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# Effectiveness of Online Learning and Preparedness of Preschool Teachers Amid COVID-19 Pandemic

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**Abstract**

Education is a significant factor in success. It is seen as a hope to have a bright future. Today, education has evolved through the use of technology. Technology helps to enhance learning, increase engagement, and improve teaching techniques. This study aims to determine the effectiveness of preschool online learning during the COVID-19 pandemic in the identified schools in Lapu-Lapu City for the school year 2020 -2021. This study used a descriptive correlational research design and survey technique with 35 teacher respondents. A survey questionnaire was designed to assess the perception of teachers on the effectiveness of online learning for young learners. Frequency count, percentage, and weighted mean were used to treat the data gathered. The level of effectiveness of preschool online learning was measured in four aspects: online learning platform used, learning materials used, techniques and methods used, and engagement of students in class. The level of preparedness was also calculated based on criteria. A test subjected to a 0.05 level of significance was used to know if there was a significant relationship between the responses and the demographic profile of the respondents. The results of this study revealed that the respondents found online learning to be moderately effective. They are also only somewhat prepared for online teaching. Furthermore, the study revealed that there is no significant relationship between the teachers' perception of the level of effectiveness and preparedness and their demographic profile. Based on the findings, an action plan was formulated and recommended for implementation by the authorities concerned.

**Keywords:** early childhood education, descriptive-correlational research design, pre-school online learning, effectiveness, preparedness

## 1. Introduction

Education has been seen as the hope for a bright future. From the primitive days up to now, the ways of instructional delivery have been continuously evolving and improving.

Nowadays, learning can occur outside the 4 walls of a classroom. In recent years, various learning modalities have been introduced to give more flexibility to other learners who cannot be catered under the traditional educational setup such as distance learning and internet-based learning. Since then, these new modalities were implemented mostly in the tertiary and basic education levels. Meanwhile, the application of these new educational trends in the early childhood education level was little to none as the need for hands-on learning and socialization for this age bracket was prioritized more than convenience.

From the global perspective, since the COVID 19 pandemic hit almost all places of the world, there has been a sudden shift of the educational scenario from the traditional learning set-up to the new normal, the online learning, modular, and virtual or distance learning. Schools in more or less 100 countries around the world have been closed as a safeguard against the surge of Coronavirus cases. With this sudden move, a lot of adjustments and challenges were also met by different stakeholders specially the teachers and the parents.

In the Philippines, private schools offering ECE also turned to online learning platforms to provide their services to the kids. On the other hand, public schools have resorted to the modular learning modality. In the City Division of Lapu-Lapu, school leaders had to answer the urgent call of the urgent shift of the delivery of instruction from the regular classroom setting to online learning. Preparations have been made including orientation of teachers as well as parents whose tasks on teaching their children at home were of great importance at the moment.

All public and private schools did the necessary preparations to continue the teaching-learning process of the children. Teachers prepared all instructional materials to be used by the children in their online classes. Different modalities have been employed depending on the resources at hand. Pre-school education has to continue and support was necessary since this is the strong foundation of quality education.

After one school year of online learning in the time of the pandemic, a lot of learners and parent have qualms about its effectiveness. Parents encountered difficulties in assuming the responsibilities in their role as assistant teachers while their children have to study at home. On the other hand, the teachers felt concern on how effective the learning of early childhood education with the abrupt change of the teaching-learning process. Various studies have shown that parents' perception of online learning is generally leaning towards the negative side as preparation for the said shift has been relatively short and lacking. However, it is of great significance that evaluation will be done from the perspective of the teachers since they are the primary playmakers in the implementation of the curriculum.

Along with this premise, this study sought answers on the effectiveness of the online learning of the preschoolers in some identified schools in the Division of Lapu-Lapu City and to developed an action plan based on the findings.

### *1.1 Theoretical Background*

Education is one of the things that is given high regard and importance around the world. It has been seen as the source of hope and the beacon of light especially in understanding the mysteries of the world and life itself. Throughout the years, education has evolved in terms of methodologies, pedagogies, and approaches. All of these innovations in the field of education are grounded in the different theories proposed by passionate and intellectual persons of importance.

This study is anchored on Constructivism Theory which was propounded by Jean Piaget in 1972 (Plus, 2016), Behaviorism Theory by B.F. Skinner (as cited by Reimann, 2018), and Connectivism Theory of George Siemens and Stephen Downes in 2005 (as cited by Fiore, 2018). Republic Act 8980 also known as Early Childhood Care and Development supports this study.

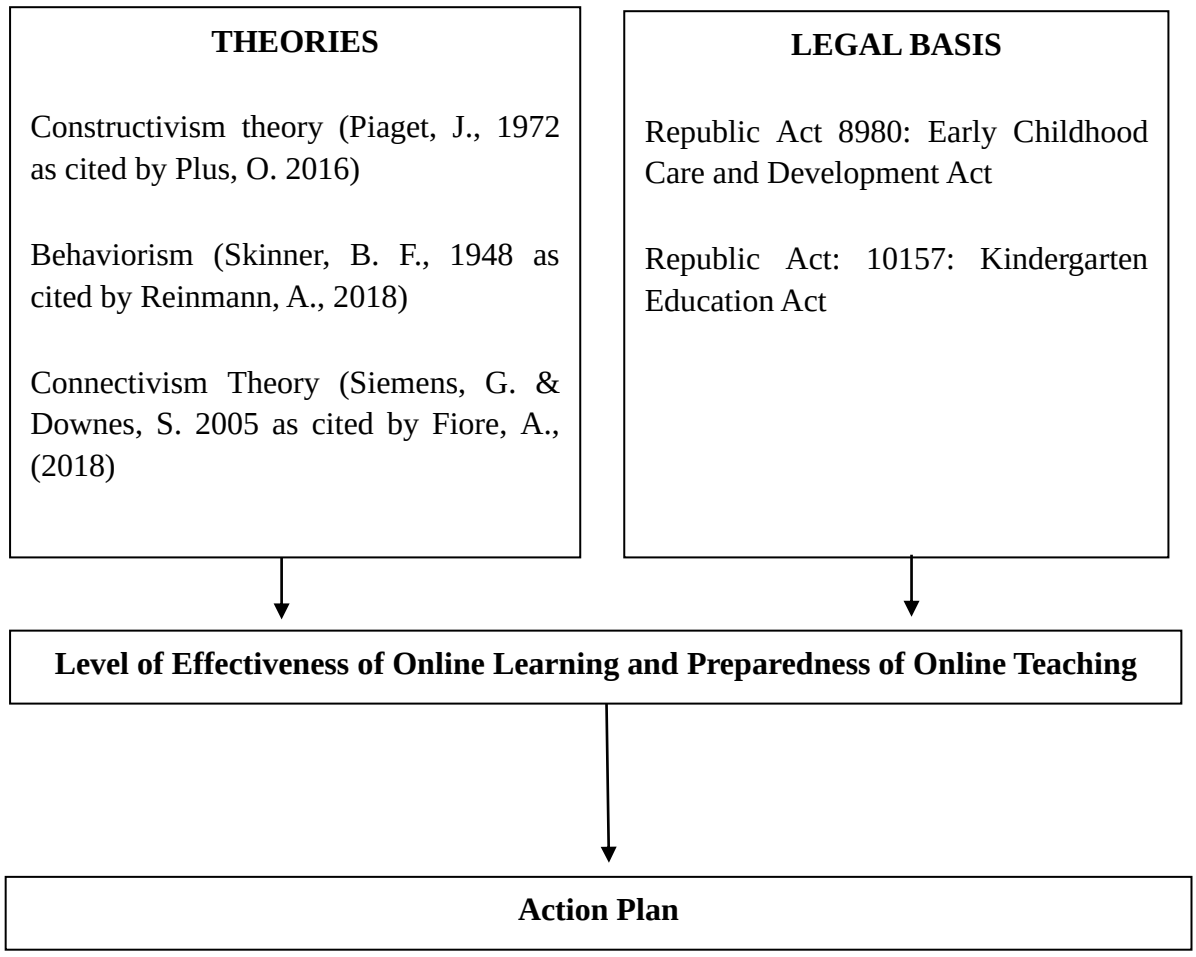


Figure 1. Theoretical Framework of the Study

The Constructivism Theory was proposed by Jean Piaget in 1972. Constructivism Theory states that the learners are the ones who are responsible for actively constructing knowledge by building upon their personal experiences (Plus, 2016). There are two main processes

introduced under Piaget's constructivism theory: assimilation and accommodation. Assimilation refers to the process of fitting fresh and novel information into an existing schema. On the other hand, accommodation refers to redeveloping and revising an existing schema to accommodate new information. This theory has been used in the classroom setting to engage the learners to be active rather than passive and participate in the learning process. With the advancement of technology and its integration into the field of education, it anchors on the principles of constructivism theory. In turn, technology serves as the channel and catalyst which helps implement strategies and methodologies based on the constructivism theory.

Another useful theory applied in this study is Behaviorism Theory which is proposed by B.F. Skinner (as cited by Reimann, 2018). This theory states that the learning environment can be carefully arranged and manipulated to elicit specific behavior and responses from the learners. Moreover, this theory also believes in using positive and negative reinforcements in shaping the learners' behavior and molding them into the desired outcome. Positive reinforcement refers to giving rewards or verbal praises for a job well done, which in turn helps them get into a mindset of always aiming for excellence. On the other hand, negative reinforcement refers to taking away something to help the child realize that improvement needs to be done or that a behavior needs to be eliminated. In educational technology, behaviorism is used to make behavioral objectives and devise classroom management strategies. Aside from these, the use of giving rewards and punishments also helped in controlling the learning process in general. This theory has also been applied in integrating technology in the classroom and in understanding how to use it to further motivate and help them.

Connectivism Theory, introduced in 2005, is one of the most useful theories in the field of education. It was proposed by George Siemens and Stephen Downes which states the interconnection between the learners even outside the traditional four walls of the classroom. This thought gave way to a more innovative thinking that allows the learners to experience an extended learning environment through various activities and through the use of vicarious learning experiences (Fiore, 2018). Aside from this, it gives focus on the idea that learning happens in an environment where everywhere is connected all the time. For example, it can happen in an online community or even in online classrooms. It also tells us that learning can exist outside of ourselves. Another principle of Connectivism worth taking note of includes that learning is a process of connecting various information sources. It also proposes that learning can occur even in non-human subjects or appliances. This idea gives way to the use of computer-assisted instruction strategy in the learning process.

After the industrial revolution, a new perspective was shed in light of improving the delivery of instruction while also democratizing quality education and making it more accessible to a wider audience. In connection to the advancement of technology, some schools at the tertiary level provide more choices on the methods on which learners can gain their education degrees. Modular approach and distance learning have been introduced throughout the

years to fulfill this purpose.

The modular approach refers to the use of modules or predetermined units of lessons divided into reasonable chunks to be completed within a specific time frame. This approach promotes self-learning and individualized instruction in which learners can freely learn at their own pace. First introduced to the tertiary level in the academic ladder, the modular approach has given flexibility especially for those learners who are working while also studying. Aside from benefiting the learners, this approach towards learning also helps the institution in more ways than one. It helps the institution in saving some part of the annual budget supposedly allocated for the utility bills like electricity and water. The teachers also are provided a lot of flexibility to work from home and anywhere else provided they are connected to the internet. But this revolutionary approach to learning has not been without rough bumps along the road.

For the first few years of implementation, most of the learners and other educational stakeholders were skeptical of the effectiveness and efficiency of the newly introduced method of the modular approach. In addition to this, teachers were not highly skilled yet in handling the difference in the modular approach compared to the traditional one. The challenges include online platforms, learning materials needed, and methodologies to be used. The careful crafting of the modules to be used also proved to be a challenge as teachers and other authors need to beat the time constraint and produce it in time while also upholding and ensuring its quality. But as time passed by, the people involved in making this approach work slowly adjusted, and this approach was little by little embraced by the community.

In a study done by Vallespin (2021), it was found out that the modular approach has proven to be even more effective than the traditional teaching method and was preferred by most of the respondents. The study was also able to find out how a modular approach can help increase student participation and self-motivation. It was suggested to also apply the modular approach to other levels other than the tertiary level. However, the modular approach has not yet been widely applied to the lower year levels in the educational level due to concerns involving the appropriateness of the approach to the age level and needs of younger learners.

Aside from the modular approach, another method was born known as distance learning. Distance learning is defined as the approach to learning which includes the physical separation of learners from their teachers and the learning environment. It mostly involves learning through the online platforms for the learning process and facilitating student-teacher communication while also following the specified and mandatory curriculum appropriate for the grade level.

This approach provides a lot of benefits because physical presence is no longer needed in school to learn. learners can also learn at their own pace and may complete their tasks anytime and anywhere and just need to be connected to the internet. Just like the modular approach, distance learning also met some challenges along the way.

One of the first institutions to offer a distance learning-based program at the tertiary level in the Philippines is the University of the Philippines – Open University (UPOU). The institution implemented the use of ODel, also known as “open and distance e-learning,”

which utilizes various web and online mediums and combines asynchronous and synchronous learning methods to facilitate learning and communication between the learners and teachers. According to Arinto (2016), the major implementation problems were categorized into two: (a) increasing the engagement level of the UPOU faculty in the implementation of ODeL through making use of innovative practices; and (b) sustaining the innovative practices of the faculty and innovators. The study also pointed out the need to provide technical support especially in the process of using a novel educational program and platform.

In the basic education and early childhood department, there has been little to no past research on the effectiveness of the use of the novel approaches towards learning which are modular and distance learning. A reason for this could be because these age and grade levels require more physical interaction with their teachers and peers compared to learners in the higher grade levels. Another problem considered was the method on how to sustain the attention of the young children especially when interventions cannot be done on the spot and using the methods previously known to work. In addition to these, the faculty and teacher issues also played a significant role in why institutions have not yet ventured into offering distance learning to young kids (Donohue and Miller, 2020). As a result of these, not many experimental test runs have been done throughout the years.

In the middle of the school year 2019-2020, the world was shaken when the Covid-19 Virus suddenly had its widespread and caused almost all establishments to temporarily shut down. In the Philippine setting, approaching the last few weeks of school, learners, teachers, and other educational stakeholders were hopeful to resume and finish the school year. Graduation and moving up ceremonies were postponed after the supposedly nationwide one-week lockdown. Unfortunately, the effects of the novel virus were more than previously expected by doctors and experts alike. Work, entertainment, and other big events were also suspended. The initial efforts to contain the virus from spreading were not effective as it was met with resistance from the citizens especially with the number one concern of all - the financial capacity to sustain the hunger and other needs of families. After a week of lockdown, the condition of the virus situation in the Philippines and all over the world worsened. The initially thought one week lockdown only stretched into months and months of quarantine. All over the world, a lot of people got infected which led to massive numbers of death rates. With the world in chaos, people have no choice left but to standby and stay at home while front liners risk their lives in the attempt to control the global pandemic.

With the sudden effects brought about by the Covid-19 pandemic, the choice between traditional classroom learning and online learning was also suddenly stripped off as the situation forced an immediate shift from the four walls of the classroom to the online platforms. This shift has had adverse effects on everyone in the educational setting but most especially on the younger learners who need more special attention and care than older ones. In the case of early childhood learners, a lot of challenges are being faced by everyone involved in the learning process - learners, parents, guardians, and teachers.

Being in the ground zero of the global pandemic, China was the first to experience the

adverse effects of the virus not only on the country's economy and citizens' health but also including the education of their school-age population. Due to the lockdown and restrictions in social distancing, classes were suspended in the areas affected by the virus, thus, leading to resorting to another method in learning called online learning.

A study conducted by Dong, et. al (2020) in China determined the parents' and guardians' beliefs and attitudes towards their young children's online learning experiences. Using a large-scale online survey tool, the researchers were able to gather data on how the Chinese parents and guardians had negative perspectives regarding the shift to online learning method from the traditional face-to-face learning process. Their negative beliefs towards online learning can be narrowed down to three main reasons: (a) limitations brought about by the online learning method; (b) the lack of self-regulation capabilities of young learners; and (c) parents' and guardian's lack of time and knowledge to provide the support needed the by the young children following the online learning method. All of these reasons combined with the physical and emotional challenges brought about by the pandemic showed how the parents' and guardians struggled on the ground of unpreparedness.

Another study conducted by Song, et. al. (2020), examined the situation and status of online teaching for the elementary and secondary levels amidst the Covid-19 pandemic. The findings of this study have shown how the schools in the levels mentioned previously have actively responded to the Chinese government's call to "suspend classes without suspending teaching and learning." But just like the previous study discussed above, the shift to online teaching for the elementary and secondary levels from 100 basic education schools met some challenges along the way. The study has found out that some teachers are not yet well-acquainted to the use of technology as an integration to the teaching-learning process. It illustrated how the teachers need support in different areas such as online teaching skills, technology literacy, and online teaching resources to be used. Another challenge was about the home-school cooperation where the families of the children were a little bit hesitant and unprepared to assume the role of being the extended teacher of the school-age children in their household. A survey given to school principals has shown how they think that schools in general need support, too, in terms of guaranteeing the quality of education given to the learners using the online teaching method. Generally, the data gathered from the survey on school principals pointed to the difficulties experienced by the school in terms of heavy workload for teachers, lack of training for the new method, and the unorganized and underdeveloped information structure.

A study conducted during the heat or peak of the Covid-19 pandemic was done in a Norwegian municipality through online surveys. This study aimed to get to know the views of the learners, teachers, and the parents of "home-school" in lieu of the traditional learning during the period of community lockdown. The results of this study showed how the learners quickly adjusted to the new approach and system, and how the parents also embraced it with a positive outlook (Bubb and Jones, 2020). Furthermore, the new approach towards school was found out to give way to having more independence for self-paced learning, and creativity which leads to a better learning achievement.

In the United States of America, the parents' perception of the distance learning for preschoolers and their involvement during the Covid-19 crisis were studied. According to Stites, et. al. (2021), parents were more involved in providing assistance to pre-school learners when it comes to literacy subjects, and less were extended to the logical subjects such as mathematics. In addition to that, the lack of opportunity for social development and engagement on the part of the learners was also observed. Parents suggested to lessen the time-consuming activities and convert the time supposedly time spent to having more interactions with their peers.

Another research done in Romania by Butnaru, et. al., (2021) revealed how academic and high school students' perception on the effectiveness of online learning during the pandemic can differ based on a lot of factors. Moreover, one of the most notable factors was found out to be the level of satisfaction of the students which can be linked to the level of their experience in using the tools necessary for online learning as well the ease in accessing online learning platforms. In addition to that, students also consider the proficiency of their teachers in assessing the effectiveness of learning in the new normal.

Recently, a study was done to determine the teachers' perception on turning to online learning as a way of the Chinese government to control the spread of the virus. According to Yang (2020), teachers show willingness and motivation to brave through the new normal. Moreover, the results also suggested that some of the teachers had prior experience on handling online learning which contributes to their readiness to teach online. However, it was also found out that there was a lack of training done for the benefit of those who haven't handled this kind of situation yet. As a response to the findings of this study, teachers were immediately given training as support. In conclusion, majority of the teachers had a positive opinion on the implementation of online learning in the time of the pandemic.

Having little to no time for preparation for online learning, teachers also have different levels of preparedness. According to a study by Paliwal and Singh (2021), teachers of HEIs appear to be technically prepared to conduct online classes. However, they are not yet that equipped in terms of communication, design, and time management aspects. In another study conducted in Russia, preschool teachers were seen to be actively responding to the call for online learning method during the covid-19 pandemic despite the lack of preparedness of institutions for the new normal (Pavlenko & Pavlenko, 2020). Moreover, it has been found out that even with the limited experience in using technology for preschool education, the teachers were able to maintain a positive demeanor in dealing with the different factors which needed to be addressed during the challenging times of starting the online learning method.

After one year of battling with the Covid-19 pandemic and with the emergence of new variants, the Philippine educational sector has been constantly looking for the best ways on how to continue the learning process of the learners in all the levels of the educational ladder. After completing one whole school year since the pandemic started, a lot of challenges were also met just like the other countries around the world.

Being a third-world country, a lot of technical problems arose during the implementation of

the online learning method. One of these was the lack of access of the majority of the learners to a stable internet connection which is a vital ingredient in availing education services during the new normal. Another challenge is the lack of financial capability of typical Filipino families to acquire the appropriate and updated gadgets like cellular phones, tablets, laptops, and computers needed to be able to join the online classes. With the difficult situation of small businesses closing and middle and large companies' cost-cutting their expenses, a lot of Filipino parents and guardians lost their means to sustain all the needs of their family members. With the tight budget in every provider and breadwinner's pocket, essential needs like food, medicine, alcohol, face masks, and other tools for sanitation have been bumped up into the priority list leaving little to no extra money to spare for upgrading internet connection speed or other things used for educational purposes. A lot of children previously studying in private schools were transferred to the public schools for practical reasons.

The Department of Education in the Philippines has been constantly trying to figure out the best move to make in order to still provide quality education especially to those learners who cannot join the online classes. In connection with this, the Department of Education has launched the free DepEd channel which can be viewed through a television. This channel offers supplemental information on the different subject areas across all levels in the basic education department. A YouTube channel was also launched as an alternative to the television medium. However, still the same problem lies because of the lack of access to the gadgets needed to avail of these free services. It was proposed to also provide another option to air these programs in the radio where it is more accessible to Filipino learners across different social status in the society. Aside from this, Self-Learning Modules were also made which can provide all the needed information for the learning competencies in each grade level. This is another option provided by learning institutions in order to cater to those learners in far flung areas which do not have access to the internet or the other methods and mediums of learning during this new normal. Unfortunately, this combined modular and distance learning approach still met some problems along the road.

One of the most obvious reasons for this is because of the lack of resources and limited manpower to mass produce these learning modules in time for all the learners, especially in the public schools. With the restrictions brought by the pandemic, people who are needed for this task cannot gather all at once and need to follow a shifting schedule routine. Aside from this, another obstacle is the delay of acquiring the needed tools like printer, ink, and bond paper to produce the learning modules. All of these reasons combined with the emotional stress and physical strain experienced by everyone who is concerned in the learning process have caused some lapses and delays in the opening of classes for school year 2020-2021 in the Philippines.

A study conducted by UNICEF in collaboration with the different government agencies in the Philippines has recommended the return of the face-to-face classes even just for the younger children from the preschool to the elementary departments (UNICEF, 2020). This is due to the results of the investigation that younger children are less likely to cope with the psychological stress of just being at home all the time and not being able to interact and play

with their peers. Aside from this, online learning for children in the early childhood category may not be that effective due to the fact that they have a very short attention span. Another reason is due to the prior findings that young children are less likely to contract the dreaded Covid-19 virus than adults. But with the rise of new variants from different parts of the world and just recently even here in the Philippines, the hopes of returning to the traditional face to face classes have been put down to rest yet again.

In the midst of the school year 2021-2022, there are still lots of questions on people's mind on whether the online learning method is really effective and if the learners actually learned something during this school year. School principals, school proprietors, teachers, learners, parents and guardians, and other people who are related to the education field all have different reactions and perceptions on the overall school year during the global pandemic. Being another difficult and experimental year, evaluations should be done in all aspects of the educational scene as assessment on what practices are to be retained, improved, or stopped in case the pandemic stretches into another school year.

The Early Childhood Care and Development Act or Republic Act 8980 states that young children in these ages should be given programs and activities which not only develop them physically, but also mentally and intellectually. Republic Act No. 10157, also known as the Kindergarten Education Act, states that kindergarten should be a mandatory requirement to be able to enroll in Grade 1. Furthermore, it also officially delegates kindergarten to be a part of the basic education system. The act suggests using teaching methods and learning materials which are suitable to the needs of the learners. This move is done by the government and the educational sector in order to harness the sharpness and quick-absorbing ability of the young learners' minds. Building a strong educational foundation during these early years is crucial and essential for a more effective higher years in the academic ladder. Hence, kindergarten education should be continuously evaluated and improved to be able to be engaging and adaptive, especially to the changes brought by the 21st century modern world.

These theories, including the legal bases of the study, support the study as they suggest ways on how the pre-school education should be implemented. Furthermore, they also give insights on what needs to be evaluated to have an effective pre-school education especially in this time of the pandemic.

### *1.2 Statement of Purpose*

This study aims to determine the effectiveness of preschool online learning during the COVID 19 pandemic in the identified schools in Lapu-Lapu City for the school year 2020-2021 as the basis for an action plan. Specifically, it seeks to determine whether the demographic profile, teaching experience, and fields of specialization of the respondents affects their teaching performance in an online setup. It also aims to determine whether the status of technology used at home affects their level of preparedness and effectiveness in online teaching. In addition, this study aims to know whether the teacher's level of preparedness and effectiveness affects their teaching techniques and class engagement. Moreover, this study aims to know the level of effectiveness of online learning during the

pandemic and determine what action plan could be proposed.

## 2. Research Method

### *2.1 Design*

This study made use of the descriptive correlational research design and the survey technique. This design and strategy were chosen because this study aimed to know the perception of the teachers towards the effectiveness of preschool online learning as well as the teachers' preparedness for online teaching. Also, the relationship of selected demographic profile of the respondents and the level of effectiveness and preparedness of online learning was sought for.

### *2.2 Environment*

The study was conducted in the selected private schools in the Philippines.

### *2.3 Respondents*

The focus of this study were the teachers from the preschool department wherein their perception towards the effectiveness of online learning were determined. Table 1 presents the distribution of the respondents which were chosen through purposive sampling technique.

As shown in the table there are 35 teachers from the different private schools which offers Preparatory classes. It is clear from the table that the schools have few numbers of teachers.

Table 1. Distribution of Respondents

| School | F | f |
|---|---|---|
| Advance***** | 3 | 3 |
| Asian**** | 3 | 3 |
| Benthe***** | 5 | 5 |
| Center***** | 6 | 6 |
| Institute*****. | 3 | 3 |
| Einstein*** | 2 | 2 |
| Holy***** | 3 | 3 |
| India***** | 1 | 1 |
| Royal***** | 3 | 3 |
| San***** | 2 | 2 |
| St. Ignatius*****. | 1 | 1 |
| Stephanie***** | 3 | 3 |
| **Total** | | **35** |

*2.4 Instruments*

This study used a survey questionnaire adapted from that used during the Teaching and Learning International Survey (TALIS) a worldwide evaluation on teaching and learning performed in 2008 by the Organization for Economic Co-operation and Development (OECD). The instrument was modified as it was designed to assess the perception of the teachers towards the effectiveness of online learning for young learners. These was subjected to content and logical validation by some Early childhood teachers through pilot testing and was finalized with the assistance of the research adviser.

There are three parts of the survey questionnaire:

Part I asked the demographic profile of the respondents such as age, gender, civil status, highest educational attainment, field of specialization, and years of teaching experience.

Part II answered the status of technology used by teachers for online class in terms of gadget and type of internet connection.

Part III answered the level of effectiveness of online learning as perceived by the respondents in terms of online learning platform, learning materials used, methods and techniques used, and engagement of learners in class.

Part IV - This answered the level of preparedness of preschool teachers for online teaching.

*2.5 Data Gathering Procedure*

Letters were sent to the schools' principals to ask permission to conduct the study. Upon the approval of the letter, the researcher went to the identified schools informing the school principal of the intent to conduct the study. The researcher then conducted an online brief overview and orientation to the respondents on the aims and goals of the study. The survey questionnaires were given to the identified respondents via the selected online application and platform. The respondents were given ample time to answer the questionnaire. From time to time, a follow up was made to make sure that the respondents are in the right track in giving answers to the questions asked. The data were then gathered, collated, tabulated, and analyzed for interpretation.

*2.6 Statistical Treatment*

To analyze the data that were obtained, the researcher used descriptive and inferential methods in statistics. To proceed with statistical calculations, MS Excel software was used. All statistical computations and analyses were performed with the assistance of a qualified statistician.

Frequency count tool was used to determine the number of times that the same variable is evident or is present in every respondent's profile and in their other responses on the survey questionnaire. Percentage was used to show the proportion of a certain variable to be present on certain respondents from the total number of respondents. The weighted mean was used to interpret the data on the teachers' perception towards the effectiveness of online learning for young learners, as well as their level of preparedness for online teaching.

## 3. Results

### *3.1 Data Analysis and Discussion*

Table 2. Age and Gender

| Age and Gender | Responses | | Grand Total | |
|---|---|---|---|---|
| | *f** | *%* | *f* | *%* |
| 50-59 | 1 | 2.86 | 1 | 2.86 |
| 30-49 | 18 | 51.43 | 18 | 51.43 |
| 29yrs. old below | 16 | 45.71 | 16 | 45.71 |
| TOTAL | 35 | 100 | 35 | 100 |

f*: male=35. Female=35

Table 2 shows that most of the respondents are between 30-49 years old, which means that most of the preschool teachers are in their early adulthood stage. The result implies that since the majority of the respondents are in their early adulthood stage, they are also more adept in using the gadgets and technology needed in conducting online classes. A study by Smart Energy Consumer Collaborative (2016) as cited by Volkwyn, (2019), found out that young adults spend more time exploring new technology. These are often closely linked with the standards of feminine behavior and responsibility within gender roles culturally and socially, this is mostly particularly true at pre- primary/elementary education level (Bongco & Ancho, 2020). Across all regions in the world, roughly 60-70 percent of teachers are female and with differences in Europe, Latin America, and North America, since 1980 and most particularly noted, there are more female teachers at lower grades in primary level than secondary or tertiary level (Le Nestour & Moscoviz ,2020).

Table 3. Civil Status

| Marital Status | Responses | | Grand Total | |
|---|---|---|---|---|
| | *f** | *%* | *f* | *%* |
| Single | 16 | 45.71 | 16 | 45.71 |
| Married | 19 | 54.29 | 19 | 54.29 |
| **TOTAL** | **35** | **100** | **35** | **100** |

f*: male=35. Female=35

As shown in Table 3, most of the respondents were married while the remaining are still single. Several studies found that marital status has an effect on teachers' being effective. In a study conducted by Oselumese, et. al (2016), it was found out that being married has high self-efficacy of teachers because of their experiences juggling different tasks at home. There is a significant difference between the married and unmarried teachers (Igbafe & Ogonor, 2019). Chauhan (2016) found that there was a significant influence on the instructional strategies and the teachers' efficacy on their marital status. Rizvi's (2016) study, however,

reported teachers' self-efficacy in classroom management changes with time without any relation to the change of the teacher who had changed marital status over that period. Based on the findings of this study, marital status may affect an employer or school's decision in the recruitment of foreign teachers to ensure the quality of program they can provide to students.

Table 4. Highest Educational Attainment

| Highest Educational Attainment | Responses | | Grand Total | |
|---|---|---|---|---|
| | *f* | % | *f* | % |
| with units in Doctorate degree | 1 | 2.86 | 1 | 2.86 |
| with units in Master's degree | 18 | 51.43 | 18 | 51.43 |
| Baccalaureate degree | 16 | 45.71 | 16 | 45.71 |
| TOTAL | 35 | 100 | 35 | 100 |

f*: male=35. Female=35

In Table 4, 18 out of 35 respondents are master degree teachers and only one teacher has a doctorate degree. According to Nag (2017), teachers with advanced knowledge and skills brought by attending graduate studies are also linked to an increased effectiveness as well as student satisfaction. The finding implies that a higher educational attainment means better job opportunities for them and higher chances to get employed in schools offering a stable job and better employment benefits. A study by Abun, et. al., (2021) supported the same findings that an overall consensus of having at least a Bachelor's degree and or raising the teacher education qualification can improve the classroom quality in preschool education. However, not all evidence is conclusively the same, results from numerous studies of preschool programs suggested no relations between predicting classroom quality and children's academic outcomes from the educational attainment and major of teachers (Faria, et. al., 2017).

Table 5. Fields of Specialization

| Fields of Specialization | Responses | | Grand Total | |
|---|---|---|---|---|
| | *f* | % | *f* | % |
| Early Childhood Education | 17 | 48.57 | 17 | 48.57 |
| General Education | 15 | 42.86 | 15 | 42.86 |
| Secondary Education | 2 | 5.71 | 2 | 5.71 |
| Special Education | 1 | 2.86 | 1 | 2.86 |
| TOTAL | 35 | 100 | 35 | 100 |

As shown in table 5, most of the respondents specialize in Early childhood Education with a total of 17 respondents out of 35. Moreover, it also shows that Special Education garnered the least number of responses with only one respondent. In a study conducted by Johansson and Myrberg (2019), it was found out that hiring teachers with relevant qualifications to what they need to teach has a positive impact especially on the learners' academic performance. A study

from Balushi (2021) pointed out that having specialized degree in English like TESOL, can help better prepare teachers and Floris & Renandya (2020) added that programs accommodated to the needs of the non-native speakers of English would raise the future teachers' motivation and self-worth. By contrast, some studies argued that both NESTs and non-NESTs can benefit the specialization (Schenck, 2018). Takahashi and McDougald (2016) mentioned that while proponents of specialization claim that classifying teachers by areas of strength allows them to master subject content which could lead to increased teacher retention rates. Others conclude that teacher specialization can have a negative influence on student achievement (Fryer, et. al., 2016)

Table 6. Years of Teaching Experience

| Years of Teaching Experience | Responses | | Grand Total | |
|---|---|---|---|---|
| | *f* | % | *f* | % |
| 16-20 years old | 17 | 48.57 | 17 | 48.57 |
| 11-15 years old | 15 | 42.86 | 15 | 42.86 |
| 6-10 years old | 2 | 5.71 | 2 | 5.71 |
| 5 years old and below | 1 | 2.86 | 1 | 2.86 |
| TOTAL | 35 | 100 | 35 | 100 |

Table 6 shows that most of the respondents are relatively new in the field of teaching with 5 years or below teaching experience. In addition to that, one of the respondents has been in the profession for 16-20 years already. According to Kini, et al, (2016), having greater years of experience is also linked to increased teacher effectiveness and can be observed in better achievement and performance of the learners.

Overall, teaching experience is significantly associated with students' achievements and improved quality education. An analysis done by the Learning Policy Institute concluded that out of the 30 studies published over the past 15 years teaching experience is positively associated with student achievement gains throughout a teacher's career.Moreover, as teachers gain experience, their students not only acquire better academic results but may also do better in their overall school success like school attendance, Kini & Podolsky, (2016).

Table 7. Mobile Device Used

| Mobile Device at Hand | RESPONSES | (n=35) | Rank |
|---|---|---|---|
| | **f** | **%** | |
| Smartphone | 27 | 77.14 | 1 |
| Personal Computer | 6 | 17.14 | 2 |
| Laptop | 2 | 5.72 | 3 |

Table 7 shows that almost all teacher respondents use their smartphones to conduct online classes and only two teachers use laptops. The results revealed that most teachers rely on smartphones for easy mobility and access to resources. A possible reason for this is

smartphones are relatively cheaper than a desktop or personal computer and a laptop. Previous research shows that teachers consider the use of smartphones effective for distance education, just like what the Philippine educational system is adapting in the new normal (Iqbal & Bhatti, 2020). However, it is note-worthy that the features of mobile devices are not sufficient conditions for positive learning effects. The minor effects of mobile-device-based cooperative and game-based learning in our study illustrated this fact. Instructional strategies are important for effective learning with information technology (Zhu, et. al., 2021). Researchers must find the "key" to integrate mobile devices with instructional strategies and ingeniously match the unique features of mobile devices to the resolution of specific pedagogical challenges.

Table 8. Type of Internet Connectivity at Home

| Type of Internet Connectivity at Home | RESPONSES (n=35) | |
|---|---|---|
| | *f* | % |
| Fiber to the home | 8 | 22.86 |
| DSL, ADSL, SDSL, VDSL | 1 | 2.86 |
| Data from cell phone | 9 | 25.71 |
| Cable internet access | 5 | 14.29 |
| Home prepaid internet | 12 | 34.28 |

Table 8 shows that all the teacher respondents differ in the type of internet connectivity at home. Most of the teachers make use of home prepaid internet like Tattoo Home Broadband, Globe prepaid Wi-Fi, and PLDT home prepaid Wi-Fi. In comparison, only one is connected via DSL/ADSL/SDSL/VDSL. The results suggest that a great number of teachers resort to using home prepaid internet because it is more economical and practical than availing expensive monthly plans which come with long lock-in periods. The findings of Household Information Technologies Use Research report in 2016 as cited by Daghan (2017) implied that frequency of internet use was every day in a week, duration of internet connection with 1-2 hours every day, teachers frequently stay connected to the internet at home with a computer and the frequency of mobile devices and social network use was every time. When frequency of internet use and duration of connection to the internet is compared, teachers mostly responded as "every day" and "3-4 hours". When frequency of internet use increases, duration of connection to the internet also increases. Furthermore, a significant difference was found between frequency of internet use and the environments in which teachers stay connected to the internet. It was also figured out that teachers indicated that they are connected to the internet with "a connection that belongs to their computer at home" during "3-4 hours". The services provided by the internet have had a major impact in the university context, in organization and in teaching and learning methods.

Table 9: Level of Effectiveness of Online Platform Used

| Level of Effectiveness of Online Platform Used | Mean | Description |
|---|---|---|
| Teacher's Experiences in Admin-Related Functionalities | | |
| Obtaining the class list | 3.29 | VE |
| Adding or enrolling students to the appropriate classroom per subject | 3.31 | VE |
| Getting the online contact details of the student | 3.83 | VE |
| Teacher's Experiences in Communication Related Functionalities | | |
| Posting announcements | 3.71 | VE |
| Communicating with students, parents, co-teachers, administrative staff | 3.54 | VE |
| Sending a general message to the whole class | 3.60 | VE |
| Sending a personal message to a student for follow-ups and assistance to problems | 3.49 | VE |
| Teacher's Experiences in Teaching-Related Functionalities | | |
| Delivering the lesson to the class | 3.40 | VE |
| Facilitating quizzes, chapter tests, exams, and other kinds of assessments | 3.29 | VE |
| Collecting the results of assessments conducted | 3.29 | VE |
| Marking student assessments | 3.37 | VE |
| Releasing the students' assessment scores and giving feedback | 3.40 | VE |
| **Average Mean** | **3.46** | **VE** |

**LEGEND: 3.26-4.00** – Very Effective **2.51-3.25** – Moderately Effective **1.76-2.50** – Effective **1.00-1.75** – Less Effective

Table 9 shows that the average scores of each functionality is very effective. This implies that teachers perceive the use of online learning platforms to be effective and useful. Research done at the Medical University of Bialystok revealed that the use of online learning platforms for e-learning and distance education modality has shown betterment in teachers' performance and also with the learners' achievement in their examinations (Sykutera, 2020). Before the development of online learning tools, conducting assessments was a little bit impractical compared to the traditional pen and paper method (Khan & Khan, 2019). Aside from these, some studies also found out that it is quite difficult to maintain academic integrity as learners can ask assistance from more knowledgeable others in their houses, or surf the net for answers while assessments are ongoing (Mukhtar, et. al., 2020). However, with the continuous evolution of online learning platforms, an add-on feature that includes assessment options is very useful.

Table 10. Effectiveness of learning Materials Used

| Level of Effectiveness of Learning Materials Used | Mean | Description |
|---|---|---|
| School's Learning Module | 3.17 | ME |
| Online Resources | 3.26 | VE |
| Worksheets | 3.37 | VE |
| Books | 3.06 | ME |
| Manipulatives | 3.17 | ME |
| Counters | 3.23 | ME |
| YouTube | 3.40 | VE |
| **Average Mean** | **3.24** | **ME** |

In Table 10, average scores of the learning materials listed above are between moderately effective and very effective. Among the listed choices, YouTube is the one perceived to be the most effective. On the other hand, books are seen to be the least effective during this time of the pandemic. The effectiveness of YouTube as a tool that promotes learning was studied. It was found out that it brings the fun-factor in classes while also sustaining the learners' attention (Abbas & Qassim, 2020). Another study found out that YouTube can be an effective tool in incorporating English lessons and is a good supplementary material for online learning (Almurashi, 2016). Furthermore, the same study revealed that having both audio and video which appeals to two senses at once increases student involvement in the class and increases the retention rate of learners. Another learning material which has been around since time immemorial are books. Research has found out that young learners and those who are not too fond of reading prefer e-books on their mobile devices (Alfonso, 2017). In addition, e-books have also been seen to help learners with disorders or impairment. ElAdl & Musawi, (2020) also noted that there is a significant improvement in terms of the level of effectiveness of online learning and increased motivation levels by the use of e-books.

Table 11. Effectiveness of Techniques and Method Used

| Level of Effectiveness of Techniques and Method Used | Mean | Description |
|---|---|---|
| Individualized Learning | 3 | ME |
| Cooperative Learning | 3.03 | VE |
| Practical life/soft skills integration | 3.11 | VE |
| Discovery Learning | 3.11 | ME |
| Montessori Method | 2.86 | ME |
| Reggio-Emilia Method | 2.80 | ME |
| Waldorf Steiner Method | 2.74 | VE |
| **Average Mean** | **2.95** | **ME** |

Table 11 presents that the average scores of the effectiveness of techniques and methods listed above are between moderately effective and very effective. Practical or life skills integration as well as discovery learning top the list based on the teachers' perceptions. Meanwhile, Waldorf Steiner Method came out to be the least effective during this time of the pandemic.

From the results presented in the table above, the connection between the new normal setup and the technique or method perceived to be most effective can be seen. Various studies have shown the importance of having life skills as early as possible. It was found out that integrating life skills can help in making learners ready for real life situations and overcoming problems as they grow up (Prajapati,et al, 2017). In addition to that, it can also prevent encountering issues in the teenage years such as teenage pregnancy, alcohol and substance addiction, and the likes (Kirchhoff & Keller, 2021). Offering an alternative to the traditional curriculum offered in public schools, Waldorf Steiner method of education is one of the popular choices. Studies reveal that this method increases the interest of the learners towards learning, but not so much significance on their achievement (Salchegger, et. al., 2021).

Table 12. Effectiveness in terms of Learner's Engagement in Class

| Level of Effectiveness in terms of Learner's Engagement in Class | Mean | Description |
|---|---|---|
| Participation of students in the discussion | 3.31 | VE |
| Utilization of chat box for clarifications and other concerns | 3.29 | VE |
| Utilization of chat box for general communication purposes *(student-teacher or student-student interactions)* | 3.40 | VE |
| Submission of tasks and activities | 3.29 | VE |
| Cooperation with peers | 2.94 | ME |
| Attendance of students in the online class | 3.29 | VE |
| Average Mean | **3.25** | **ME** |

In Table 12, it can be seen that the average scores of the effectiveness of techniques and methods listed above are generally between moderately effective and very effective. In the data, the utilization of the chat box for general communication purposes shows the time where learners are most engaged. On the other hand, the respondents' perception on the effectiveness of online learning in terms of cooperation with peers is less effective. Being born in the digital age, most of the young learners have access to the internet and even learn how to navigate social media sites (Gonzales & Heck, 2020). In the online learning setup, learners make use of the chat box for inquiries, socialization, and as a way to answer questions during the class (Lapitan, et. al., 2021). A study by Kukard (2020) suggested that there is evidence that collaborative tasks are possible to have even in the online learning scene similarly to the traditional learning setup.

Table 13. Teachers Level of Preparedness for Online Teaching

| Level of Preparedness | Mean | Description |
|---|---|---|
| Navigation and utilization of the online learning platform | 3.11 | ME |
| Creation and compilation of learning materials to be used | 3.17 | ME |
| Tools and equipment needed for online learning | 3.20 | ME |
| Application of various methods and techniques useful for online learning | 3.23 | ME |
| Online class management | 3.14 | ME |

| | | |
|---|---|---|
| Delivery of lessons | 3.20 | ME |
| Use of student performance assessment techniques | 3.17 | ME |
| Addressing possible problems in the class | 3.11 | ME |
| **Average Mean** | **3.17** | **ME** |

In Table 13, it can be seen that the overall respondents' perception for the level of effectiveness of online learning is moderately effective. This result can be attributed to the novelty of this online learning class which was not foreseen to be a preferred choice for early childhood education.

Table 14. Teachers' Level of Preparedness for Online Teaching

| Level of Preparedness | Mean | Description |
|---|---|---|
| Navigation and utilization of the online learning platform | 3.11 | ME |
| Creation and compilation of learning materials to be used | 3.17 | ME |
| Tools and equipment needed for online learning | 3.20 | ME |
| Application of various methods and techniques useful for online learning | 3.23 | ME |
| Online class management | 3.14 | ME |
| Delivery of lessons | 3.20 | ME |
| Use of student performance assessment techniques | 3.17 | ME |
| Addressing possible problems in the class | 3.11 | ME |
| **Average Mean** | **3.17** | **ME** |

**LEGEND: 3.26-4.00** – Very Prepared **2.51-3.25** – Moderately Prepared **1.76-2.50** – Less Prepared **1.00-1.75** – Unprepared

Table 14 shows that the respondents are generally somewhat prepared for online teaching. Results show that they are most prepared in applying the methods and techniques applicable for online learning. Furthermore, they are least prepared in terms of navigating the online learning platform as well as addressing possible problems in the class. According to Martin, et.al., (2019), teachers who have fewer years of experience also haven't gathered enough familiarity with using the previously mentioned tools to be completely prepared and confident for online teaching. Another notable finding is that even with institutional support, the lack of readiness and confidence of teachers for online teaching still may not be alleviated (Scherer, et. al., 2021).

Table 15: Summary on the Test of Significant Relationship between the Profile of the Respondents and the Level of Effectiveness of Online Learning During the Pandemic

| Test of Significant Relationship Between the Profile of the Respondents and the Level of Preparedness of Online | Degrees of Freedom (df) | Computed $x^2$ Value (Average) | Critical $x^2$ Value | Decision | Remarks |
|---|---|---|---|---|---|

| | | | | | | |
|---|---|---|---|---|---|---|
| Learning During the Pandemic | | | | | | |
| Respondents' Age | 6 | 5.40 | < | 12.59 | Accept $H_0$ | Insignificant |
| Respondents' Gender | Not Applicable | | | | | |
| Respondents' Civil Status | 3 | 2.13 | < | 7.81 | Accept $H_0$ | Insignificant |
| Respondents' Highest Educational Attainment | 6 | 5.14 | < | 12.59 | Accept $H_0$ | Insignificant |
| Respondents' Field of Specialization | 9 | 5.76 | < | 16.92 | Accept $H_0$ | Insignificant |
| Respondents' Years of Teaching Experience | 9 | 4.45 | < | 16.92 | Accept $H_0$ | Insignificant |

Table 15 displays the test of significant relationship between profile of the respondents and the level of effectiveness of online learning during the pandemic using chi-square. The computed values are lesser than the set critical value. At 0.05 significance level, which means that the respondents' age, civil status, highest educational attainment, field of specialization and years of teaching experience have no significant relationship on the level of effectiveness of online learning during the pandemic.

Table 16. Test of Significant Relationship Between the Profile of The Respondents and the Level of Preparedness on Online Teaching

| Test of Significant Relationship Between the Profile of The Respondents and the Level of Preparedness on Online Teaching | Degrees of Freedom (df) | Computed $x^2$ Value (Average) | | Critical $x^2$ Value | Decision | Remarks |
|---|---|---|---|---|---|---|
| Respondents' Age | 6 | 2.84 | < | 12.59 | Accept $H_0$ | Insignificant |
| Respondents' Gender | Not Applicable | | | | | |
| Respondents' Civil Status | 3 | 1.10 | < | 7.81 | Accept $H_0$ | Insignificant |
| Respondents' Highest Educational Attainment | 6 | 5.59 | < | 12.59 | Accept $H_0$ | Insignificant |
| Respondents' Field of Specialization | 9 | 5.53 | < | 16.92 | Accept $H_0$ | Insignificant |
| Respondents' Years of Teaching Experience | 9 | 6.45 | < | 16.92 | Accept $H_0$ | Insignificant |

Table 16 displays the test of significant relationship between profile of the respondents and the level of preparedness of online teaching. As manifested in the table, the computed values are lesser than the set critical value at 0.05 significance level, which means that the respondents' age, civil status, highest educational attainment, field of specialization and years

of teaching experience have no significant relationship on the level of preparedness of online teaching.

*3.2 Findings*

From the data which have been treated using the appropriate statistical tools, below were the findings based from such empirical process, to wit:

The respondents' demographic profile was as follows: they were 30-49 years old and the respondents were all female. Majority of them are married. In terms of educational attainment, most are with units in Master's degree. The respondents are mostly having early childhood education as their field of specialization. The respondents have been in the field of teaching for 5 years or below. Almost all respondents use smartphones and majority of them utilize home prepaid Wi-Fi to conduct online classes. It was found out that the respondents perceived the level of effectiveness of online learning in terms of online learning platform used, learning materials used, methods and techniques used, and engagement of learners in class to be moderately effective. The respondents also perceived their level of preparedness for online teaching to be somewhat prepared.

There was no significant relationship between the demographic profile of the respondents and their perception on the level of effectiveness of online learning, hence the null hypothesis is accepted. It was also revealed that there was no significant relationship between the demographic profile of the respondents and their level of preparedness for online teaching, hence the null hypothesis is accepted.

## 4. Conclusion

Based from the summary and findings of the study conducted, the researcher concludes that the respondents who taught early Childhood Education perceive online learning during the pandemic to be moderately effective despite being only somewhat prepared for online teaching. Furthermore, it can also be concluded that the respondents' demographic profile was not a significant factor which can influence the teachers' perception in terms of effectiveness and preparedness.

## 5. Recommendation

The conclusion of the study shows how the respondents view online learning during the pandemic to be moderately effective while being only somewhat prepared for online teaching. Based on the findings of the study, the following are hereby recommended. It is suggested that pre-school teachers continue using the learning materials and techniques and methods which are deemed to be effective. In addition to that, it is also recommended to conduct more workshops and training on navigating the online platform in order to maximize its use for online learning. Finally, implementation of the action plan is hereby recommended to improve the quality of online classes for pre-school in the future.

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