Ways Distance Resources: Towards Support Teaching – And – Learning

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ABSTRACT

This study explores the utilization of distance learning resources in teaching Biology, particularly in response to the transition to online education due to the COVID-19 pandemic. It aims to assess the effectiveness of these resources in enhancing student engagement, comprehension, and teacher preparedness. The research employs a descriptive-comparative design, incorporating data collected from both students and teachers through surveys and statistical analysis.

Findings indicate that while teachers acknowledge the potential of distance learning tools, students generally prefer traditional face-to-face interactions for better understanding. Despite challenges such as accessibility, engagement, and technological constraints, the study highlights that well-structured digital resources significantly contribute to student learning. A strong correlation was observed between teacher and student perceptions regarding the effectiveness of these tools, although teachers exhibited a broader range of opinions.

Furthermore, the study emphasizes the importance of integrating interactive digital tools and adaptive learning strategies to bridge the gap between conventional and remote learning. It suggests that self-regulated learning is a key factor in student success and that educators should develop innovative pedagogical approaches to enhance motivation and participation. The findings underscore the necessity of institutional support, including professional development for teachers and improved digital infrastructure, to sustain the effectiveness of distance learning in science education.

The study concludes that distance learning can be an effective instructional approach when combined with proper curriculum design, continuous support, and strategic implementation of digital tools. It recommends further enhancements in instructional materials, teacher training programs, and ongoing evaluations to maximize the benefits of distance learning. Future research should explore the long-term impact of digital learning tools on student performance and engagement in a post-pandemic educational landscape.

INTRODUCTION

A review of the human life pyramid, which is one of the variables with the highest impact on the change and transformation of globalization, would demonstrate that humankind experienced several epidemics and pandemics caused by different pathogens in history. Examples of these epidemics include Black Plague, Cholera, Yellow Fever, Smallpox, Hong Kong Flu, SARS, MERS, Spanish Flu and Ebola. The common feature of these epidemic diseases, which could easily turn into a pandemic and have high mortality rates, is that these diseases are all induced by zoonotic pathogens that are transmitted by animals to humans (Koçer, 2020). The term zoonosis was first introduced in the 19th century. It could be suggested

that with the introduction of the term by Rudolf Virchow, the health correlation between animals and humans became a prominent research topic (CDC, 2017).

In addition to the above-mentioned diseases, COVID - 19 was the last disease that has been effective on the world since December 2019 and was declared as a pandemic by World Health Organization). COVID-19 disease is claimed to have originated at Huanan Seafood and Live Animal Market, which is a livestock market in Wuhan, China, in December 2019 (Tesini, 2020; Üstün and Özçiftçi, 2020). Despite the fact that the origin of the pathogen virus, which immediately became an epidemic, was not objectively determined by the scientific community, several people claimed – albeit non evidence –that the disease was caused by contact with the animals sold in the above-mentioned market and their consumption. This virus (2019-nCoV) was first diagnosed in Hubei province in China in late 2019 in a group of patients with pnömoni, by a professional team of physicians, scientists and epidemiologists in about 9 days as a coronavirus that has not previously been detected in humans. The disease was christened as "COVID-19" (Akpınar and Üstün, 2020).

According to the data published in the official WHO website as of May 26, 2020, the number of global covid19 cases was 5.404.512, while the number of people who died from the disease was 343.514 (WHO, 2020). Due to the case and death incidence of the COVID-19 epidemic, which has been increasing globally every day, it was considered as a pandemic, and several countries closed their borders to the outside world and quarantined their nation. Since these decisions were based on isolation, they led to panic and anxiety around the world, and to support the "stay at home" calls, countries temporarily interrupted formal education activities in several fields, and turned to the distance education method. It was observed that the student population, which has been away from school in more than 188 countries affected by the pandemic, corresponded to 91% of the total global student population (UNESCO, 2020; Emin, 2020).

The distance education activities were adopted to maintain educational activities in countries that were affected by the epidemic by the transfer of the course content and relevant materials to the digital environment. The term "distance education (DE)" was coined in the 1892 University of Wisconsin Catalog, and first mentioned in an article authored in 1906 by the administrator of the same university, William Lighty (Kaya, 2002). Later on, the term was adapted to German (Fernunterricht) by educator Otto Peters in the 1960s and 1970s and to French (Teleenseignement) by distance education institutions in France (Verduin and Clark, 1994; Kaya, 2002).

The United States Distance Learning Association (USDLA, 2004) defined distance education as access to education using tools such as satellite, audiovisual, graphical, computerized, and multimedia, etc. technologies. Distance education includes activities such as multimedia-based education, interactive learning-instruction and guidance, keyboard control, e-learning independent of time and space, interactive classroom management, digital transfer and exams (Guo, 2010; Guohong et al., 2012). It could be suggested that distance learning has several advantages over traditional classroom education. These advantages include the utilization and sharing of several resources at the same time, interactive collaborative sharing and interaction in the learning-teaching process (Guo, 2010). There are several application examples in the world and digital educational activities take place in several forms. A National Distance Education University was established in Spain to conduct these activities. Similarly, distance education courses (Coursera, EDX, Udacity, Open Yale Courses, Teamtreehouse, etc.) were organized by several educational platforms globally (Samigulina and Samigulina, 2016).

Today, educational knowledge and instruction methods are very important indicators of social development (Collins et al., 2016). It could be suggested that societies who are aware of these indicators

tended to conduct instructions on web-based digital environments during the Covid-19 outbreak. In the present study conducted to comprehensively analyze this trend, the views of teachers, who are among the important variables in distance education, were employed.

Coronavirus disease (COVID-19) is an infectious disease triggered by a new virus outbreak from Wuhan, China. The COVID-19 has been spreading rapidly across the global, overreaching health services and intensified with the shelter confinement. Global disease outbreak such as Middle East respiratory syndrome coronavirus (MERS-CoV) from Saudi Arabia, Influenza A (H1N1) from Spain, Henipavirus (Nipah) from China and Severe acute respiratory syndrome (SARS) increase death rate statistic, basically, affect Malaysia sphere but not forcing government action to quarantine movement.

COVID-19 outbreak in Malaysia early 2020 reported day-by-day positive carrier statistic increasing that force government action to impose movement control order (MCO); Malaysian stay at home to stop the virus from spreading fast. The MCO affects Communication and Media Studies undergraduate students who are just starting a new semester in the week fourth to stay at home but learning activities continue using Online Distance Learning (ODL) method.

Little and not exaggerate to mention, no study conducted on ODL due to disease outbreak that creates spark panic and fear; force current semester students complete their study and new teaching method that rarely apply during 'peace situation'. Most of ODL study directed due to the fact that the nature of the study program or syllabus mode in ODL; structured, well-planned class activity and monitored for quality academic purposes. Besides, many researchers found that ODL brought advantages in teaching and learning activities compared to conventional; face-to-face method. However, the future researcher needs to consider ODL method chosen by the university due to disease outbreak and findings surprisingly and urged standard operation (SOP) for ODL conducted.

Faculty of Communication and Media Studies (FKPM), University Teknologi MARA, Melaka, Malaysia have three undergraduate academic programs and most of the syllabus went through blended learning (online learning) but not mandatory just optional. By using i-learn (online learning platform initiate by the university), Google Classroom, Skype and Facebook Live majority of students enjoy the learning activities conducted by lecturer due to the fact that students can study from anywhere, flexibility to choose learning session, saving time and money (mobility from residential college to a classroom) but they still have social interaction with the lecturer for assessment and lecture consultation. Totally different mode for ODL where the student started their learning activities from home with no physical social interaction with lecturer and groupmate to perform course assessment and expected destruction occur can affect academic performance. These are the challenges expected occur in applying distance education during a disease outbreak.

The conceptual definition of distance education stated that the teaching method in which students completed their study from anywhere but not always be physically come to the lecture session. In other words, a student learns, study, and completed in their registered courses through online learning without having to attend any physical class such as lecture hall, computer lab, library or any physical classes. According to (Kenny, 2010), the most of distance education today fully utilize the Internet network and easy acces for thevast majorityof students either through laptop or mobile phone (Hussin et al., 2017) whether in their own homes.

The term online distance learning is also used interchangeably with terms like e-learning (Keis et al., 2017), blended learning (Deschacht & Goeman, 2015), online learning (Wallace, 2010) and virtual

learning with the main idea stated that learning activities in an informal form, utilize any Internet tools and little or no physical social interaction with lecturer (Kuo et al., 2014). Besides, these teaching methodology approaches are used to deliver course content through teleconferencing (Bhat et al., 2018), online chatting or forum , interactive video, recorded video and audio. By using online teaching materials delivery, students are expected to have a stable Internet network connection, workable hardware and high online learning readiness level. The most important factors need to consider for ODL methods are the student must possess computer/Internet literacy (Hernández-sellés& Muñoz-carril, 2019), self-directed learning (Garrison,1987) and high-level motivation of learning (El-Seoud, 2016) to complete their study. The purpose of this study to measure the level of computer/internet literacy, self-directed learning and motivation of learning among undergraduate students in order to provide view student online learning readiness to the faculty management and the lecturers for teaching planning.

Motivation has been defined as the 'engine' of learning by Paris & Turner (1994) and supported by Howe (1998) mentioned the fuel of human learning is motivation. By engaging mental activities with physical that produce learning outcomes demand of time, money and commitment. This manufacturing of learning to take place there needs to be some kind of motivation to make the process work (Casaló et al., 2010).

Joining ODL activities during pandemic outbreak helps to make learning feasible to ensure teaching and learning continue for the knowledge transfer (Park & Yun, 2017). But what makes students join the ODL activities in the first place? To gain practical understandings into the causes of joining ODL during the pandemic outbreak, this study not only have to examine a type of learning activities but researcher also goes a step further and discover what makes learners 'attend' the ODL session.

According to Howe (1998) in principles of abilities and human learning on the role of motivation he claimed that for the student to attend in the learning session, there wishes to be an incentive or motivation raised. Motives and incentives for people attend to learning session 1) to complete the task for all registered courses (Chen, 2017), 2) the student needs to be strongly motivated for higher academic achievement (Samir A. El-Saoud, 2016), 3) by establishing good study habits the student make themselves into the productive learner. However, integrating technology in the learning process does not positively significant to enhance student's learning motivation level. Online instruction and e-learning activities resulted demand high Internet connection speed (Cooper, 2006), time consuming, effort and commitment to take place. Besides, ODL during pandemic outbreak urge the lecturers to turn the classroom into an online environment. The question is what specifically is required of the lecturers to develop students learning motivation in ODL mode?

The lecturers need to understand their students' motivations while the students must adapt from conventional courses (face-to-face learning) into online classes to complete them (El-Saoud, 2016), they tend to fail for many reasons. This study believed that the success or failure of ODL is related to student motivation and propose suggestion to the lecturers what to do to stimulate student motivation. To stimulate students, the lecturers should keep in mind that motivation must be natured in students. By explaining to their students how the online environment may be used and encourage interaction and collaboration among their students suggested by previous study to strengthening learning motivation.

Besides, build study groups so that students will no longer be studying in isolation and help students to make friends by meeting fellow students in the online environment claimed to develop learning motivation (Kenny, 2010). Furthermore, online social interaction with their students by monitoring the online

presence and construct their learning materials reported to enhance students learning motivation (Docula, 2016).

Are learners really ready for the "new normal?" The advent of the COVID-19 pandemic has changed our educational landscape, forcing schools to abruptly shift to online classes in lieu of face-to-face classroom set up. In the Philippines, the Covid-19 crisis has affected about 27 million learners, 1 million teachers and non-teaching staff, as well as the families of learners (Obana, J. 2020). As the world continues to grapple with the effects of this infectious and deadly disease – destabilizing economy and claiming many lives – transitioning to distance learning is the most viable alternative so far (Alipio, 2020; Baticulon, Alberto, Baron, Mabulay, Rizada, Sy, Tiu, Clarion & Reyes, 2020). The current situation poses great challenges to educational institutions not only in the Philippines, but throughout the world. The restrictions and community quarantine imposed on many areas particularly in the country have left students with little choice but to attend online classes. In order for learners to continue education, the Department of Education (DepEd) and other institutions have implemented online distance learning. Online Distance Learning features the teacher as a facilitator, engaging learner's active participation through the use of various technologies accessed through the internet while they are geographically remote from each other during instruction (Llego, 2020). Before the implementation, DepEd has been bombarded with criticisms, with some throwing back the question on whether DepEd and other educational institutions are really prepared for the current situation. Despite all the criticisms, these institutions were confident that Online Distance Learning will work in the Philippines. According to an education official, about 93 percent of public schools nationwide already have devices that will be used in the online learning modality for the school year 2020-20121 (Hernando-Malipot,2020). Private schools are allowed to start classes prior to the opening of public-school classes on October 5, 2020 provided that they will only use distance learning modalities. However, literature shows that e-learning presents many challenges to both students and teachers alike (Andersson, 2008; Islam, Beer & Slack, 2015; Gilbert, 2015; Arinto, 2016; Gillet-Swan, 2017; Dubey & Piroska, 2019; Baticulon et al., 2020). Though much research had been done about online distance learning even before the pandemic, its use in the primary level had yet to be studied more because of the very limited sources. There is also a dearth of local literature on the aspect of student concentration in online classes. The researchers aim to discover the challenges faced by primary pupils of Educare College, Inc. in using Online Distance Learning and how these challenges could be addressed. Through analysis and synthesis of the challenges of Online Distance Learning, the factors affecting the concentration of students in online classes in this time of COVID-19 pandemic can be identified.

To respond to the challenge of innovating educational delivery mechanisms in higher education, colleges and universities across the globe ventured into different practices such as distance education, online teaching, remote learning, blended learning, and mobile learning. These practices can be collectively called emergency remote education (ERE). It is the temporary change in the delivery of instruction caused by the sudden occurrence of a crisis. ERE does not mean going away from the traditional arrangement of the instructional process nor creating a completely new educational system. It provides a temporary feasible alternative for education practitioners to perform instruction and provide students with necessary instructional support (Hodges et al., 2020). ERE is also a branch of distance education, however, treated as an 'option' not 'obligation' in this time of crisis (Bozkurt et al., 2020). Furthermore, ERE enables the making the most of available resources including a wide range of technologies that offer capabilities for remote learning. It is also emphasized that, in this case, ERE is the best term to describe education during this interruption and is not the same as those distance education practices long before (Bozkurt et al.,

2020). Considering current COVID-19 crisis, World Bank (2020) emphasized that education systems must make use of ERE and prepare if needed, different learning delivery modalities to ensure that students are engaged and can continue their learning. On the other hand, the sudden shift of educational delivery also presents the other side of the coin for most students who are already disadvantaged long before the pandemic.

On a global scale, UNICEF (2020) reported that more than 1.5 billion learners of all ages are affected because of the school and university closures. Shutdowns have put youth in a disproportionate state. With utmost consideration to provide education as a fundamental human right, educational systems around the globe were once again challenged to produce different measures to immediately sustain education efforts (UNESCO, 2020), but this does not consider giving solutions to the problems of every particular student. Generally, the education system seems unprepared and may transpire unpredicted consequences during and beyond the crisis (Bozkurt & Sharma, 2020).

Meanwhile, after the "no vaccine, no face-to-face classes" declaration by President Rodrigo Duterte in the Philippines, the Commission on Higher Education (CHEd) issued directives to universities to start preparing for distance learning. Thus, universities across the country are forced to close indefinitely. Classes in various universities already opened just these past few months and remote learning are faced with multiple challenges (Mateo, 2020) which later became difficult to handle by Filipino university students. Complicating this picture even is the fact that, not every student can provide and adapt to the rapid advances of technology in today's digital age (Alvarez, 2020) especially for developing countries like the Philippines in which education is plagued by problems even before the pandemic.

In this Philippine context, remote learning reveals a digital divide among Filipino students (Santos, 2020). This current situation in remote learning may most possibly exacerbate existing inequalities and may translate to barriers in online learning. For example, a cross-sectional study conducted nationwide reported that thirty-two percent (32 %) and twenty-two percent (22%) out of 3, 670 Filipino medical students surveyed have difficulties adjusting to new learning styles and do not have reliable internet access, respectively (Baticulon et al., 2020). For some, it may present difficulty to purchase a facilitative learning device to easily tune in to online classes and immediately turn in assignments in the online system (Santos, 2020). Despite the efforts to make education accessible for all, many difficulties are still confronting Filipino university students in the practice of distance education.

Distance-education and internet-based learning are no longer novel concepts, as demonstrated by exponential growth of such courses (Dobbs et al., 2009). In science this trend is slower (Kennepohl & Shaw, 2010). We suspect that biology teachers fall into three camps with regard to distance education: (1) those to whom the process is so routine that they may give our paper only a passing glance (2) those who are new enough to the process that they are actively seeking information, and (3) those who have a deeply entrenched opposition to the whole idea.

Distance learning requires advance planning. Both the instructors and students involved in distance learning will need to make sacrifices, at times, in order to get things done on time. Distance learning, although affordable, may come with hidden costs (for example extra shipping and handling costs).Distance learning does not offer immediate feedback. In a traditional classroom setting, a student's performance can be immediately assessed through questions and informal testing. With distance learning, a student has to wait for feedback until the instructor has reviewed his or her work and responded to it. Compared with traditional course delivery method, distance learning demands a disproportionate amount of effort on the part of instructors. Namely, teaching distance courses includes not only the time required for actual

delivery of course materials, but it must also involve a great deal of time dedicated to student support and preparation. Also, time spent on e-mail correspondence is very significant. Distance learning does not always offer all the required coursework online for every degree program. In fact, physical classroom attendance is mandatory for the completion of some degree programs. Distance learning degrees may not be acknowledged by all employers although most employers do. Students who want to work for a specific employer upon graduation should be sure of that employer's perspective about online education. Distance learning does not give students the opportunity to work on oral communication skills. Students in distance learning courses do not get the experience of practicing verbal interaction with professors and other students. Another disadvantage of distance learning is social isolation. Distance learners may feel isolated or miss the social-physical interaction that comes with attending a traditional classroom. However, many distance learning participants have reported that this sense of isolation has been decreasing with the use of communication technologies such as bulletin boards, threaded discussions, chats, email, and video conferencing. The most important issue regarding distance learning is instructors' preparedness and students 'attitude. If students do not perceive the technology as useful, they will be not receptive to distance education (Christensen, E. W., Anakwe U. P. & Kessler, E. H., 2001, p. 267). Also, the inability of teachers to develop the necessary skills, to adopt a positive attitude, and to develop the needed pedagogy are other important problems affecting the creation of distance learning community. There is connection with pedagogy, personal experience, and distance learning. When a teacher is somewhat reluctant to use technology or views it in a negative way, pedagogy may suffer. Many researches proved that many educational initiatives failed because they had little impact on teacher's beliefs or practices (Niederhauser, D. S. & Stoddart, T., 2001, p. 25). The method of introducing computers tofaculty is another factor in the personal development of technological pedagogy. Faculties may alsoexperience other barriers such as time needed to learn the technology, frustration with malfunctioning

Learning during pandemic has been shifted into distance learning, so that teachers were urged to use technology in order to teach students. There are ten best practices for taking experiential learning online, 1) provide clear structure and objectives for virtual program, 2) provide zoom and virtual etiquette, 3) find out students' needs, 4) create a monitoring network for students, 5) use synchronous tutorials, 6) facilitate networking and community building by social event, 7) leverage online resources, 8) using workshop to supplement training experience, 9) organize for one-toone meeting, 10) leverage virtual conference [4].

Learning using technology can enhance learning. When computer technology used with the appropriate pedagogical strategies can be used to assist learners in understanding biological concepts and processes [5]. Using computer in teaching also gives greater access to information [6]. It also promotes students critical thinking and problems solving. Moreover, it gives them meaning to learning. Hence, integrating computer technology in learning biology can enhance students' achievement.

In term of using technology in the biology classroom, teachers can display visualization and a projection screen to explain and illustrate the biology concept and also using simulation to explore phenomenon when activities and materials cannot be duplicated [5]. ICT adds values to learning in term of reaching parts of the curriculum that other teachings methods do not, for example, students of senior high school are able to study by comparing and contrasting the model of protein and nucleic acid by using 2D and 3D representation using animation [7]. Further, learning biology incorporating by ICT can influence and sustain students' attainment. ICT based-learning environment can help students to understand and interpret data and provide them to focus on developing conceptual understanding [8]. That effects are described by four main effects; 1) promoting students' cognitive development, 2) increasing students self- management

and tracking their own learning, 3) enabling students to broaden the learning experience and relate it to realworld experience, 4) facilitating data collection and data presentation.

Creating learning with an online-based environment is also needed in the era of distance learning during pandemic. One of the forms to establish an online-based learning environment is the Learning ManagementSystem (LMS). Learning management system (LMS) is a software application or web-based technology used to plan, implement and assess a specific learning process [9]. LMS provide teacher to create and deliver learning content, monitor students' participation, and assess students' performance. It also provides interactive features such as discussion forum and video conferencing. LMS helps teacher to monitor students learning progress and performance and also update learning modules and activities easily. In addition, it also gives benefit to students that they can personalize their learning experience. Some popular LMS used by Indonesian educational institutions are Moodle and Blackboard. Research stated that learning biology on the topic of human movement systems with Moodle become more fun [10]. Another research also added that using of e-learning facilities by students in the course of Human Anatomy Physiology, increased activity of learning, and students' attitude towards human physiology and anatomy course

Several studies have been conducted to report the stress (e.g. AlAteeq, Alijhani & AlEesa, 2020; and Baloran, 2020) and challenges encountered by students in virtual learning spaces in their respective countries (e.g. Adnan & Anwar, 2020 in Pakistan; Arinto, 2016 in the Philippines; Henaku, 2020 in Ghana; Matswetu, et al., 2020 in Zimbabwe; Subedi et al., 2020 in Nepal; and Dhawan, 2020 in India). A most recent comprehensive study including 31 countries (Bozkurt et al., 2020) was also conducted to look at how the COVID-19 pandemic interrupted the education arena across the globe. This multicountry study significantly reported reflections, lessons learned, and suggestions on how to navigate education in this time of uncertainty. With the goal in mind to help authorities come up with better responses to education, this study endeavors to provide a piece of evidence in the context of a developing country as regards the difficulties experienced by Filipino university students. If this inquiry will be addressed, lessons can be drawn and may eventually open windows for relevant actions.

Self-regulated learning (SRL) theory focuses on how learners can take an active and self-directed role in their learning process, making decisions and managing their cognitive, affective, and behavioral aspects to achieve learning goals. When applied in the context of distance learning with the support of various resources, SRL theory can be highly effective.

Autonomy and Independence: Distance resources provide learners with the autonomy to access educational materials and engage in learning activities independently. Self-regulated learners in a distance learning environment can take charge of their learning process and pace, utilizing online resources to support their educational journey.

Goal Setting and Planning: Self-regulated learners set specific learning goals and create plans to achieve them. In a distance learning setting, learners can use various resources to design personalized learning paths, ensuring that their goals align with the available materials and technological tools.

Self-Monitoring: Self-regulated learners continuously monitor their progress and reflect on their learning experiences. With distance resources, learners can track their performance, participation, and engagement, allowing them to identify areas of improvement and adjust their strategies accordingly.

Time Management: Distance resources can facilitate time management for self-regulated learners. With the flexibility of accessing materials online, learners can organize their study schedules to fit their individual preferences and responsibilities.

Metacognition: Self-regulated learners are mindful of their cognitive processes, including problem-solving strategies, comprehension, and critical thinking. Distance resources can provide various learning activities and interactive content to encourage metacognitive thinking and reflection.

Resource Utilization: In a distance learning context, self-regulated learners explore and leverage various distance resources to support their learning. They can access digital libraries, online courses, multimedia content, and interactive tools to enhance their understanding and knowledge retention.Adaptation and Flexibility: Distance resources enable learners to adapt their learning approaches to suit their needs and preferences. Self-regulated learners can choose the most effective resources and methods that align with their learning style and objectives.

Motivation and Engagement: Self-regulated learners are often intrinsically motivated to learn. The use of distance resources, which can be interactive and engaging, can enhance learners' motivation, fostering a positive learning experience.

Supportive Learning Environment: The integration of distance resources can create a supportive and conducive learning environment for self-regulated learners. Online forums, video conferencing, and collaborative tools enable interaction and peer support, essential aspects for self-regulated learning

In summary, the theory of Self-Regulated Learning is highly relevant to distance learning, as it emphasizes the active role of learners in managing their learning process. When combined with appropriate distance resources, self-regulated learning can contribute significantly to effective and successful teaching and learning experiences in a distance education setting.

This paper determined how a teacher would deal with ways in distance resources in teaching Biology.

Specifically, it determined the profile of the student participants in terms of sex, age and grade level; differences on how teacher deals with distance resources; and this led ways to distance resources towards teaching and learning.

The interplay between and among the variables is seen in the paradigm of the study seen below:
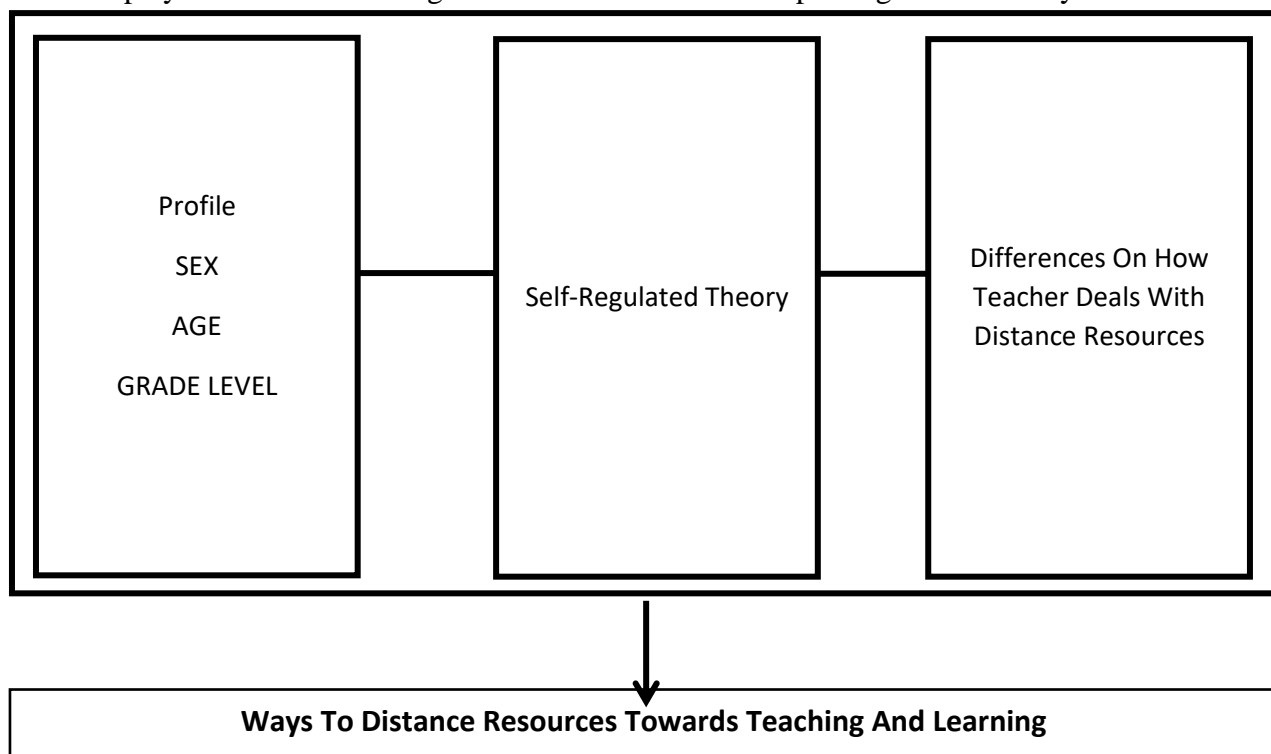

Figure 1. Research Paradigm

In order to formulate the teacher's strategies for increasing expectations of perceived value, the study surveyed the personological aspect of the respondents in terms of sex, grade level and age.

Afterwards, the assessment of the respondents were taken regarding the teacher's intervention skills. The significant difference in the assessment of the respondents were also determined. The respondents' answers were explained using the theory of Thorndike.

In order for the intended readers to have a clearer understanding of this paper, the researcher has provided both the conceptual and operational definition of the following terms: **1. Academic Performance.** Academic performance achievement is the extent to which a student, teacher, or institution has attained their short or long-term educational goals and is measured either by continuous assessment or cumulative grade point average. **2. Learning environment.** The term "learning environment" refers to the physical, social, and psychological conditions in which learning takes place. It encompasses the physical setting, resources, interactions, and atmosphere that influence and support the learning process. The physical environment includes the physical space, infrastructure, and resources available for learning. It involves factors such as classroom layout, lighting, seating arrangement, availability of educational materials, technology, and other tangible resources that contribute to the learning experience. **3. Online resources.** Online resources refer to digital materials, tools, and information available on the internet that can be accessed and used for various purposes, including learning, research, entertainment, and professional development. These resources offer a wide range of content, formats, and platforms, making them valuable assets for individuals seeking information, education, or entertainment online. **4. Pedagogical strategies**. Pedagogical strategies are instructional approaches and methods that educators use to facilitate effective teaching and learning experiences. These strategies aim to engage students, enhance their understanding of the subject matter, and support their overall learning process. Pedagogical strategies can vary based on the subject, grade level, learning objectives, and the needs of the students.

METHODS AND PROCEDURES

The study made use of the descriptive method specifically the descriptive -comparative research design. This method involves the collection of data in order to test the hypotheses and to answer questions concerning current status of the subject of the study. In relation to the research. It was utilized because it is the most appropriate with regards to the purpose of the researcher, that is, to gather data in order to answer for the specific questions raised as well as to test the hypotheses related to the subject.

Aquino (2019) gives the definition of descriptive research as a fact-finding with adequate interpretation. The descriptive research is something more and beyond just data gathering. The true meaning of the data collected should be reported from the point of view of the objective and the basic assumptions of the project underway.

The study will be conducted at Amaya School Home and Industry from among its students. There are 192 teachers with 6,010 students in the subject school.

The researcher made use of the 130 students as respondents in the study.

The researcher used the researcher-made instrument to gather the information required in the study. Such instrument was validated by at least three experts in the field. After their validation, the instrument was subjected to reliability test using the Cronbach Alpha. The validated and reliable instrument were then used by the researcher to collect the needed information or data to analyze the required problem in this study.

The researcher requested permit from the Office of the Superintendent where the locale of the paper was

conducted. After approval, data collection were done.

The gathered data were then subjected to statistical analysis using the statistical package SPSS version 23. The researcher analyzed the data using the frequency, percentage for the profile variables; the mean, ranking and standard deviation for the descriptive analysis; the t-test or F-test together with the Post-Hoc test as the case maybe.

After gathering data and asking permission from the different offices, the gathered data were subjected to the statistical treatment of data.

The instrument was developed using a 4-point scale (Salkind, 2019).

The gathered data were subjected to statistical treatment which is as follows:

1. Frequency Count – This was used by the researcher in the analysis of the data profile of the respondents.
2. Weighted Mean – This was used by the researcher in determining the degree of the responses of the respondents.
3. T-test/Anova - This tool was used by the researcher in the analysis of the comparison of the assessment of the respondents.

The following values of the computed mean were interpreted as follows:

Point	Range of Values	Qualitative Description	Interpretation
1	1.00 – 1.50	Strongly Disagree	Not Effective
2	1.51 – 2.50	Disagree	Somehow Effective
3	2.51 – 3.50	Agree	Effective
4	3.51 – 4.00	Strongly Agree	Very Effective

Furthermore, this study made use of the 5% level of significance in all the statistical analysis thereby providing 95% level of confidence in the rejection or acceptance of the stated hypothesis. Using the SPSS software, any value of Sig found lower than 0.05 level were rejected.

The researcher will strictly observe the different ethical considerations for research including but not limited to informed consent, beneficence and non-maleficence.

The researcher strictly observed the different ethical considerations for research including but not limited to informed consent, beneficence and non-maleficence.

The following ethical guidelines were considered by the researcher in the gathering of raw data:

1. In conducting the respondents' answers, the researcher was discreet enough about the demographic profile and make a personal commitment to protect the identities of the people observed or with whom the researcher interacted even if informally. Confidentiality was maintained all throughout the research project from data gathering to data analysis.
2. The sensitivity checks on the questions used was schemed and checked.
3. The researcher was especially sensitive to differences in age, sex, class, health, and culture that were raised ethical issues during the course of the respondents' discussion or during data gathering.
4. The researcher sought respondent's informed consent for the data gathering process approved by the Graduate School of WCI which covered being well-informed about the purpose of the research they are asked to participate in, understanding the benefits that might grow to them as a result of participating and feeling free to make an independent decision without fear of negative consequences.

5. The researcher recognized that respondents are autonomous people who share information willingly. Respondents were given opportunities to exercise their rights as autonomous persons to voluntarily accept or refuse to participate in the study. The dignity of all research respondents were wholeheartedly respected. Also, the researcher considered the anonymity of the respondents throughout the entire duration of data gathering, writing, and publication. Codes were used in most cases.

6. To standardize data collection, only the researcher gathered the data per methodology.

7. The researcher exercised integrity of data by maintaining a clear and complete record of raw data that were acquired.

RESULTS AND ANALYSIS

This chapter deals with the presentation of the gathered data together with the analysis and interpretation according to the statement of the problem. The gathered data on the profile of the teacher respondents and their assessment of their present situation few years before their retirement are hereby presented.

3.1. Demographic Profile of the Respondents

Table 1 and 2 shows the demographic profile of the student respondents and the teacher respondents.

Table 1 Frequency Distribution of the Student Respondents' Profile

Profile	Frequency	Percentage
Age		
11 years old	1	0.8%
12 years old	33	25.4%
13 years old	32	24.6%
14 years old	36	27.7%
15 years old	21	16.2%
16 years old	7	5.4%
Total	**130**	**100%**
Grade Level		
Grade 7	65	50%
Grade 8	65	50%
Total	**130**	**100%**

In terms of age, one (4) or about 0.8% of the student respondents are 11 years old, thirty-three (33) or about 25.4% of the student respondents are 12 years old, thirty-two (32) or about 24.6% of the student respondents are 13 years old, thirty-six (36) or about 27.7% of the student respondents are 14 years old, twenty-one (21) or about 16.2% of the student respondents are 15 years old, and seven (7) or about 5.4% of the student respondents are 16 years old. This means that majority of the student respondents are 14 years old. This may be taken to mean that the students are in the appropriate grade level for their age.

In terms of grade level, sixty-five (65) or about 50% of the student respondents are from Grade 7 and the remaining sixty-five (65) or about 50% of the student respondents are from Grade 8. This means that the student respondents are equally divided between the two grade levels. This illustrates that the students are given equal chances to become a part of the study.

In terms of age, one (1) or about 14.3% of the teacher respondents is 26 years old, one (1) or about 14.3%

of the teacher respondents is 33 years old, one (1) or about 14.3% of the teacher respondents is 36 years old, one (1) or about 14.3% of the teacher respondents is 39 years old, one (1) or about 14.3% of the teacher respondents is 40 years old, one (1) or about 14.3% of the teacher respondents is 41 years old, and one (1) or about 14.3% of the teacher respondents is 42 years old. This means that majority of the teacher respondents are equally divided among different ages. This may be taken to mean that the teacher respondents have varied ages which may give a clue on their experience in teaching.

Table 2 Frequency Distribution of the Teacher Respondents' Profile

Profile	Frequency	Percentage
Age		
26 years old	1	14.3%
33 years old	1	14.3%
36 years old	1	14.3%
39 years old	1	14.3%
40 years old	1	14.3%
41 years old	1	14.3%
42 years old	1	14.3%
Total	**7**	**100%**
Years of Service		
3–5 years	2	28.6%
6–10 years	1	14.3%
11–15 years	4	57.9%
Total	**7**	**100%**
Educational Attainment		
Bachelor's Degree	4	57.1%
Master's Degree (with units)	2	28.6%
Master's Degree (full pledge)	1	14.3%
Total	**7**	**100%**

In terms of years of service, two (2) or about 28.6% of the teacher respondents have been in the service within 3 to 5 years, one (1) or about 14.3% of the teacher respondents have been teaching within 6 to 10 years, and four (4) or about 57.9% of the teacher respondents have been in the service for 11 to 15 years. This means that majority of the teacher respondents have been teaching for 11 to 15 years. This illustrates that the period of time that the teacher has spent being a teacher is considerable regarding their other qualifications.

In terms of educational attainment, four (4) or about 57.1% of the teacher respondents hold bachelor's degrees, two (2) or about 28.6% of the teacher respondents have units in their master's degree, and one (1) or about 14.3% of the teacher respondents are full-pledge master's degree holders. This means that majority of the teacher respondents hold bachelor's degrees. This illustrates that the teacher respondents are professionally prepared and qualified to hold their current positions as they currently meet the basic educational requirement.

3.2. Assessment of Teacher-Respondents on How Teacher Deals with Distance Resources

Table 3 shows the assessment of the teacher respondents on how teacher deals with distance resources.

Table 3 Assessment of Teacher Respondents on the How Teacher Deals with Distance Resources

The distance resources…	Mean	Qualitative Description	Interpretation
are aligned with the MELC.	3.42	Agree	Effective
enables the learner to acquire the skills and competencies in the MELC.	3.28	Agree	Effective
has accurate content.	3.14	Agree	Effective
is detailed enough for a student to progress through the instruction without an instructor or teacher.	3.71	Agree	Effective
contents can be learned by the student without any instructional support.	3.00	Agree	Effective
provides a complete demonstration of the concept	3.00	Agree	Effective
provides opportunities to practice new concepts, skills.	3.14	Agree	Effective
is comprehensible for the learners.	3.14	Agree	Effective
is suitable to the student's level of development.	2.85	Agree	Effective
provides for the development of higher cognitive skills such as critical thinking, creativity, learning by doing, inquiry, problem-solving, etc.	3.14	Agree	Effective
contributes to the achievement of specific objectives of the subject area and grade/year level for which it is intended.	3.14	Agree	Effective
activities are designed to facilitate the learning of its content.	3.00	Agree	Effective
can be accomplished in a given period of time.	3.28	Agree	Effective
presentation is engaging, interesting, and understandable.	3.00	Agree	Effective
instruction follows a logical hierarchy of skill and knowledge development.	3.28	Agree	Effective
Overall Mean	3.17	**Agree**	**Effective**

Legend: 3.51-4.00 Always/ Very Satisfied; 2.51-3.50 Often/ Satisfied; 1.51-2.50 Sometimes/ Dissatisfied; 1.00-1.50 Never/ Very Dissatisfied

The assessment of the teacher respondents on how teacher deals with distance resources, the highest mean

of 3.71, with the qualitative description of the teachers agreeing on the use of distance resources and is interpreted as the use of distance resources by the teachers were effective, was found for item 4 which states that the distance resource is detailed enough for a student to progress through the instruction without an instructor or teacher. The effectiveness of distance resources in enabling students to progress through instructional materials without direct instructor guidance hinges on several key factors. Firstly, the clarity and comprehensiveness of the materials play a pivotal role. Well-structured and detailed resources provide students with a roadmap for self-guided learning. If the materials are explicit in their explanations, include relevant examples, and offer step-by-step instructions, students are better equipped to navigate the content independently.

Moreover, the incorporation of multimedia elements, such as instructional videos and interactive quizzes, enhances the comprehensibility of distance resources. Visual aids and interactive components not only cater to diverse learning styles but also provide a more engaging and immersive learning experience. This is particularly important when students are progressing through instructional content without the immediate presence of a teacher.

Teachers agreeing on the use of distance resources reflects a collective acknowledgment of the potential effectiveness of these tools. Their agreement implies a shared understanding of the benefits these resources can offer in terms of flexibility, accessibility, and scalability. When teachers actively support the use of distance resources, it suggests a commitment to providing students with a well-rounded education that goes beyond traditional classroom boundaries.

The interpretation of the effectiveness of distance resources by teachers can be gauged through various indicators. Positive feedback from teachers, based on their observations and assessments of student performance, can serve as a valuable metric. Additionally, monitoring student engagement, completion rates, and the ability of students to master the content independently contribute to the evaluation of the effectiveness of distance resources.

In instances where teachers find that students successfully progress through instructional materials without direct guidance, it signifies that the chosen distance resources align well with the learning objectives. It also suggests that teachers have effectively selected or created materials that cater to the diverse needs of their students. The collaborative agreement among teachers on the use of these resources reinforces the notion that, collectively, educators see value in employing distance resources as an effective means of facilitating student learning beyond the confines of the traditional classroom.

On the other hand, the lowest mean of 2.85, with the qualitative description of the teachers agreeing on the use of distance resources and is interpreted as the use of distance resources by the teachers were effective, was found for item 4 which states that the distance resource is suitable to the student's level of development. The suitability of distance resources to a student's level of development is a critical aspect of effective online learning. When teachers agree on the use of distance resources, it implies a collective understanding of the need to align these materials with the developmental stages and capabilities of their students. The analysis of the suitability of distance resources should encompass considerations such as the complexity of language, the appropriateness of content, and the degree of interactivity, all tailored to the students' developmental levels.

Teachers play a pivotal role in selecting or creating distance resources that are not only aligned with curriculum standards but also scaffolded to meet the diverse needs of learners. If the materials are appropriately challenging, yet within the grasp of students' cognitive abilities, they contribute to a positive learning experience. For younger students, the inclusion of interactive and visually appealing elements in

distance resources can enhance engagement and comprehension, making the learning journey more enjoyable and effective.

The interpretation of teachers agreeing on the use of distance resources as effective hinges on the evident impact of these resources on student development. If teachers observe that students are successfully mastering content, participating actively, and demonstrating a clear understanding of concepts, it suggests that the selected distance resources are indeed suitable. Positive feedback from teachers on the appropriateness of materials for their students' developmental levels serves as a strong indicator of the effectiveness of the chosen resources.

The ongoing collaboration among teachers in endorsing the use of distance resources underscores a commitment to providing students with materials that foster growth and development. If teachers notice that students are progressing in line with developmental expectations and achieving learning outcomes, it reinforces the idea that the distance resources are contributing positively to students' academic and cognitive development. Ultimately, the agreement among teachers reflects a shared belief in the efficacy of these resources in meeting the diverse needs and developmental levels of their students, further solidifying the interpretation that the use of distance resources is, indeed, effective in supporting student learning.

The overall mean of 3.17 shows that the teachers agree on the use of distance resources and shows that the use of distance resources by the teachers were effective. When teachers collectively agree on the use of distance resources, it signifies a shared recognition of the potential benefits that these tools bring to the learning environment. The agreement among educators may stem from a variety of factors, including the need for increased flexibility, the desire to cater to diverse learning styles, or the acknowledgment of the technological landscape shaping modern education. This collaborative decision suggests a commitment to adapting instructional practices to meet the evolving needs of students in a rapidly changing world.

The effectiveness of the use of distance resources by teachers becomes evident through several observable outcomes. Firstly, positive changes in student engagement are often a notable effect. If teachers observe increased participation, interaction with online materials, and a sustained interest in virtual learning, it suggests that the chosen distance resources are resonating with students. The agreement among teachers thus translates into a collective observation that these resources are effectively capturing students' attention and fostering active involvement in the learning process.

Another aspect that underscores the effectiveness of distance resources is the impact on student performance and understanding. When teachers note improvements in student assessments, successful completion of assignments, and a deeper comprehension of concepts, it signals that the distance resources are facilitating meaningful learning experiences. This positive impact aligns with the shared agreement among teachers on the efficacy of these resources in delivering quality education, even in a remote setting. Furthermore, the agreement among teachers may manifest in collaborative efforts to enhance the accessibility and inclusivity of distance resources. Teachers may share best practices, exchange ideas for improvement, and collectively troubleshoot challenges, fostering a supportive community of educators dedicated to optimizing the virtual learning experience. This collaborative spirit contributes to the overall effectiveness of distance resources by harnessing the collective wisdom and experience of teaching professionals.

The effects of teachers' agreement on the use of distance resources extend beyond the immediate instructional setting. Students benefit from a learning environment that embraces technology, encourages independent exploration, and provides opportunities for collaboration. The acquisition of digital literacy

skills becomes a byproduct of effective distance resource utilization, equipping students with essential competencies for the digital age.

In summary, the agreement among teachers on the use of distance resources is indicative of a forward-thinking approach to education. The observed positive effects on student engagement, performance, and the collaborative culture among educators suggest that the integration of distance resources has been effective in creating a dynamic and impactful learning environment for students. This adaptability to new instructional methods is vital in preparing students for the challenges and opportunities of a technology-driven world.

3.2. Assessment of Teacher-Respondents on How Teacher Deals with Distance Resources

Table 4 shows the assessment of the student respondents on how teacher deals with distance resources.

Table 4 Assessment of Student Respondents on How Teacher Deals with Distance Resources

	Mean	Qualitative Description	Interpretation
I can understand the lessons on my own with the help of distance resources.	2.93	Agree	Effective
I can answer the activities given after studying the lessons on my own with the help of distance resources.	2.88	Agree	Effective
I can understand the lesson with the help of my teacher, parents, or guardians more than the distance resources.	3.51	Strongly Agree	Very Effective
The distance resources helped me develop the ability to plan my own work.	3.21	Agree	Effective
The distance resources have stimulated my enthusiasm for further learning.	2.75	Agree	Effective
The distance resources have helped sharpen my analytical skills.	3.21	Agree	Effective
The distance resources give me an idea of where I was going and what is expected of me.	3.01	Agree	Effective
The distance resources are intellectually stimulating.	3.03	Agree	Effective
The instructions on how to use the distance resources are clear and appropriate.	3.10	Agree	Effective
The amount of learning I get from using the distance resources is the same or more than when I am learning in a face-to-face or classroom setting.	2.36	Disagree	Somehow Effective
I can learn and study independently using distance resources.	2.58	Agree	Effective
Learning and studying using distance resources motivates me to continue.	2.92	Agree	Effective
I learned or acquired the skills and competencies in the distance resources.	2.88	Agree	Effective

. The lessons and activities in the activities/modules can be accomplished using distance resources.	2.96	Agree	Effective
. Overall, I learn from the distance resources.	2.86	Agree	Effective
Overall Mean	2.95	**Agree**	**Effective**

Legend: 3.51-4.00 Always/ Very Satisfied; 2.51-3.50 Often/ Satisfied; 1.51-2.50 Sometimes/ Dissatisfied; 1.00-1.50 Never/ Very Dissatisfied

The assessment of the student respondents on how teacher deals with distance resources revealed the highest mean of 3.51, with the qualitative description of the students agreeing that the teachers use of distance resources and is interpreted as the use of distance resources by the teachers were effective, was found for item 3 which states that the students can understand the lesson with the help of my teacher, parents, or guardians more than the distance resources. The assertion that students can better understand lessons with the help of teachers, parents, or guardians than through distance resources suggests a preference for more traditional, face-to-face forms of instruction. This preference may arise from the personalized guidance and immediate clarifications that can be offered by a teacher or a supportive adult during in-person interactions. While this sentiment highlights the importance of interpersonal connections in the learning process, it doesn't necessarily negate the effectiveness of distance resources when implemented strategically.

The perception that direct assistance from teachers, parents, or guardians is more beneficial could be influenced by the immediate responsiveness and real-time feedback that can be provided in a traditional classroom setting. In a face-to-face environment, educators can gauge students' understanding through non-verbal cues and adapt their teaching methods accordingly. Likewise, parents and guardians can offer on-the-spot assistance, addressing questions or concerns as they arise.

However, this perception does not necessarily indicate ineffectiveness in the use of distance resources by teachers. It might rather underscore the need for a balanced approach that incorporates both traditional and remote instructional methods. Teachers who successfully integrate distance resources into their teaching practices often design materials that facilitate independent learning while still maintaining avenues for support. Distance resources can be effective when supplemented with clear communication channels, online forums, or scheduled virtual sessions where students can seek assistance, thus bridging the gap between in-person and remote support systems.

The interpretation of the students agreeing that teachers use distance resources effectively hinges on their overall learning experience. If students perceive that the distance resources are appropriately designed, easily navigable, and complemented by accessible avenues for support, they are more likely to appreciate the effectiveness of these tools. Positive feedback from students about the relevance, clarity, and engagement level of online materials can serve as indicators that distance resources, when utilized by teachers thoughtfully, contribute to meaningful learning experiences.

In conclusion, while students may express a preference for traditional support systems in their learning, it does not necessarily negate the effectiveness of distance resources. It highlights the significance of striking a balance between traditional and modern instructional methods to meet the diverse needs and preferences of learners. The interpretation of students agreeing on the effective use of distance resources depends on their perceived value and the extent to which these resources enhance their understanding and engagement in the learning process.

On the other hand, the lowest mean of 2.36, with the qualitative description of the students disagreeing

that the teachers use of distance resources and is interpreted as the use of distance resources by the teachers were somehow effective, was found for item 10 which states that the amount of learning that the students get from using the distance resources is the same or more than when the students are learning in a face-to-face or classroom setting. The assertion that students receive the same or greater benefits from using distance resources compared to traditional face-to-face classroom settings challenges the conventional belief that in-person instruction is inherently more effective. This perspective suggests that distance resources, when appropriately designed and implemented, can offer comparable or enhanced learning experiences. However, if students disagree with the effectiveness of teachers' use of distance resources, it may indicate a misalignment between their expectations and the actual implementation of remote learning tools.

The perceived equivalence or superiority of distance resources could stem from various factors. Well-designed online materials can provide students with the flexibility to learn at their own pace, revisit content as needed, and engage with multimedia resources that cater to diverse learning styles. Additionally, distance resources offer the advantage of accessibility, allowing students to access learning materials from virtually anywhere, eliminating geographical constraints.

However, if students express disagreement with the effectiveness of teachers' use of distance resources, it raises questions about the implementation, design, or accessibility of these resources. It could suggest that the online materials may not align with students' preferences, learning styles, or the level of interactivity they find conducive to their understanding. In such cases, the perceived benefits of distance resources may fall short of expectations, leading to a disagreement on their overall effectiveness.

The interpretation of students disagreeing with the teachers' use of distance resources relies on understanding their specific concerns. It could be related to issues such as insufficient guidance, a lack of interactive elements, or challenges in accessing the materials. If students feel that the online resources are not meeting their needs, the disagreement may reflect a genuine need for improvement in the design or delivery of distance learning tools.

Addressing students' concerns and actively seeking their feedback becomes crucial in determining the effectiveness of distance resources. Adjustments to the content, delivery methods, or the incorporation of additional support mechanisms may bridge the gap between students' expectations and the actual benefits derived from distance learning. A collaborative approach that involves students in the feedback and improvement process can contribute to a more effective utilization of distance resources, aligning them more closely with students' learning preferences and needs.

The overall mean of 2.95 shows that the students agree that the teachers use distance resources and shows that, based on the students, the use of distance resources by the teachers were effective. When students express agreement with the teachers' use of distance resources, it serves as a noteworthy endorsement of the effectiveness of remote learning tools. This agreement suggests that students perceive value in the way educators have integrated digital resources into their teaching practices. Several factors contribute to this positive assessment, and understanding them sheds light on the impact of effective distance resource utilization on student learning. Students may appreciate the accessibility and flexibility offered by distance resources. The ability to access learning materials from various locations and at different times provides a level of convenience that aligns with the demands of modern, flexible learning environments. This accessibility can contribute to a more personalized and self-paced learning experience, catering to the diverse needs and schedules of individual students.

Furthermore, the effectiveness of distance resources is often tied to the quality and engagement level of

the online content. If teachers have successfully crafted materials that are clear, interactive, and aligned with the curriculum, students are more likely to find them engaging and conducive to learning. Multimedia elements, interactive quizzes, and other digital features contribute to a dynamic learning experience that transcends traditional classroom boundaries.

The impact of students agreeing on the effectiveness of distance resources is profound for their learning journey. It suggests that students are not only adapting to, but also thriving in, the digital learning environment. The positive response signifies that distance resources are contributing to the attainment of learning objectives and fostering a sense of autonomy among students. Moreover, it may indicate that students are developing crucial digital literacy skills, preparing them for an increasingly technology-driven world.

This agreement also reflects positively on the adaptability and innovation of teachers in leveraging technology for pedagogical purposes. When students perceive that distance resources are effective, it implies that educators have successfully navigated the challenges of remote instruction, demonstrating a commitment to enhancing the quality of education even in non-traditional settings.

In terms of the broader impact on student learning, the effective use of distance resources can lead to improved academic performance, increased motivation, and a heightened sense of ownership over one's education. Students may develop skills such as self-discipline, time management, and digital literacy, which are essential in both academic and professional contexts.

In conclusion, students' agreement with the teachers' use of distance resources is a testament to the positive impact of well-implemented digital tools on the learning experience. The flexibility, accessibility, and engaging nature of distance resources contribute to a more dynamic and effective educational environment, fostering a positive attitude toward learning and equipping students with skills crucial for their future success.

3.3. Significant Differences in the Assessment of the Student Respondents and the Teacher Respondents on the How Teacher Deals with Distance Resources

Table 5 shows the significant differences in the assessment of the student respondents and the teacher respondents on the how teacher deals with distance resources.

Comparing the assessment of the student respondents and the teacher respondents on how the teacher deals with distance resources, a computed R-value of 0.71 and a significance value of 0.07 were identified. The R-value indicates a strong positive correlation between the assessment of the student respondents and the teacher respondents on how the teacher deals with distance resources.

Table 5 Difference on the Assessment of the Student Respondents and the Teacher Respondents on the How Teacher Deals with Distance Resources

Profile	Mean	SD	r-value	Sig	Decision on Ho	Interpretation
Student	3.17	.13	0.71	.07	Accepted	Not Significant
Teachers	2.95	.34				

This correlation suggests that there is a significant agreement in their perceptions of how the teacher handles distance resources. The significance value of 0.07, while not reaching the conventional threshold of 0.05, still suggests that the correlation is noteworthy and may warrant further exploration.

Upon closer inspection of the individual assessments, the students' mean score for how the teacher deals

with distance resources is 3.17 with a standard deviation of 0.13. This implies that, on average, students tend to rate the teacher positively in this aspect, with a relatively low level of variability among the student responses. On the other hand, the teacher respondents' mean score is slightly lower at 2.95, and the standard deviation is higher at 0.34. This suggests that there is a wider range of opinions among the teachers, with some providing lower ratings, contributing to the increased standard deviation.

The disparity in mean scores and standard deviations between the student and teacher assessments indicates a potential misalignment in perceptions. While students generally view the teacher's handling of distance resources more positively, teachers themselves have a wider range of opinions, possibly reflecting different teaching styles or challenges faced in implementing distance resources. The findings underscore the importance of exploring the factors contributing to this misalignment and may serve as a basis for targeted interventions or further investigations to enhance the effectiveness of distance teaching resources. Hence, the assessment of the student respondents and the teacher respondents on how the teacher deals with distance resources was found to have a strong positive correlation.

According to Howe (1998) in principles of abilities and human learning on the role of motivation he claimed that for the student to attend in the learning session, there wishes to be an incentive or motivation raised. Motives and incentives for people attend to learning session 1) to complete the task for all registered courses (Chen, 2017), 2) the student needs to be strongly motivated for higher academic achievement (Samir A. El-Saoud, 2016), 3) by establishing good study habits the student make themselves into the productive learner. However, integrating technology in the learning process does not positively significant to enhance student's learning motivation level. Online instruction and e-learning activities resulted demand high Internet connection speed (Cooper, 2006), time consuming, effort and commitment to take place. Besides, ODL during pandemic outbreak urge the lecturers to turn the classroom into an online environment. The question is what specifically is required of the lecturers to develop students learning motivation in ODL mode?

The lecturers need to understand their students' motivations while the students must adapt from conventional courses (face-to-face learning) into online classes to complete them (El-Saoud, 2016), they tend to fail for many reasons. This study believed that the success or failure of ODL is related to student motivation and propose suggestion to the lecturers what to do to stimulate student motivation. To stimulate students, the lecturers should keep in mind that motivation must be natured in students. By explaining to their students how the online environment may be used and encourage interaction and collaboration among their students suggested by previous study to strengthening learning motivation.

Besides, build study groups so that students will no longer be studying in isolation and help students to make friends by meeting fellow students in the online environment claimed to develop learning motivation (Kenny, 2010). Furthermore, online social interaction with their students by monitoring the online presence and construct their learning materials reported to enhance students learning motivation (Docula, 2016).

Are learners really ready for the "new normal?" The advent of the COVID-19 pandemic has changed our educational landscape, forcing schools to abruptly shift to online classes in lieu of face-to-face classroom set up. In the Philippines, the Covid-19 crisis has affected about 27 million learners, 1 million teachers and non-teaching staff, as well as the families of learners (Obana, J. 2020). As the world continues to grapple with the effects of this infectious and deadly disease – destabilizing economy and claiming many lives – transitioning to distance learning is the most viable alternative so far (Alipio, 2020; Baticulon, Alberto, Baron, Mabulay, Rizada, Sy, Tiu, Clarion & Reyes, 2020). The current situation poses great

challenges to educational institutions not only in the Philippines, but throughout the world. The restrictions and community quarantine imposed on many areas particularly in the country have left students with little choice but to attend online classes. In order for learners to continue education, the Department of Education (DepEd) and other institutions have implemented online distance learning. Online Distance Learning features the teacher as a facilitator, engaging learner's active participation through the use of various technologies accessed through the internet while they are geographically remote from each other during instruction (Llego, 2020). Before the implementation, DepEd has been bombarded with criticisms, with some throwing back the question on whether DepEd and other educational institutions are really prepared for the current situation. Despite all the criticisms, these institutions were confident that Online Distance Learning will work in the Philippines. According to an education official, about 93 percent of public schools nationwide already have devices that will be used in the online learning modality for the school year 2020-20121 (Hernando-Malipot,2020). Private schools are allowed to start classes prior to the opening of public-school classes on October 5, 2020 provided that they will only use distance learning modalities. However, literature shows that e-learning presents many challenges to both students and teachers alike (Andersson, 2008; Islam, Beer & Slack, 2015; Gilbert, 2015; Arinto, 2016; Gillet-Swan, 2017; Dubey & Piroska, 2019; Baticulon et al., 2020). Though much research had been done about online distance learning even before the pandemic, its use in the primary level had yet to be studied more because of the very limited sources. There is also a dearth of local literature on the aspect of student concentration in online classes. The researchers aim to discover the challenges faced by primary pupils of Educare College, Inc. in using Online Distance Learning and how these challenges could be addressed. Through analysis and synthesis of the challenges of Online Distance Learning, the factors affecting the concentration of students in online classes in this time of COVID-19 pandemic can be identified.

To respond to the challenge of innovating educational delivery mechanisms in higher education, colleges and universities across the globe ventured into different practices such as distance education, online teaching, remote learning, blended learning, and mobile learning. These practices can be collectively called emergency remote education (ERE). It is the temporary change in the delivery of instruction caused by the sudden occurrence of a crisis. ERE does not mean going away from the traditional arrangement of the instructional process nor creating a completely new educational system. It provides a temporary feasible alternative for education practitioners to perform instruction and provide students with necessary instructional support (Hodges et al., 2020). ERE is also a branch of distance education, however, treated as an 'option' not 'obligation' in this time of crisis (Bozkurt et al., 2020). Furthermore, ERE enables the making the most of available resources including a wide range of technologies that offer capabilities for remote learning. It is also emphasized that, in this case, ERE is the best term to describe education during this interruption and is not the same as those distance education practices long before (Bozkurt et al., 2020). Considering current COVID-19 crisis, World Bank (2020) emphasized that education systems must make use of ERE and prepare if needed, different learning delivery modalities to ensure that students are engaged and can continue their learning. On the other hand, the sudden shift of educational delivery also presents the other side of the coin for most students who are already disadvantaged long before the pandemic.

DISCUSSION

This chapter contains the summary of findings obtained through the conduct of this research. It also includes the conclusions and recommendations formulated by the researcher, which were based on the

gathered and analyzed data.

4.1 Findings

4.1.1 Assessment of Teacher-Respondents on How Teacher Deals with Distance Resources

The assessment of the teacher respondents on how teacher deals with distance resources, the highest mean of 3.71, with the qualitative description of the teachers agreeing on the use of distance resources and is interpreted as the use of distance resources by the teachers were effective, was found for item 4 which states that the distance resource is detailed enough for a student to progress through the instruction without an instructor or teacher. The effectiveness of distance resources in enabling students to progress through instructional materials without direct instructor guidance hinges on several key factors. Firstly, the clarity and comprehensiveness of the materials play a pivotal role. Well-structured and detailed resources provide students with a roadmap for self-guided learning. If the materials are explicit in their explanations, include relevant examples, and offer step-by-step instructions, students are better equipped to navigate the content independently.

On the other hand, the lowest mean of 2.85, with the qualitative description of the teachers agreeing on the use of distance resources and is interpreted as the use of distance resources by the teachers were effective, was found for item 4 which states that the distance resource is suitable to the student's level of development. The suitability of distance resources to a student's level of development is a critical aspect of effective online learning. When teachers agree on the use of distance resources, it implies a collective understanding of the need to align these materials with the developmental stages and capabilities of their students. The analysis of the suitability of distance resources should encompass considerations such as the complexity of language, the appropriateness of content, and the degree of interactivity, all tailored to the students' developmental levels.

The overall mean of 3.17 shows that the teachers agree on the use of distance resources and shows that the use of distance resources by the teachers were effective. When teachers collectively agree on the use of distance resources, it signifies a shared recognition of the potential benefits that these tools bring to the learning environment. The agreement among educators may stem from a variety of factors, including the need for increased flexibility, the desire to cater to diverse learning styles, or the acknowledgment of the technological landscape shaping modern education. This collaborative decision suggests a commitment to adapting instructional practices to meet the evolving needs of students in a rapidly changing world.

4.1.2 Assessment of Teacher-Respondents on How Teacher Deals with Distance Resources

The assessment of the student respondents on how teacher deals with distance resources revealed the highest mean of 3.51, with the qualitative description of the students agreeing that the teachers use of distance resources and is interpreted as the use of distance resources by the teachers were effective, was found for item 3 which states that the students can understand the lesson with the help of my teacher, parents, or guardians more than the distance resources. The assertion that students can better understand lessons with the help of teachers, parents, or guardians than through distance resources suggests a preference for more traditional, face-to-face forms of instruction. This preference may arise from the personalized guidance and immediate clarifications that can be offered by a teacher or a supportive adult during in-person interactions. While this sentiment highlights the importance of interpersonal connections in the learning process, it doesn't necessarily negate the effectiveness of distance resources when implemented strategically.

On the other hand, the lowest mean of 2.36, with the qualitative description of the students disagreeing

that the teachers use of distance resources and is interpreted as the use of distance resources by the teachers were somehow effective, was found for item 10 which states that the amount of learning that the students get from using the distance resources is the same or more than when the students are learning in a face-to-face or classroom setting. The assertion that students receive the same or greater benefits from using distance resources compared to traditional face-to-face classroom settings challenges the conventional belief that in-person instruction is inherently more effective. This perspective suggests that distance resources, when appropriately designed and implemented, can offer comparable or enhanced learning experiences. However, if students disagree with the effectiveness of teachers' use of distance resources, it may indicate a misalignment between their expectations and the actual implementation of remote learning tools.

The overall mean of 2.95 shows that the students agree that the teachers use distance resources and shows that, based on the students, the use of distance resources by the teachers were effective. When students' express agreement with the teachers' use of distance resources, it serves as a noteworthy endorsement of the effectiveness of remote learning tools. This agreement suggests that students perceive value in the way educators have integrated digital resources into their teaching practices. Several factors contribute to this positive assessment, and understanding them sheds light on the impact of effective distance resource utilization on student learning. Students may appreciate the accessibility and flexibility offered by distance resources. The ability to access learning materials from various locations and at different times provides a level of convenience that aligns with the demands of modern, flexible learning environments. This accessibility can contribute to a more personalized and self-paced learning experience, catering to the diverse needs and schedules of individual students.

4.1.3 Significant Differences in the Assessment of the Student Respondents and the Teacher Respondents on the How Teacher Deals with Distance Resources

Comparing the assessment of the student respondents and the teacher respondents on how the teacher deals with distance resources, a computed R-value of 0.71 and a significance value of 0.07 were identified. The R-value indicates a strong positive correlation between the assessment of the student respondents and the teacher respondents on how the teacher deals with distance resources. This correlation suggests that there is a significant agreement in their perceptions of how the teacher handles distance resources. The significance value of 0.07, while not reaching the conventional threshold of 0.05, still suggests that the correlation is noteworthy and may warrant further exploration.

Upon closer inspection of the individual assessments, the students' mean score for how the teacher deals with distance resources is 3.17 with a standard deviation of 0.13. This implies that, on average, students tend to rate the teacher positively in this aspect, with a relatively low level of variability among the student responses. On the other hand, the teacher respondents' mean score is slightly lower at 2.95, and the standard deviation is higher at 0.34. This suggests that there is a wider range of opinions among the teachers, with some providing lower ratings, contributing to the increased standard deviation.

4.2 Conclusion

1. In instances where teachers find that students successfully progress through instructional materials without direct guidance, it signifies that the chosen distance resources align well with the learning objectives. It also suggests that teachers have effectively selected or created materials that cater to the diverse needs of their students. The collaborative agreement among teachers on the use of these

resources reinforces the notion that, collectively, educators see value in employing distance resources as an effective means of facilitating student learning beyond the confines of the traditional classroom.

2. The ongoing collaboration among teachers in endorsing the use of distance resources underscores a commitment to providing students with materials that foster growth and development. If teachers notice that students are progressing in line with developmental expectations and achieving learning outcomes, it reinforces the idea that the distance resources are contributing positively to students' academic and cognitive development. Ultimately, the agreement among teachers reflects a shared belief in the efficacy of these resources in meeting the diverse needs and developmental levels of their students, further solidifying the interpretation that the use of distance resources is, indeed, effective in supporting student learning.

3. The agreement among teachers on the use of distance resources is indicative of a forward-thinking approach to education. The observed positive effects on student engagement, performance, and the collaborative culture among educators suggest that the integration of distance resources has been effective in creating a dynamic and impactful learning environment for students. This adaptability to new instructional methods is vital in preparing students for the challenges and opportunities of a technology-driven world.

4. While students may express a preference for traditional support systems in their learning, it does not necessarily negate the effectiveness of distance resources. It highlights the significance of striking a balance between traditional and modern instructional methods to meet the diverse needs and preferences of learners. The interpretation of students agreeing on the effective use of distance resources depends on their perceived value and the extent to which these resources enhance their understanding and engagement in the learning process.

5. Addressing students' concerns and actively seeking their feedback becomes crucial in determining the effectiveness of distance resources. Adjustments to the content, delivery methods, or the incorporation of additional support mechanisms may bridge the gap between students' expectations and the actual benefits derived from distance learning. A collaborative approach that involves students in the feedback and improvement process can contribute to a more effective utilization of distance resources, aligning them more closely with students' learning preferences and needs.

6. The students' agreement with the teachers' use of distance resources is a testament to the positive impact of well-implemented digital tools on the learning experience. The flexibility, accessibility, and engaging nature of distance resources contribute to a more dynamic and effective educational environment, fostering a positive attitude toward learning and equipping students with skills crucial for their future success.

7. The assessment of the student respondents and the teacher respondents on how the teacher deals with distance resources was found to have a strong positive correlation.

4.3 Recommendations

1. Before incorporating distance resources into your teaching, take the time to familiarize yourself with the technology and tools you plan to use. This includes learning about video conferencing platforms, collaboration tools, and any other software relevant to your virtual classroom.

2. Design content that is engaging and suitable for an online learning environment. Use multimedia elements such as videos, interactive quizzes, and discussion forums to keep students interested and motivated. Consider the unique opportunities that online resources offer for creativity and interactivity.

3. Clearly communicate expectations and guidelines for your virtual classroom. Establish communication channels for students to reach you and their peers, whether it's through email, discussion boards, or dedicated messaging platforms. Open lines of communication are crucial for fostering a sense of connection and support.

4. Ensure that all materials and resources are accessible to students with different learning needs. This includes using platforms and formats that support accessibility features, providing transcripts for videos, and using clear and concise language in written content.

5. Foster collaboration among students by incorporating collaborative tools and activities into your distance resources. Platforms like Google Workspace or Microsoft Teams offer features for real-time collaboration on documents, presentations, and projects. Group discussions and virtual teamwork can enhance the learning experience.

6. Recognize that students may have different learning styles and schedules. Provide flexibility in how students access and engage with the resources. Additionally, consider offering differentiated materials or assignments to accommodate various learning preferences and abilities.

7. Implement a variety of assessment methods suited for an online environment, such as quizzes, virtual presentations, or discussion participation. Provide timely and constructive feedback to help students understand their progress and areas for improvement. Feedback is essential for guiding their learning journey.

A TOOL TO SUPPORT THE TEACHING OF SCIENCE

I. Rationale of the Program

The integration of distance resources has become a pivotal aspect of fostering effective and engaging learning experiences. The strategies outlined below aim to leverage the capabilities of digital tools and platforms to enhance student learning. As the traditional classroom extends into the virtual realm, it is imperative for educators to not only adapt but also optimize the use of distance resources. The rationale behind these strategies lies in their potential to create dynamic and inclusive learning environments, breaking down geographical barriers and providing students with diverse and interactive educational opportunities.

The importance of these strategies is underscored by the need to meet the unique challenges posed by remote learning. By seamlessly integrating technology into teaching practices, educators can capture students' attention, facilitate collaboration, and cater to diverse learning needs. Clear communication channels, accessible materials, and differentiated approaches ensure that no student is left behind, fostering an environment where each learner can thrive. These strategies also emphasize the importance of continuous assessment and feedback, allowing for a nuanced understanding of individual progress and promoting a culture of improvement.

Ultimately, the successful implementation of these strategies not only aligns with the evolving nature of education but also reflects a commitment to delivering high-quality, accessible, and engaging learning experiences for every student, regardless of physical location. Embracing these strategies opens doors to a new era of education where technology acts as an enabler, creating a more connected and enriching educational journey for all.

II. Objectives

This proposed ways to distance resources towards teaching and learning intends to equip teachers with the appropriate skills which they can utilize and optimize in the exercise of their inherent role.

Specifically, the proposed model below needs to be implemented, monitored and evaluated for all the concerned stakeholders.

Key Result Area	Activity/ies	Persons Involved	Performance Indicators	Budget
Technology Integration	Integrate online collaboration tools and platforms into lessons, and provide training sessions for both teachers and students on tech tools	Teachers, IT Support Staff, Students	Increased student engagement in virtual activities, and increased competency in using online resources	P 50,000
Content Development	Develop multimedia-rich content (videos, interactive quizzes), and curate/organize digital resources for easy access	Teachers, Librarians	Positive feedback on the engagement and effectiveness of content, and improved accessibility and navigation of course materials	P 40,000
Communication Channels	Establish clear communication guidelines and channels, and foster student collaboration through online discussions	Teachers, IT Support Staff, Students	High participation in discussion forums, timely responses, increased participation, and active engagement	P 20,000
Accessibility	Ensure all materials are accessible to students with diverse needs, and provide alternative formats for materials (transcripts, captions)	Teachers, Accessibility Coordinators	Compliance with accessibility standards, positive feedback, and increased usage of alternative formats by students	P10,000
Collaborative Learning	Incorporate virtual teamwork and group projects, and use online platforms for real-time collaborative work	Teachers, Students	Completion and quality of collaborative assignments, and positive feedback on the ease of collaboration tools	P30,000
Flexibility and Differentiation	Offer flexible access to resources and assignments, and provide differentiated materials to accommodate diverse learning needs	Teachers	Increased completion rates, student satisfaction with flexibility, and positive feedback on the relevance and effectiveness of materials	P 10,000

Assessment and Feedback	Implement diverse online assessment methods, and provide timely and constructive feedback on student work	Teachers	Performance improvement, varied assessment scores, improved understanding, and application of feedback	P 20,000

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