included in teacher training programs.

### **Significance of the Influence of the Predictors of Teachers' Readiness in Online Teaching Environment**

Results indicate that both individual adaptability and availability of ICT facilities significantly influence teachers' readiness for online teaching. Out of the two independent variables, the availability of ICT resources best predicts the teachers' readiness in an online teaching environment. This implies that making ICT facilities available to both teachers and students increases the propensity of making a difference in terms of quality learning experiences for students. Aside from the availability of ICT facilities, teachers' ability to adapt to the challenges brought about by coronavirus is found influential to the preparedness of teachers in online teaching. This implies that teachers are more likely to perform the job of teaching even at the time of the new normal considering that they have a very high level of adaptability as they excise the teaching profession. The relatedness among variables coincides with the research conducted by Winardi and Prianto (2016) which found that adaptability greatly influenced teachers' readiness. This study is further supported by Nacario et al. (2014) that the availability of ICT facilities and the provision of initial ICT training to faculty and students in schools contributed to the preparedness of teachers in an online teaching environment. The other factor of teachers' readiness in online teaching which is more than fifty percent is caused by alienation or factors not included in the study.

## **CONCLUSION AND RECOMMENDATIONS**

This chapter presents the conclusions and recommendations based on the findings of the study.

## Conclusions

Based on the findings of the study, the following conclusions are drawn:

The teachers' level of individual adaptability is high indicating that teacher's individual adaptability is oftentimes evident among teachers. They are highly adaptive to an uncertain situation that normally occurs in their workplace and are highly capable of adjusting to the changes embedded in the implementation of an online teaching environment. The status of ICT facilities needed by teachers in teaching is high which implies that teachers have access to the ICT facilities which are important in their work as teachers. The level of teachers' readiness in an online environment is high which tells us that the majority of the teachers are highly skilled in manipulating computers and Internet learning tools which manifested rich experiences in online teaching and learning.

The individual adaptability of teachers and the availability of ICT facilities influence teachers' readiness in an online teaching environment. This tells us that teachers' ability to adapt to challenges is found influential to the preparedness of teachers in online teaching. Additionally, the availability of ICT facilities contributed to the preparedness of teachers in an online teaching environment as these will help them to become more effective in delivering online classes. Among the two indicators, the availability of ICT facilities is the best predictor.

## Recommendations

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

Since the level of teachers' adaptability, availability of ICT facilities and teacher's readiness are high, it is recommended that teachers may sustain their high level of adaptability through performing well in uncertain situations, managing themselves in times of crisis, and through developing creativity when faced with difficulties. Further, the Department of Education with the help of the school heads may continuously provide ICT facilities in schools and create a teachers' development program that will enhance the technical skills and teaching pedagogy of the teachers.

Since the individual adaptability of teachers and the availability of ICT facilities influence teachers' readiness in an online teaching environment, these may be given emphasis by the school heads to provide the needs of the teachers particularly in the technology aspect to ensure quality teaching and learning experience. Additionally, the school administration may continue to have regular assessments on the level of teacher's readiness and their ICT infrastructures in order to provide rich experiences and quality of our educational system.

## Implications for Educational Practice

The very high level of individual adaptability, availability of ICT facilities, and readiness of teachers toward online teaching have implications for educational practice. The shift of teaching modality from face-to-face to online teaching is not considered a serious problem for teachers since they can easily adapt to the implementation of the new normal setup. This implies that these teachers demonstrate positive attitudes toward supporting the programs of the government at this time of COVID-19 pandemic. This means teachers consider themselves part of the solutions to the abrupt change in the delivery of formal education to students.

The very high level of availability of ICT facilities is evident since public school teachers are the ones providing these needs using their own resources, implying favorable attitudes of teachers towards their work. This also implies a high level of teachers' commitment towards the practice of the teaching profession.

The very high level of readiness of teachers indicates that they have an optimistic attitude toward the implementation of online teaching and that they are willing to adapt to the abrupt change in the educational system brought about by COVID-19 pandemic. This implies that the teachers demonstrate commitment to their duties and responsibilities for them to continuously touch the lives of students amidst educational health crises. Further, the teachers already have experience in online teaching, but it does not mean they already know all social media technologies and applications or utilizations of the different programs that are available. Thus, they still more support from the government and other agencies or other individuals who can give support to teachers for them to sustain their positive attitudes toward the implementation of online teaching, making them more adaptive to change in the learning modalities.

### **Recommendations for Future Research**

The present study is relevant to the implementation of new normal education, tackling some of the important issues on the adaptability of teachers, availability of ICT facilities, and teachers' readiness towards online teaching at this time of pandemic. The results of the study are very informative to future researchers planning to conduct related studies. Hence, it is recommended that they conduct a study related to the variables involved in this research to validate this study's findings generated from the respondents.

### **Concluding Remarks**

The adaptability of teachers to the implementation of online teaching is considered vital in the delivery of formal education to students, especially at this time of health crisis brought about by the COVID-19 pandemic. This adaptability helps teachers to become flexible in facing the different challenges and difficulties embedded in the implementation of online teaching. Also, there is a need for ICT facilities to be available to ensure efficiency in the delivery of lessons done through online teaching. Teachers need to be adaptive always to changes in the learning modalities and the Department of Education needs to allocate more budget for the school facilities since they contribute to the readiness of teachers towards the implementation of online teaching in this new normal setting.

### **REFERENCES**

1. Adeyemi, T. O. (2011). Impact of Information and Communication Technology (ICT) on the Effective Management of Universities in South-West Nigeria. *American Journal of Social Management Science*, 2(3), 248-257. doi:10.5251/ajsms.2011.2.3.248.257
2. Agai-Demjaha, T., Minov, J., Stoleski, S., & Zafirova, B. (2015). Stress Causing Factors Among Teachers in Elementary Schools and Their Relationship with Demographic and Job Open access Macedonian journal of medical sciences, 3(3), 493–499. <https://doi.org/10.3889/oamjms.2015.077>
3. Agi, C. W. (2013) Role of Counselling in Effective Integration of Information, Communication Technology to University Education. In *Journal of Applied Research* ; 5(1) 41-47
4. Agim, N., Chioma, O., Obasi-Haco, C. (2018). Level of Availability and Utilization of Information and Communication Technology Facilities by Students: A Case Study of Federal Polytechnic, Nekede, Owerri, Imo State Nigeria Academic Library. June 2018
5. Ahammad, F. (2019). Availability and Utilization of Ict Facilities for Teaching and Learning in Higher Secondary Schools of West Bengal. <https://1library.net/document/zkkwp3pz-availability-utilization-facilities-teaching-learning-higher-secondary-schools.html>
6. Ajayi, I. A. (2008). Towards effective use of information and communication technology for teaching in Nigerian colleges of education. *Asian J. Inf. Technol.* 7(5): 210 – 214.
7. Ajitha, P. (2020). Teacher Readiness. [progressiveteacher.in/teacher-readiness/](http://progressiveteacher.in/teacher-readiness/)
8. Akaslan, Dursun & Law, Effie. (2011). Measuring Student E-Learning Readiness: ZsA Case about the Subject of Electricity in Higher Education Institutions in Turkey. 209-218. 10.1007/978-3-642-25813-8\_22.



9. Akingbade, O., Olaopa, S. O. (2019). Information Literacy Skills as determinant of ICT Utilisation by Secondary School Teachers in Private Secondary Schools in Ibadan North Local Government Area, Oyo State, Nigeria <https://digitalcommons.unl.edu/libphilprac/2668/>
10. Al-Awidi, H. & Aldhafeeri, F. (2017). Teachers' Readiness to Implement Digital Curriculum in Kuwaiti Schools. *Journal of Information Technology Education: Research*. Volume 16, 2017.
11. Al-Zaidiyeen, N., Mei, L. & Fook, F. (2010). Teachers' Attitudes and Levels of Technology Use in Classrooms: The Case of Jordan Schools *International Education Studies*, 3(2), 21-218.
12. Allworth, E., & Hesketh, B. (1999). Construct-oriented Biodata: Capturing Change-related and Contextually Relevant Future Performance. *International Journal of Selection and* 7(2): 97-111. DOI:10.1111/1468-2389.00110
13. Amin, S. (2013). An effective use of ICT for education and learning by drawing on worldwide knowledge, research and experience: ICT as a change agent for education (A Literature review). *Scholarly Journal of Education* Vol. 2(4), pp. 38-45, April 2013. 42. 38-45.
14. Anderson, D., Imdieke, S., & Standerford, N. S. (2011). Feedback please: Studying self in the online classroom. *International Journal of Instruction*, 4, 3-15
15. Anney, V. N. (2014). Ensuring the quality of the Findings of Qualitative Research: Looking at Trustworthiness Criteria
16. Ansari, J.A.N., Khan, N. A. (2020). Exploring the role of social media in collaborative learning the new domain of learning. *Smart Learn*. 7, 9 (2020). <https://doi.org/10.1186/s40561-020-00118-7>
17. Anya, C. (2017). Availability of ICT Facilities and Teachers' Literacy Level and Their Impact on The Academic Performance of Secondary School Students In Abakaliki Lga of Ebonyi State.
18. Apagu, V. V., & Wakili, B. A. (2015). Availability and Utilization of ICT Facilities for Teaching and Learning of Vocational and Technical Education in Yobe State Technical Colleges. *American Journal of Engineering Research (AJER)* e-ISSN: 2320-0847 p-ISSN: 2320-0936, V04, I-02, pp-113-118.
19. Ayeni, A. J. Ogunbameru, M. (2013). Effective Utilization and Maintenance of ICT facilities for Quality Teaching and learning Outcome in Secondary Schools in Ondo State, Nigeria. *Consortia Academia* V2, N 2, Jul 01, 2013 ISSN 2243-7738
20. Baard, S. K., Rench, T. A., & Kozlowski, S. W. J. (2014). Performance Adaptation: A Theoretical Integration and Review. *Journal of Management*, 40(1), 48-99.
21. Babajide, V.F.T., Bolaji, O.A. (2013). Perception of lecturers and service teachers towards the use of communication media in teaching pure science related discipline. 44th Annual STAN Conference proceedings pp. 33 – 36.
22. Baloran, E., Hernan, J. (2020) Crisis Self-Efficacy and Work Commitment of Education Workers among Public Schools during COVID-19 Pandemic. Preprints 2020, 2020070599 (doi: 10.20944/preprints202007. 0599.v1)
23. Barde, M. (2017). Teachers' readiness for integration of information communication and technology in the teaching of biology in secondary schools of Bauchi State, Nigeria.
24. Bamidele, S.O. (2006). Development of modern ICT and internet system. In Agagu A.A. (ed). *Information and communication technology and computer applications*. Abuja; pamof pree pp. 1-3.
25. Bonk, C. J. (2012). "Online Teaching in an Online World." *USDLA Journal* 16no.1. [http://cecs5580.pbworks.com/f/ Online+Teaching+in+an+Online+world. pdf](http://cecs5580.pbworks.com/f/Online+Teaching+in+an+Online+world.pdf)
26. Boss, J. (2015). 14 Signs Of An Adaptable Person. <https://forbes.com/sites/jeffbloss/%202015/09/03/14-signs-of-an-adaptable-person/>
27. Bransford, J., Derry, S., Berliner, D., Hammerness, K., & Beckett, K.L. (2005). Theories of Learning and their Roles in Teaching. In L. Darling-Hammond & J. Bransford (Eds.), *Preparing teachers for a changing world* (pp. 40-87). San Francisco, CA: Wiley.
28. Brierley, J. A. (2017). The Role of a Pragmatist Paradigm when Adopting Mixed Methods in Behavioural Accounting Research. *International Journal of Behavioural Accounting and Finance*, Inderscience Enterprises Ltd, vol. 6(2), pages 140-154.
29. Bryers, A. P. (2014). Psychological evaluation by means of an on-line computer. *Behaviour Research Method and Instruction*, 13, 585 – 587.

30. Callo, E. C. & Yazon, A. D. (2020). Exploring the Factors Influencing the Readiness of Faculty and Students on Online Teaching and Learning as an Alternative Delivery Mode for the New Normal. *August Universal Journal of Educational Research* 8(8): 3509-3518 DOI: 10.13189/ujer.2020.080826
31. Chapman, J. and Clark, D. (2020). Can being adaptable help, you advance in your career? <https://inhersight.com/blog/advancement/adaptability>
32. Cohen, W. B., Maiersperger, T. K., Gower, S. T. & Turner D. P. (20013). An improved strategy for regression of biophysical variables and Landsat ETM+ data. *Remote Sensing of Environment* Volume 84, Issue 4, 10 April 2003, Pages 561-571
33. Collie, R.J., & Martin, A.J. (2015). Teachers' Adaptability: Examining Links with Principal Support, Teachers' Psychological Functioning, and Students' Achievement. *Learning and Individual Differences* Volume 55, April 2017, Pages 29-39. <https://doi.org/10.1016/j.lindif.2017.03.003>
34. Collie, R.J, & Martin, A.J. (2016). Adaptability: An important capacity for effective teachers. *Educational Practice and Theory*, 38(1), 27-39
35. Collie, R. J., Martin, A. J., & Grandziera, H. (2018). Being Able to Adapt in the Classroom Improves Teachers' Well May 8, 2018. *The Conversation*.
36. Corno, L. (2008). On Teaching Adaptively. *Educational Psychologist*, 43(3), 161-173. <http://dx.doi.org/10.1080/00461520802178466>
37. Creswell, J. (2003). *Research design: Qualitative, quantitative and mixed methods approaches* (2nd ed.). Thousand Oaks, CA: SAGE Publications. Creswell, J.W. and Plano Clark, V.L. (2011) *Designing and Conducting Mixed Methods Research*. 2nd Edition, Sage Publications, Los Angeles
38. Cromarty, C. (2020) "How to Adapt Communication for Cultural Differences, and why is it so important?". EW Group.
39. Crossman, A. (2020). Understanding Purposive Sampling. An Overview of the Method and It's Applications. <https://thoughtco.com/purposive-sampling-3026727>
40. Cruz, M (2020). Only 40% of Public School Teachers so far Trained for Distance Learning. *Philippine Daily Inquirer*. June 26, 2020
41. Cua, A J. S. (2020). *The Manila Times*. Campus' <https://manilatimes.net/2020/09/24/>
42. Cudis, K. (2020) "Davao Teachers Learn New Skills Amid COVIS-19 Crisis". *Philippine News Agency*, July 15,2020. <https://pna.gov.ph/articles/1108977>
43. Cutri, R. M., Mena, J., & Whiting, E. F. (2020) Faculty Readiness for Online Crisis Teaching: Transitioning to Online Teaching during the COVID -19 Pandemic, *European Journal of Teacher Education* 43:4, 523-541, DOI: 10.1080/02619768.2020.1815702
44. Davis, F. & Bagozzi, R. & Warshaw, P.. (1989). User Acceptance of Computer Technology: A Comparison of Two Theoretical Models. *Management Science*. 35. 982-1003. doi: 10.1287/mnsc.35.8.982.
45. Dela Cruz, D.N.J. (2020). "PH not ready to virtual classes- lawmaker". *The Manila Times*. May 25, 2020.
46. Dela Pena-Bandalaria, M. (2009). E-Learning in the Philippines: Trends, Directions, and Challenges. *International Journal on E-Learning*, v8 n4 p495-510 Oct 2009. <https://eric.ed.gov/?id=EJ851849>
47. De Meuse, K. P., Dai, G., & Hallenbeck, G. S. (2010). Learning Agility: A construct whose time has come. *Consulting Psychology Journal: Practice and Research*, 62(2), 119–130. <https://doi.org/10.1037/a0019988>
48. Diamantidis, A. & Chatzoglou, P. (2018). Factors affecting employee performance: an empirical approach. *International Journal of Productivity and Performance Management*. 68. 10.1108/IJPPM-01-2018-0012.
49. Doculan, J. D. (2016). E-Learning Readiness Assessment Tool for Philippines Higher Education Institutions. *International Journal on Integrating*
50. Ellevsen, G. (2018). Cultural Adaptability. *The Brandthropologist*.
51. Ertmer, P.A. & Ottenbreit-Leftwich, A. T. 2010). Teacher Technology Change, *Journal of Research on Technology in Education*, 42:3, 255-284, DOI: 10.1080/15391523.2010.10782551
52. Farzkish, M. & Montazer, G.A. (2019). E-Learning Readiness among Faculty Members of Iranian Universities: A Survey of 23 Universities. 10.30476/IJVLMS.2019.84302.1003

- [https://ijvlms.sums.ac.ir/article\\_45937.html](https://ijvlms.sums.ac.ir/article_45937.html)
53. Farooqi, M. (2016). Exploring Relationship of Time Management with Teachers' Performance. *Bulletin of Education and Research*. 8. [https://researchgate.net/publication/314949572\\_Exploring\\_Relationship\\_of\\_Time\\_Management\\_with\\_Teachers'\\_Performance](https://researchgate.net/publication/314949572_Exploring_Relationship_of_Time_Management_with_Teachers'_Performance).
  54. Finger, G., Jamieson-Proctor, R. & Grimbeek, P. (2013). Teaching Teachers for the Future Project: Building TPACK Confidence and Capabilities for Elearning. November 2013.
  55. Fiori, M., Bollmann, G./., & Rossier, J. (2015). Exploring the path through which career adaptability increases job satisfaction and lowers job stress: The role of affect, *Journal of Vocational Behavior*, Volume 91, 2015, Pages 113-121, ISSN0001-8791, <https://doi.org/10.1016/j.jvb.2015.08.010>.
  56. Fuller, D., R. Norby, K. Pearce and S. Strand. (2010). "Internet Teaching by Style: Profiling the Online Professor." *Educational Technology & Society* 3, no. 2. [https://ds.unipi.gr/et&s/journals/3\\_2/pearce.html](https://ds.unipi.gr/et&s/journals/3_2/pearce.html)
  57. Gay, G. H. (2016) An Assessment of Online Instructor E-learning Readiness Before, During, and After Course Delivery. *Journal of Computing in Higher*, 28(2), 199-220.
  58. Gay, G. H. E. A Study of Technological Barriers to Instructor E- Readiness in the Online Learning Environment. Doctoral dissertation. Nova Southeastern University. NSUWorks, Graduate School of Computer and Information Sciences. (160) [https://nsuworks.nova.edu/gscis\\_etd/160](https://nsuworks.nova.edu/gscis_etd/160)
  59. Ghavifekr, S. & Rosdy, W. A. W (2015). Teaching and Learning with Technology: Effectiveness of ICT Integration in Schools. *International Journal of Research in Education and Science*, v1 n2 p175-191 Sum 2015. <https://eric.ed.gov/?id=EJ1105224>
  60. Girneata, A. (2014). Adaptability- A Strategic Capability During Crisis. *Economic Questions, Issues and Problems*, ISBN 978-80-89-691-07- .
  61. Gerrish, R. (2009). Creativity (aka Adaptability). <https://cbsnews.com/news/creativity-aka-adaptability/>
  62. Glei, J.K. (2009). Creativity is adaptability. <https://americanexpress.com/en-us/business/trends-and-insights/article/s/creativity-is-adaptability-jocelyn-k-glei/>
  63. Glen, (2015) "Purposive Sampling (Deliberate Sampling)" from *Statistics How To.com: Elementary Statistics for the rest of us!* <https://www.statisticshowto.com/purposive-sampling/>
  64. Hargreaves, A. (2005). Educational Change takes Ages: Life, Career and Generational Factors in Teachers' Emotional Responses to Educational Change. *Teaching and Teacher Education*, 21(8), 967-983. <http://dx.doi.org/10.1016/j.tate.2005.06.007>
  65. Hornby, A. S. (2010) *Oxford Advanced Learners Dictionary of current English*. Oxford: The University Press.
  66. Hussain, M. A., Iqbar, .M. Z., & Akhtar, M. S. (2010). Technology Based Learning Environment and Student Achievement in English as a Foreign Language in Pakistan. January 2010. *World Academy of Science, Engineering and Technology International Journal of Information and Communication Engineering Vol:4, No:1, 2010* [doi.org/10.5281/zenodo.1334367](https://doi.org/10.5281/zenodo.1334367)
  67. Indeed Career Guide, 2020. <https://indeed.com/career-advice/career-development/adaptability-skills>
  68. Ivancic, K., & Hesketh, B. (2000). Learning from error in a driving simulation: Effects on driving skill and self-confidence. *Ergonomics*, 43, 1966-1984.
  69. Jobidon, M., Labrecque, A., Turcotte, I., Rousseau, V., Tremblay, S., (2013). Adaptability in Crisis Management: The Role of Organizational Structure. Conference paper. ADA587021
  70. Johnson, J., Hetzel, D.; Murillo, G. (2019). Cultural Adaptability – Using Behavioral Intelligence to Connect Across Cultures. Coeus Creative Group
  71. Kabito, G.G., & Wami, S.D. (2020). Perceived work-related stress and its associated factors among public secondary school teachers in Gondar city: a cross-sectional study from Ethiopia. *BMC Res Notes* 13, 36 (2020). <https://doi.org/10.1186/s13104-020-4901-0>
  72. Kariyev, A.D., Selkebayeva, A. T., Bespayeva, G.K., Baigundinova, B. I. and Kabdualiva, A.G. (2018). A study of teacher's readiness for teaching students by method of interactive e-learning method as a condition for developing creative abilities. <http://www.revistaespacios.com/a18v39n21/a18v39n21p15.pdf>

73. Kearsley, G., and R. Blomeyer. (2004). "Preparing K–12 Teachers to Teach Online." *Educational Technology* 44, Jan-Feb: 49–52. <https://jstor.org/stable/44428876?seq=1#metadata.info.tab.contents>
74. Keating, K. (2021). <https://gpstrategies.com/blog/5-tips-for-keeping-virtual-learners-engaged/>
75. Kebritchi, M., Lipschuetz, A., & Santiago, L. (2017). Issues and Challenges for Teaching Successful Online Courses in Higher Education: A Literature Review. August 8, 2017. <https://doi.org/10.1177/0047239516661713>
76. Khan, M. (2015). Trustworthiness or Validity in Qualitative Research? <https://meokhan.blogspot.com/2015/02/trustworthiness-or-validity.html>
77. Khan, H. M. A., Farooqi, M. T. K., Khalil, A., and Faisal, I. (2016). Exploring Relationship of Time Management with Teachers' Performance. *Bulletin of Education and Research* December 2016, Vol. 38, No. 2 249-263
78. Kim, J. (2020). Learning and Teaching Online During Covid-19: Experiences of Student Teachers in an Early Childhood Education Practicum. *International Journal of Early Childhood*. 52. 10.1007/s13158-020-00272-6.
79. Kim, K. H., & Pierce, R. A., (2013). *Torrance's Innovator Meter and the Decline of Creativity in America*. Routledge. 1<sup>st</sup> 2013. ISBN9780429230745
80. Kisanga, D. H (2016). Determinants of Teachers' Attitudes Towards ELearning in Tanzanian Higher Learning Institutions. *International Review of Research in Open and Distributed Learning* Volume 17, Number 5 September – 2016. <https://files.eric.ed.gov/fulltext/EJ1117380.pdf>
81. Klimov E.A. (2002). *Psychology of professional*. St. Petersburg, 2002. – p.492 Konig, J., Jager-Biela, D. & Glutsche (2020) Adapting to online teaching during COVID-19 school closure: teacher education and teacher competence effects among early career teachers in Germany, *European Journal of Teacher Education*, 43:4, 608-622, DOI: 10.1080/02619768.2020.1809650
82. Kok, D. (2018). Why adaptability and creativity are more important than ever in this age of disruption. <https://thepeakmagazine.com.sg/interviews/adaptability-creativity-important-ever-age-disruption/>
83. Kozlowski, S. W. J., Mak, S., Chao, G. T. (2016). Team-centric leadership: An integrative review. *Annual Review of Organizational Psychology and Organizational Behavior*, 3, 21–54.
84. Krishna Kumar, R., & Kumar, R. (2011). Attitude of Teachers of Higher Education towards e-Learning. *International Knowledge Sharing Platform*. Vol.2, No.4 (2011). <https://iiste.org/Journals/index.php/JEP/article/view/440>
85. Kunter, M., Klusmann, U., Baumert, J., Richter, D., Voss, T., & Hachfeld, A. (2013). Professional competence of teachers: Effects on instructional quality and student development. *Journal of Educational Psychology*, 105(3), 805-820. <http://dx.doi.org/10.1037/a0032583>
86. Lapada, A.A., Robledo, D.A. R., Miguel, F. F., Alam, Z. F. (2020) Teachers' Covid-19 Awareness, Distance Learning Education Experiences and Perceptions towards Institutional Readiness and Challenges. July 2020 DOI:10.26803/ijlter.19.6.8
87. Lion, R., & Stark, G. (2010). A glance at institutional support for faculty teaching in an online learning environment. *Educause Quarterly*, 33 <http://er.educause.edu/articles/2010/9/a-glance-at-institutional-support-for-faculty-teaching-in-anonline-learning-environment>
88. Llego, M A. (2020). Teacher PH. DepEd's Readiness for Distance Learning. DepEd Commons. Teacher PH.
89. Lichoro, D. M. (2015). Faculty readiness for transition to teaching online courses in the Iowa Community College Online Consortium. *Graduate Theses and Dissertations*. 14376. <https://lib.dr.iastate.edu/etd/14376> Lincoln YS, Guba EG. *Naturalistic inquiry*. California: Sage Publications;
90. Limperos, A. M., Buckner, M. M., Kaufmann, R., Frisby, B. N. (2015). Online teaching and technological affordances: An experimental investigation into the impact of modality and clarity on perceived and actual <https://doi.org/10.1016/j.compedu.2014.12.015>
91. Lincoln, Y. S. & Guba E. G. (1985). *Naturalistic Inquiry*. SAGE Publications. International Educational and Professional Publisher Newbury Park London, New Delhi.

92. Mansfield, C. F., Beltman, S., Price, A., & McConney, A. (2012). "Don't sweat the small stuff:" Understanding Teacher Resilience at the Chalkface. *Teaching and Teacher Education*, 28(3), 357-367. <http://dx.doi.org/10.1016/j.tate.2011.11.001>
93. Mardiana, H. (2020). Lecturers' Adaptability To Technological Change And Its Impact On The Teaching Process. *JPI (Jurnal Pendidikan Indonesia)*. 9. 275.10.23887/jpi-undiksha.v9i2.24595
94. Markle, R. S.(2016). Exploring Teacher Readiness: What Features of Professional Development Enhance Motivation to Implement Technology Innovations? .University of South Carolina .Scholar Commons. . <https://scholarcommons.sc.edu/etd/3879>
95. Martin, F., Budhrani, K., & Wang, C. (2019). Examining Faculty Perception of their Readiness to Teach Online. *Online Learning*, 23(3), 97-119. doi:10.24059/olj.v23i3.1555:<https://files.eric.ed.gov/fulltext/EJ1228799.pdf>
96. McCombes, S. (2019). Correlational Research. <https://scribbr.com/methodology/correlational-research/>
97. McRae, P., S. Varnhagen, J.C. Couture and B. Arkison. (2012). "A study of Alberta teachers' working condition in distributed learning environments: flexibility, accessibility and permeable boundaries." Proceedings of the American Education Research Association (AERA) Annual Conference, San Diego, CA: AERA
98. Mitchell, M. (2015). Teaching for Life Success: Why Resourcefulness Matters/ <https://edutopia.org/blog/8-pathways-why-resourcefulness-matters-marilyn-price-mitchel>
99. Mndzebele, N. (2013). Teachers Readiness in Using ICT in the Classroom: The Case of a Developing Country. *International Journal of Information and Education Technology*. 409-412. 10.7763/IJET.2013.V3.309.
100. Morgan, J. (2016). "Why learning, adaptability will matter in the future workplace": <https://hrdive.com/news/why-learning-adaptability-will-matter-in-the-future-workplace/421641/>
101. Morris S. S. S. Tumanduk, Rifana S. S. I. Kawet, Christine T. M. Manoppo, and Tendly S. ( 2020). The Influence of Teacher Readiness to Learning Achievement of Vocational High School Students in South Minahasa, North Sulawesi, IndonesiaMaki Faculty of Engineering, Universitas Negeri Manado, Kampus UNIMA Tondano 95618, Indonesia
102. Msila, (2015). Teacher Readiness and Information and Communications Technology (ICT) use in Classrooms: A South African Case Study. *Creative Education*, 6, 1973-1981. <http://dx.doi.org/10.4236/ce.2015.618202>
103. Muller, L., Goldenberg, G. (2020). Education in times of Crisis: Teachers' View on Distance Learning and School Reopening Plans during COVID-19.Chartered College of Teaching, 2020.
104. Murphy, S.L. (2015). Individual Adaptability as a Predictor of Job Performance Louisiana Tech University. Louisiana Tech Digital Commons <https://digitalcommons.latech.edu/cgi/viewcontent.cgi?article=\1203&context=dissertations>
105. Mwapwele S. D., Marais, M., Dlamini, S. & Biljon, J. V. (2019). "Teachers' ICT Adoption in South African Rural Schools: A Study of Technology Readiness and Implications for the South Africa Connect Broadband Policy" <http://www.scielo.org.za/pdf/ajic/v24/02.pdf>
106. Nacario, C., Osea, G., Foronda, V., Lirag, M. T. Lirag, B. (2014). Readiness and Acceptability of Information and Communication Technology Integration in Basic Education. *Asia Pacific Journal of Multidisciplinary Research* 2.
107. Ncube, L., Dube, L. & Ngulube, P (2014). E-Learning Readiness among Academic Staff in the Department of Information Science at the University of South Africa. July 2014. *Mediterranean Journal of Social Sciences* 5(16) DOI:10.5901/mjss.2014.v5n16p357
108. Naem, F. (2019). Cultural adaptations of CBT: A summary and discussion of the Special Issue on Cultural Adaptation of The Cognitive Behavior Therapist, 12, E40. doi:10.1017/S1754470X19000278
109. Nelson, J. K., Zaccaro, S. J., & Herman, J. L. (2010). Strategic Information Provision and Experiential Variety as Tools for Developing Adaptive Leadership Skills. *Consulting Psychology Journal: Practice and Research*, 62(2), 131–142. <https://doi.org/10.1037/a0019989>
110. Nesbit, P., & Lam, E. (2014). Cultural Adaptability and Organizational Change: A Case Study of a Social Service Organization in Hong Kong. *Contemporary Management Research*, 10(4).

- <https://doi.org/10.7903/cmr.12186>
111. Ofodu, GO (2017). Nigeria Literary educators and their technological needs in a digital age. *Education Focus* 5(1), 22 – 30.
  112. Ogunsola, L. A. (2014) Nigerian university libraries and the challenges of globalization: the way forward. *Electronic Journal of academic and special librarianship* 5(2-3) Fall 2014).
  113. Olaore, I. B. (2014). The Impacts (Positive and Negative) of ICT on Education in Nigeria. *Developing Country Studies* [www.iiste.org](http://www.iiste.org) ISSN 2224-607X (Paper) ISSN 2225-0565 (Online) Vol.4, No.23, 2014. <https://core.ac.uk/download/pdf/234682114.pdf>
  114. Oliver, T., & Lievens, F. (2014). Conceptualizing and assessing interpersonal adaptability: Towards a functional framework. In D. Chan (Ed.), *Individual adaptability to changes at work: New directions in research* (pp. 52–72). Routledge/Taylor & Francis Group.
  115. Ololube, N. (2006) *Teacher Education, School Effectiveness and Improvement: A Study of Nigerian Secondary Schools*. Doctoral Thesis, University of Helsinki, Helsinki.
  116. Olsen, S. (2020). Adaptability: Your most essential workplace skill. <https://inhersight.com/blog/advancement/adaptability>
  117. Orkibi, H. (2021). Creative Adaptability: Conceptual Framework, Measurement, and Outcomes in Times of Crisis. *Front. Psycholog.*, V11, p3695. 12 January 2021. ISSN=1664-1078 <https://doi.org/10.3389/fpsyg.2020.588172>
  118. Parsons, S., Williams, B., Burrowbridge, S., & Mauk, G., (2011). The Case for Adaptability as an aspect of Reading Teacher Effectiveness. *Voice from the Middle*, 19 (1), 19-23.
  119. Parvaiz, G. S., Mufti, O. & Wahab, M. (2016). Pragmatism for Mixed Method Research at Higher Education Level. <https://researchgate.net/publication/312235886>
  120. Paulhus, D., & Martin, C. (1988) Functional flexibility: A new Conception of Interpersonal Flexibility. July 1988. *Journal of Personality and Social Psychology* 55(1):88-101. DOI:10.1037/0022-3514.55.1.88
  121. Phan, T.T.N., Dang, L.T.T (2017). Teacher Readiness for Online Teaching: A Critical Review. *IJODEL*, Vol. 3, No. 1, (June 2017)
  122. Phegan, B. (2013). 437 —Manage Uncertainty and Change with Adaptability. *Company Culture* <http://companyculture.com/437-manage-uncertainty- and-change-with-adaptability/>
  123. Ployhart, R. E., Bliese, P. D. (2006). Individual adaptability (I-ADAPT) theory: Conceptualizing the Antecedents, Consequences, and Measurement of Differences in Adaptability. *Advances in Human Performance and Cognitive Engineering Research*, 6, 3-39. [http://dx.doi.org/10.1016/S1479-3601\(05\)06001-7](http://dx.doi.org/10.1016/S1479-3601(05)06001-7)
  124. Porcala, D. (2020). Philippines internet ‘second slowest’ in Asean, ranks 110th December 2020. *Phistar Global* <https://www.phistar.com/headlines/2020/12/28/2066612/philippinesinternet-second-slowest-asean-ranks-110th-worldwide>
  125. Prince, E. S. (2020). “Adaptability During Times of Uncertainty: Readjusting your Approach to a Crisis”. *Training* April 16, 2020.
  126. Pulakos, E. D., Dorsey, D. W., & White, S. S. (2006). Adaptability in the Workplace: Selecting an Adaptive Workforce. *Advances in Human Performance and Cognitive Engineering Research*, 6, 41-71. [https://doi.org/10.1016/S1479-3601\(05\)06002-9](https://doi.org/10.1016/S1479-3601(05)06002-9)
  127. Rothman, J. (2014). What is Adaptability? Create and Adaptable Life. <https://createadaptablelife.com/2014/01/what-is-adaptability.html>
  128. Runco, M. A. (2014). *Creativity: Theories and Themes: Research, Development, and Practice*, 2nd Edn. Cambridge, MA: Elsevier.
  129. Scherer, R., Howard, S., Tondeur, J. and Siddiq, F. (2020). Profiling Teachers’ Readiness for Online Teaching and Learning in Higher Education: Who’s Ready?. *Computers in Human* 118. 106675. 10.1016/j.chb.2020.106675.
  130. Shahraki, A. & Heidarzadegan, A. (2017). Feasibility study of implementing the e-learning-teaching system in secondary schools. *International Journal of Economic Perspectives*. 11. 845-854
  131. Shoss, M. K., Witt, L. A., Vera, D. (2012). When Does Adaptive Performance Lead to Higher Task Performance? *Journal of Organizational Behavior*, 33, 910-924. ([wileyonlinelibrary.com](http://wileyonlinelibrary.com)).

DOI:10.1002/job.780

132. Spector, J. M. (2007). "Time demands in online instruction." *Distance Learning* 26, no.1. <https://tandfonline.com/doi/abs/10.1080/01587910500081251>
133. Spoel, I. V., Noroozi, O., Schuurink, E. & van Ginkel, S. (2020) Teachers' online teaching expectations and experiences during the Covid19- pandemic in the Netherlands, *European Journal of Teacher Education*, 43:4,623-638, DOI: 10.1080/02619768.2020.1821185
134. Sternberg, R.J. (2001). What is the common thread of creativity? Its dialectical relation to intelligence and wisdom. *American Psychologist*, 56(4):360– 362.
135. Summak, M. S., Baglibel, M., & Samanc?o?lu, M. (2010). Technology readiness of primary school teachers: A case study in Turkey. Volume 2, Issue 2, 2010, Pages 2671-2675. <https://doi.org/10.1016/j.sbspro.2010.03.393>
136. Tahereh, I., Mona, M & Ngah, N.A. (2010). Assessment of instructors' readiness for implementing e-learning in continuing medical education in Iran. *Medial teacher*. 32. e407-1210.3109/0142159X.2010.496006.
137. Tella, A., Orim, F., Ibrahim, D. M., & Memudu, S. A. (2017). The use of electronic resources by academic staff at The University of Ilorin, Nigeria. *Education and Information Technologies*, 23(1), 9-27. <https://doi.org/10.1007/s10639-017- 9577-2>
138. Thompson, M. (2004). "Engagement or 'Encagement'? Faculty Workload in the Online Environment." Paper presented at the 20th Annual Conference on Distance Teaching and Learning. Available at <http://escholarship.bc.edu/ education/ tecplus/ vol6/iss4/art2Thompson>
139. Torres,T (2020). "Walang Signal: Davao de Oro public school teachers struggle to join webinar, camo upland". Nolisoli, June 12, 2020. <https://nolisoli.ph/author/thets/>
140. Tumanduk, M. Kawet, R.S., Manoppo, C.T. and Maki, T. S. (2020). The Influence of Teacher Readiness to Learning Achievement of Vocational High School Students in South Minahasa, North Sulawesi, Indonesia. <https://scitepress.org/Papers/2018/90137/90137.pdf>
141. Tyagi, P.,Sharma, R., Mandeep, Kumar, K. (2020). University Teacher's Attitude Towards Online Teaching in COVID-19 Pandemic. *International Journal of Multidisciplinary Educational Research*. ISSN:2277-7881; IMPACT FACTOR: 514(2020); IC VALUE:5.16; ISI VALUE:2.286
142. Varvel, V. E. Jr. (2007) Master Online Teacher Competencies *Online Journal of Distance Learning Administration*, v10 n1 Spr 200. ISSN: EISSN-1556-384. <https://eric.ed.gov/?id=EJ1065646>
143. Venkatesh, V. & Davis, F. (2000). A Theoretical Extension of the Technology Model: Four Longitudinal Field Studies. *Management* 46. 186-204. 10.1287/mnsc.46.2.186.11926.
144. Ventayen, R. J. M. (2018). Teachers' Readiness in Online Teaching Environment A Case of Department of Education Teachers PSU *Journal of Education, Management and Social Sciences*, Volume 2, Issue 1, 2018 [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=3331115](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3331115)
145. Wang, M., Zhan, Y., McCune, E., & Truxillo, D. (2011). Understanding newcomers' adaptability and work-related outcomes: Testing the mediating roles of perceived P-E fit variables. *Personnel Psychology*,64, -189 <https://doi.org/10.1111/j.1744-6570.2010.01205>.
146. Warner, R. M. (2013). *Applied Statistics: From Bivariate through Multivariate Techniques*. SAGE Publications, Thousand Oaks.
147. Wasserman, E.& Migdal, R. (2019) Professional development: Teachers' Attitudes in Online and Traditional Training Courses *Online Learning*, v23 n1 p132-143 Mar 2019. <https://eric.ed.gov/?id=EJ1211174>
148. Watkins, D. (2012). Qualitative research: The importance of conducting research that doesn't count. *Health promotion practice*. 13. 153-8. 10.1177/1524839912437370.
149. White, R. P. & Shullman, S. L. (2010). Acceptance of Uncertainty as an indicator of Effective June 2010 . *Consulting Psychology Journal Practice and Research*. 62(2):94-104.DOI:10.1037/a0019991
150. Wilkomm, A. C. (2019). 4 Ways to Boost your Adaptability Skills. Goodwin College. September 18, 2019.<https://drexel.edu/goodwin/professional-studies-blog/overview/2019/September/4-ways-to-boost-your-adaptability-skills/>
151. Wilson, A. & Walters, A. (2017) " The Importance of Adaptability in the Workplace" <https://lane4performance.com/insight/blog/adaptability- skills-in-the-workplace/>

152. Wilson, E. (2018). "Adaptability of the US Engineering and Technical Workforce: Proceedings of a Workshop" <https://nap.edu/read/25016/chapter/5>
153. Winardi, & Prianto (2016). Various Determinants of Individual Readiness to Change and Their Effects on the Teachers' Performance (A Study on Certified Teachers in Jombang Regency East Java, Indonesia). *IOSR Journal of Business and Management (IOSR-JBM)* e-ISSN: 2278-487X, p-ISSN: 2319-7668. Volume 18, Issue 2 .Ver. I (Feb. 2016), PP 22-32 [iosrjournals.org](http://iosrjournals.org)
154. Yuki, G. & Mahsud, R. (2010). Why flexible and adaptive leadership is essential June 2010. *Consulting Psychology Journal Practice and Research*, 62(2), 81-93 DOI:10.1037/a0019835
155. Yusuf, H. O., Maina, B., Dare, M. O., (2013) Assessment of The Availability, Utilization and Management of ICT Facilities in Teaching English Language in Secondary Schools in Kaduna State, Nigeria. *Advances in Language and Literary Studies* Vol. 4 No. 1; January 2013 Doi: 10.7575/aiac.all.s.v.4n.1p.20
156. Yusuf, O. (2015) Information and Communication Technology and education: analyzing the Nigerian national policy for information technology. *International Education Journal* 6(3), 316-321
157. Zhou, M., & Lin, W. (2016). Adaptability and Life Satisfaction: The Moderating Role of Social Support. *Front Psychol.* 2016; 7: 1134. Published online 2016 Jul 28. doi: 10.3389/fpsyg.2016.01134
158. M. (2012). Individual adaptability: testing a model of its development and outcomes. Retrieved from <https://doi.org/doi:10.25335/M5GD76>