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Original Article

### Exploring the Role of Virtual Learning at Little Friends Infant School Harare

Gerry Mhlanga<sup>1\*</sup>, Florence Kapfunde<sup>1</sup> & Shepherd Gumbo<sup>1</sup>

<sup>1</sup> Zimbabwe Ezekiel Guti University, P. O. Box 350, Bindura, Zimbabwe.

\* Author for Correspondence Email: [gmlhlanga@staff.zegu.ac.zw](mailto:gmlhlanga@staff.zegu.ac.zw)

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Development.

This study focused on exploring the role of Virtual learning for ECD learners at Little Friends Infant School Harare. The study will focus on how virtual learning emerged, how it was done, the availability of resources, the teacher's know-how, and above all if this learning process managed to achieve the targeted objectives. Since the study sought to explore social phenomena, a phenomenological research design was appropriate under a qualitative research approach. A sample size of 10 teachers was used in the study. The outcome of the research showed that virtual learning was being conducted by ECD teachers at Little Friends School. The observation shows that the learners were embracing virtual learning, with the help of their parents or guardians. It also showed that the teachers have a great understanding of virtual learning and are very comfortable embracing this new method of teaching. The study therefore recommends that there is a need for funding to increase access by learners who might have challenges accessing virtual learning. Schools should embrace the use of virtual platforms at the ECD level such that e-learning becomes an important part of the school programs. There is also a need for sharing skills so that users on both ends understand the use and importance of virtual learning.

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#### INTRODUCTION

According to Mawere (2011) in the last decade, the boundaries defining the teaching profession in primary schools, the world over and in Zimbabwe in

particular, have widened dramatically through the introduction of Early Childhood Development (ECD), to include roles traditionally ascribed to parents and even the way of teaching. Early

Childhood Education (ECD) is a program that provides for the care and education of children from birth to six years. In November 2019, the world woke up to a new life-threatening pandemic known as COVID-19 and to ensure the safety of the people some restrictions and regulations were put in place. In Zimbabwe like in other countries such as Ethiopia, the vast majority of school heads and teachers received practical coronavirus information, mainly from the state radio station and television station (Yorke et al., 2020). The World Health Organisation put in place several regulations which were meant to curb the spreading of the virus. Among the regulations were the total lockdown of all public places and the implementation of social distancing. The schools were ordered to close until a time when the situation was deemed safe for the children and all the other pupils. ECD centres, primary schools, secondary schools, colleges and universities were closed resulting in learners being confined at home. Movement was limited to essential services only.

To counter the long absence from the school environment governments across the world came up with strategies of helping the children with their schooling. Among the strategies, social distancing, putting on masks, sanitizing and digitalization of the learning space took precedence. During the school closures, the Ministry of Primary and Secondary Education provided distance learning through available media lessons broadcast through radio and TV media (Ministry of Education, 2020). Several schools and institutions of higher education have been encouraged to make use of Internet portals and platforms to provide virtual classrooms. Virtual learning platforms such as Google Classroom, Moodle, Microsoft Teams, and many others have been employed to make education virtual from ECD to the university level. However, the extent to which these lessons reached all students, particularly those disadvantaged, is not clear, especially given the unequal access to resources and infrastructure in Zimbabwe to wealth, rural-urban location, and regions within the country.

Technological change has become the profound driver of virtual learning globally. Technological developments, especially Information and

Communication Technologies (ICTs) have made the globe shrink into a cybernetic village. The Internet has connected learning centres across the world into a virtual learning classroom. This study discloses the role of virtual learning for ECD learners in the schools and in particular Little Friends Infant School in Harare, Zimbabwe. The country suffered a severe pandemic from 2020 to date. The standpoint of this study is that virtual learning is not wholly negative but has a positive side as well. This study will provide an objective analysis of the role of virtual learning on ECD learners at the school under study not only during the time of pandemic but also during other times.

While virtual learning has been adopted everywhere, not all learners have access. According to Human Rights Watch (2020) in Kenya, many children lack access to the Internet, which is increasingly indispensable for education. In their interview, a teacher in the Mathare informal settlements in Nairobi, Kenya, said, “None of the students have access to internet-enabled smartphones. Only a handful have access to mobile phones that can support calling and texting functionalities. Digital learning is not an option”. In Zimbabwe, formal school, at some points, closed doors and the new door is via a virtual platform. ECD children are now being compelled to learn using the virtual platform. They have to use the phone and the computer to learn. Most of the teaching has been through platforms such as WhatsApp, Zoom, Facebook and Google Classroom. The study is going to unpack the role of virtual learning for ECD learners in Zimbabwe particularly, at Little Friends Infant School in Harare.

### **Statement of the Problem**

While all schools would want to use the virtual learning system at the ECD level the teachers who are supposed to teach using the platform are not using it. Everyone wants to use the virtual learning but they are not using it. Despite the remarkable awareness in Zimbabwe of the use of the virtual learning approach for ECD learners, there is motivation from community, and local authorities to make strategic plans for universal provision of virtual learning platforms. Consequently, the lack of virtual learning platforms has resulted in the

student's failure to effectively participate in virtual learning at the formal level unaided. These early insights were guided by the development of virtual learning thus technical pedagogical and introduction of collaborative learning activities. Learning using virtual lessons has remained and the 2020 era has seen the Covid-19 situation adopting this type of learning at all educational levels from ECD to University (Ali, 2020). The current filtering of technological development has influenced the evolution of online lessons or learning and has transformed the teaching and learning process (Clardy, 2019; Garrison, 2011; Josmovic et al., 2022). Therefore, this study seeks to interrogate the role of virtual learning in ECD learning.

## REVIEW OF LITERATURE

### Theoretical Framework: Cognitive Development Theory (Piaget)

The late Jean Piaget who was a developmental psychologist and philosopher was best known for studies that led to what is now known as the cognitive development theory in which he theorized that a child's mental cognitive structures are based on the child's activities. He theorized that it is only through engagement in manipulative activities like art that children make sense of things around them. Piaget was concerned with the way children develop cognitive skills of thought, reasoning and perception. He wanted to establish how cognition grows in children from childhood to adulthood Berk (2017). Piaget proposed that all people follow a fixed sequence through a series of universal stages of cognitive development. These stages of development are of interest when the schools resort to virtual teaching and learning. Information dispatched online can be more or less yet as the child grows the quantity of information increases. Piaget suggested that not only does the quantity of information increase in each stage but the quality of knowledge and understanding changes as well. Piaget suggests that human thinking is arranged into schemes. These are organized mental patterns that represent behaviours and actions. People view things in terms of the mental images stored in the brain. The mental representations of reality kept in the brain are what Piaget referred to as schemes. In infants, such schemes represent concrete behaviour such as the

scheme for sucking or reaching and include separate behaviours that the infant may show. In other children, the schemes become more sophisticated and abstract.

Piaget suggests that the growth in children's understanding of the world can be explained by the two basic principles of assimilation and accommodation (Berk, 2017). Assimilation is a process through which people understand an experience in terms of their current stage of cognitive development and way of thinking about and understanding the world to perceive and understand a new experience, Parker (2018), and accommodation refers to a change in existing ways of thinking in response to encounters with new stimuli or events. The new way of life being experienced by the children is the technical life of relying on electronic means. It is at that phase when the child harmonizes existing schemes and new ones. Assimilation and accommodation work hand in hand to bring about cognitive development. That is, children need to assimilate a new schema and then accommodate it in building their base of schemes. Once the child accommodates the new scheme, he or she gets back to a state of mental equilibrium. More and more new stimuli are coming into his or her mind, and she/he keeps getting into dis-equilibrium which calls upon him/her to assimilate and accommodate over and over again. This is the way people acquire knowledge according to Piaget. The learners are always exposed to new knowledge as they get exposed to the Virtual Learning Environment.

### Virtual Learning

Virtual learning environment (VLE) is a technology that enhances the student's learning experience that many schools, colleges and universities implemented using a set of teaching and learning tools such as computers and the internet in the process of learning. In the world today technology has become the tool used to remove geographical barriers and everyone can learn anytime and anywhere without the presence of the facilitator, teacher or lecturer. Education at a distance became easy educational for virtual worlds. The distance education experience is quite valuable, but still moves far behind the face-to-face classroom

experience getting a small number of class community, displayed almost without effort in face-to-face classroom environments.

The first offering of fully virtual learning was conducted in 1981 in the United States of America (Harrarim, 2020; Kentnor 2018; Josmovic, 2019) where students used the internet to access distance education. The new virtual model as an educational model had the potential to deliver educational content at all levels. Online education was text-heavy and mirrored the previous postal packages of handbooks and required readings (Garrison, 2011; Harrarim, 2020). However, the early offerings of virtual learning provided rapid and valuable lessons that were very successful and effective in the learning process. These early insights were guided by the development of virtual learning thus technical pedagogical and introduction of collaborative learning activities. Learning using virtual lessons has remained and the 2020 era has seen the Covid-19 situation adopting this type of learning at all educational levels from ECD to University (Ali, 2020). The current filtering in of technological development has influenced the evolution of online lessons or learning and has transformed the teaching and learning process (Clardy, 2019; Garrison, 2011; Josmovic et al., 2022) Adopting virtual learning strategies will help children to continue benefiting learning while countries are on lockdown and will allow more interactive learning approaches (Anderson, 2019).

### **Active Learning: Theories and Research**

The challenge of writing an article on active learning is found in the complexity, yet simplicity, of this newly described form of learning and teaching across educational settings from early childhood through higher education. An active and exhaustive search of the literature reveals a range of meanings and applications both historical and contemporary. Conceptually, active learning implies deep learning on the part of the student as they construct knowledge and create meaning from their surroundings. In educational contexts applications of active learning range from focusing activities to cooperative structures to the active engagement of thinking processes in the learning and application of knowledge. While active learning as a vehicle to

enhance the quality of student learning has become the latest buzzword, the question has arisen as to whether the application of active learning has continued to achieve its intentions and potential. (Haack, 2018).

Due to the ever-accelerating pace of a changing and uncertain world, to be successful today's learners must be equipped with the appropriate skills and knowledge needed to master interconnected forces of speed, complexity and uncertainty. This means learning faster, analysing situations logically and solving problems creatively. Additionally, younger learners have had exposure to technology from an early age, making them "digital natives" who process information in a random-access manner, rather than in a linear way (Prensky, 2021). Thus, our definition of literacy has expanded from an emphasis on comprehension of page text and listening to lectures to the need for a broader set of skills that requires more activity-based competencies across a wide range of subjects and disciplines.

### **Teaching Strategies Promoting Active Learning**

Learning is situated in physical, social, and interactive contexts, and is best achieved when learners have varied and multiple opportunities to engage in inquiry at many different levels (Handerson, & Antencio, 2007). It is a process involving children's perceptions, related encoding, and subsequent retrieval of information leading to modifications in future behaviours and attitudes. Since learning is social, it is often times generated through dialogue with others and in reflection with others. In young children, learning is facilitated through their observations of others' actions and the subsequent replication of the behaviours observed into their schemata. Learning can be augmented through a range of experiences throughout one's lifetime and involves several individuals, ranging from parents, siblings, peers, teachers and others who serve in coaching and mentoring roles.

Learning is situated in cultures. In the culture of the classroom setting, where knowledge is socially constructed and integrated into the life of the learning community, active learning strategies can engage students more and enhance their learning,



thus promoting student community within the classroom. Children of all ages, and adults for that matter, are motivated to learn by their desire to participate in a community. Learning is an act of participation. What is learned and how it is learned is often a result of the socialization between the individual and those around them. Further, active learning exercises help students to get to know each other better, which transforms passive learners into active participants during the transmission of information in classrooms. As students develop, sharing their values and perspectives, they create “communities of practice” (Wener, 2018).

Learning is a lifelong and natural process, part of human nature. When students are offered multiple opportunities to actively engage and interact with objects, participate in social activities, and reflect on their discoveries, greater learning occurs. A recent ethnographic study done in Japan where students were engaged in cooperative learning experiences supports the benefits of active learning strategies in boosting content learning. The results of the study led the author to conclude that students who engaged in frequent cooperative learning experiences during classroom instruction increased their knowledge and attitudes about science (House, 2018). Engagement is inseparable from empowerment. When students contribute to the collective activity they are a part of (cooperative learning, complex instruction, etc.), they are empowered to learn. Failure to learn is a result of exclusion from participation. When students are active participants in the processes of learning rather than passive recipients of transferred knowledge, learning is optimized.

Active learning has been found to increase higher-order thinking and promote deeper learning of science content in cross-age tutoring situations. Lancor, & Schiebel (2018) describe the positive experiences shared between introductory college physics students and second graders when they were paired to implement science lessons based on simple machines using active learning techniques. The results of this study revealed that both the college students and the elementary students experienced an increased understanding of science concepts while enjoying their interactive moments together. The active learning techniques used also promoted

critical thinking and reflective skills as the college students had to reflect on teaching and learning processes while learning the deeper meaning of science concepts.

### **In What Ways Are ECD Children Using the Virtual Platform?**

According to Ali (2020), the pandemic caused by COVID-19 continues to threaten people’s lives, including parents and their children aged 0-6 years old, an age deemed crucial for the development of children’s brains and normal life. While this is the case in some countries according to UNICEF (2020) ministries of education by April had launched some online programmes to help the children learn from home. However, for this to be successful, it needs the support of the parents. According to Alui (2020), the majority of parents do not have resources to help their children access the virtual class.

As a way of reaching the ECD learner using the virtual platform, in Luxembourg, documents, pictures, videos, and other materials related to early child education and tips on parent's psychological well-being are some of the materials available on this platform (Alui, 2020). In the study, Alui noted that there are changes to the children’s daily lives and the lockdown of pre-school education institutions that lasted for a few months has substantially impacted children’s educational process. Without the assistance of the parents, it is not practical for the ECD learners to attend the lessons religiously. ECD learners are usually online when they are to observe what should be done as the teacher demonstrates.

### **Benefits of Virtual Teaching and Learning**

Online distance learning meets the needs of an ever-growing population of students who cannot attend the normal online lessons that have dominated the classroom and are preferred to the normal traditional classroom settings. The minimum requirement for students to participate in a virtual course is access to a computer, the Internet, and the motivation to succeed in a non-traditional classroom. Virtual courses provide an excellent method of course delivery unbound by time or location allowing for accessibility to instruction at any time from anywhere. Learners find the virtual environment a

convenient way to fit education into their busy lives (Suresh et al., 2018). The ability to access lessons from any computer with Internet access, or smartphone with data bundles 24 hours a day, seven days a week is a tremendous incentive for many of today's students. Some of the main advantages of virtual learning include 24/7 access from any electrical gadget that can access the internet online like a computer or smartphone (Ali, 2020). Online lessons accommodate busy schedules with the privilege of being helped by parents or guardians however the parents should be equipped with knowledge to help the students. Research shows that online lessons increase the depth of understanding and retention of content as they are actively involved in the lessons. Virtual lessons bring a fair playing field level as students can take more time to think and reflect before communicating shy students tend to thrive online due to anonymity and face-to-face online environment interaction. Virtual learning requires students to be innovative as it is a student-centred approach and demands the child to be creative in the learning activities and well-versed with the technology.

### Challenges of E-learning

Several studies have addressed the challenges associated with the introduction of e-learning. There has been evidence that the introduction of electronic learning initiatives has failed because institutions and their constituents were not prepared for the experience (Ayyıldın, & Tasci, 2005; Borotis, & Poulymenakou, 2004). Besides, people are attached to already existing traditional classrooms and practices making it difficult for them to adjust to innovations and upgrade existing use of technology (Watkins et al., 2014). Carr (2020) noted that student perception of online learning has been negative due to past experiences resulting in high dropouts and low motivation of learners (Maltby, & Whittle, 2020). Other factors were found to be low student satisfaction associated with virtual learning experience (Kenny, 2013). Nonetheless, research suggests that students and instructors are satisfied with virtual learning just like traditional learning (Ali, & Ahmad, 2021).

The increase in the number of students participating in distance education supports virtual learning as a

substitute for traditional classroom teaching. Martin, & Bolliger (2018) found that icebreaker introduction and working with virtual communication tools were the most important engagement among learners while sending reminders and providing rubrics for assignments constituted the most important benefit in learner-instructor interactions. Similarly, Zaeer et al, (2015) identified that many students were satisfied with the education received online which further revealed that e-learning can support higher education in countries where higher education institutions are limited. Factors found to contribute to student satisfaction were embodied in the tutorials, student contribution, the type of instructor, the mode of assessment, the content, the learning environment, and the resources used (Zaeer et al., 2015). The issue at hand is not associated with limitation on face-to-face tutorials in traditional classrooms where the situation demands emergency remote teaching because social gatherings including educational institutions are seen as a threat to promote the COVID-19 pandemic and have been locked down.

Therefore, this study focused primarily on the role of virtual learning and its challenges. On the contrary, students perceived barriers to virtual learning have been documented. Muilenbur, & Berge (2015) asserted that administrative issues, academic skills, social interactions, technical skills, learner motivation, time and support for studies, cost, and access to the internet and technical problems were some of the challenges associated with virtual learning. Regarding this, the present study aimed to examine the challenges of students in Ghana on how to cope with e-learning in this COVID-19 era and examined whether students were ready to study online. The following research questions guided the study-what are the most important challenges facing students at tertiary institutions in Ghana in an online learning situation? Are students at tertiary institutions in Ghana prepared for a virtual learning experience? Can social issues, lecturer issues, accessibility issues, learner motivations, academic issues, and generic issues predict the dependent variable student's intention to study virtually?

## How are the ECD Learners Accessing the Virtual Learning Environment

In well-organized systems of communication, children join communication channels through parental assistance thus in the current lockdown children use gadgets which are owned by their parents. Virtual learning experiences through distance education can be either asynchronous or synchronous. Asynchronous learning occurs when students can choose their own time for participation in learning through different media tools such as e-mail or discussion boards. Students can log into communicate and complete activities at times of their choosing and learn at their own pace. In contrast, synchronous learning activities occur through live video and/or audio conferencing with immediate feedback (Hrastinski, 2018). The learner talks at least as much as or more than the teacher. Virtual learning is associated with various sources of information such as web data banks. Most of the learning process takes in groups or by individual students, discussion forums, video conferences, chat rooms and learning takes place with no fixed location. The student motivation is high, due to the involvement in matters that are closer to them and the use of technology.

## Challenges Faced by ECD Children in Using the Virtual Platform

In this research challenges faced by schools in Zimbabwe in having ECD learners use virtual learning environments log into may be the same in other countries or different. UNICEF (2020) says that, given the difficulty of the situation and variation across the globe, countries are in different stages regarding how and when they apply virtual education. In Zimbabwe, the decision to make use of the virtual learning platform was made by the Ministry of Primary and Secondary Education. They have set up radio-based lessons and some TV-based lessons but they are mostly for the upper grades. However, UNICEF (2020) argues that, when deciding whether to use virtual education or to re-open the schools, authorities should consider the benefits and risks across education, public health and socioeconomic factors, in the local context. On socio-economic factors, the majority of the parents cannot afford the gadgets which are needed for

virtual education. The parents thought they might want to have the gadgets, but they had limited knowledge of how to use them. According to Ali (2020), most parents are facing the challenges of working from home and being able to help their children learn virtually. The other challenge is that of electricity which is not always there as is the case with Zimbabwe. Eight groups that emerged were social issues, lecturer issues, accessibility issues, learner motivation, academic issues, generic issues, learner intentions, and demographics. Cronbach's alpha was used to determine the reliability of the scales resulting in the deletion of learner motivation. Comparing the means of the factors revealed that the most important challenge for students to study virtually was accessibility issues.

## What can be Done to Help the ECD learners Use the Virtual Learning Environment?

The use of virtual platforms in education is becoming a ubiquitous component of the physical and social worlds occupied by young children. It is an important part of the private and work lives of most people, including those who support young children's learning and development, whether as parents, family members, caregivers, or early childhood educators. It is often argued in the literature that children's early childhood education experiences should reflect and connect with their experiences in the wider world. Therefore, virtual learning matters in early childhood education, because it already affects the people and the environments that surround young children's learning and well-being. The schools should encourage parents to acquire ICT gadgets and components essential for virtual learning support.

## METHODOLOGY

The researcher used the mixed methodology approach, that is, the use of both qualitative and quantitative research approaches. The target population of the research will be made up of thirty classes, 40 teachers and 4 members of the administration. The researcher will use 3 classes representing 10% of the target classes. Random sampling will be used in the research to get responses from all the groups of learners as it caters for all the learners ranging from the fast learners to

the slow learners and from ECD. A sample of ten teachers will be drawn for the questionnaire. Ten (10) teachers will be involved in answering questions from the questionnaire. Tuckman (2017) posits that questionnaires are designed for statistical analysis of responses, but this is not always the case. The researcher will also use the qualitative approach, using interviews and the observation method as part of their research instruments.

## DATA PRESENTATION, ANALYSIS AND DISCUSSION

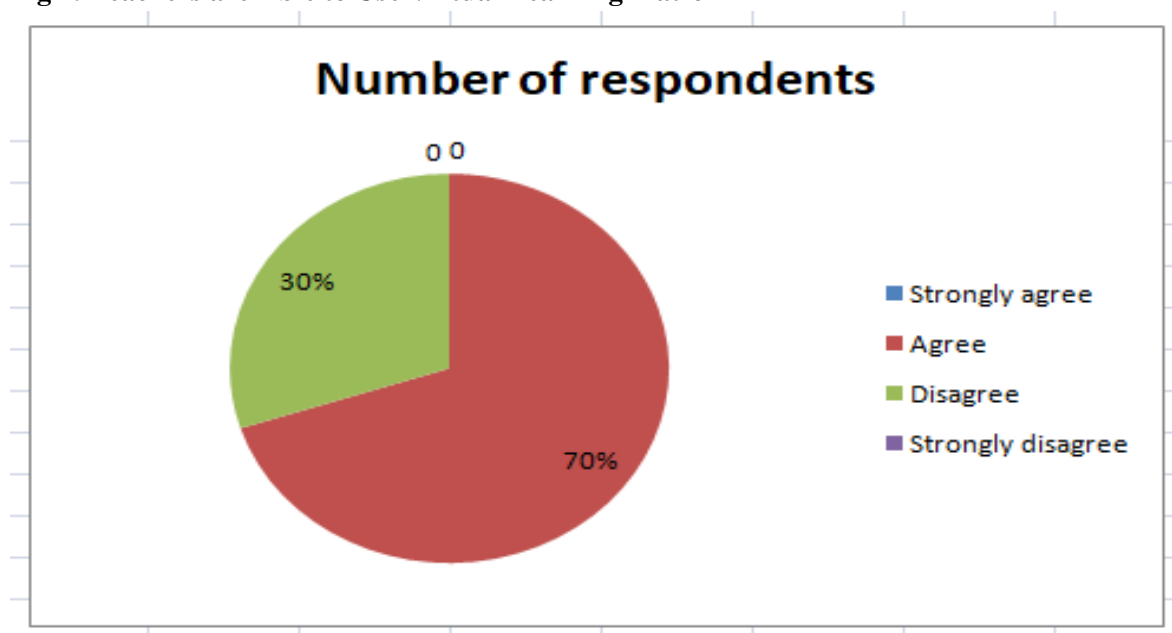
### The Role of Virtual Learning in ECD Classes During COVID-19

When the Head was interviewed, he said that virtual learning in ECD was used during COVID-19 to send videos, sounds, animals, rhymes and actions. The platform was also used to send pictures of fruits and related topics. The TIC concurred with what the Head said.

**Table 1: Teachers are Able to Use Virtual Learning Platform**

All the teachers at your school are able to use a virtual learning platform.	Strongly agree	Agree	Disagree	Strongly disagree
Number of respondents	0	7	3	0

**Fig 1. Teachers are Able to Use Virtual Learning Platform**



Virtual learning platforms used at the school are limited to 70% while the other 30% do not use virtual learning platforms. All the respondents can use WhatsApp Messenger. Though they are unable to use the platform at school for education purposes, from the responses all the respondents agreed that they used WhatsApp Messenger, or simply WhatsApp which is an internationally available freeware, cross-platform centralized instant messaging and voice-over-IP service owned by American company Meta Platforms. The platform is

popular among Zimbabweans and has been adopted by teachers all over.

### The Role of Virtual Learning for ECD Learners

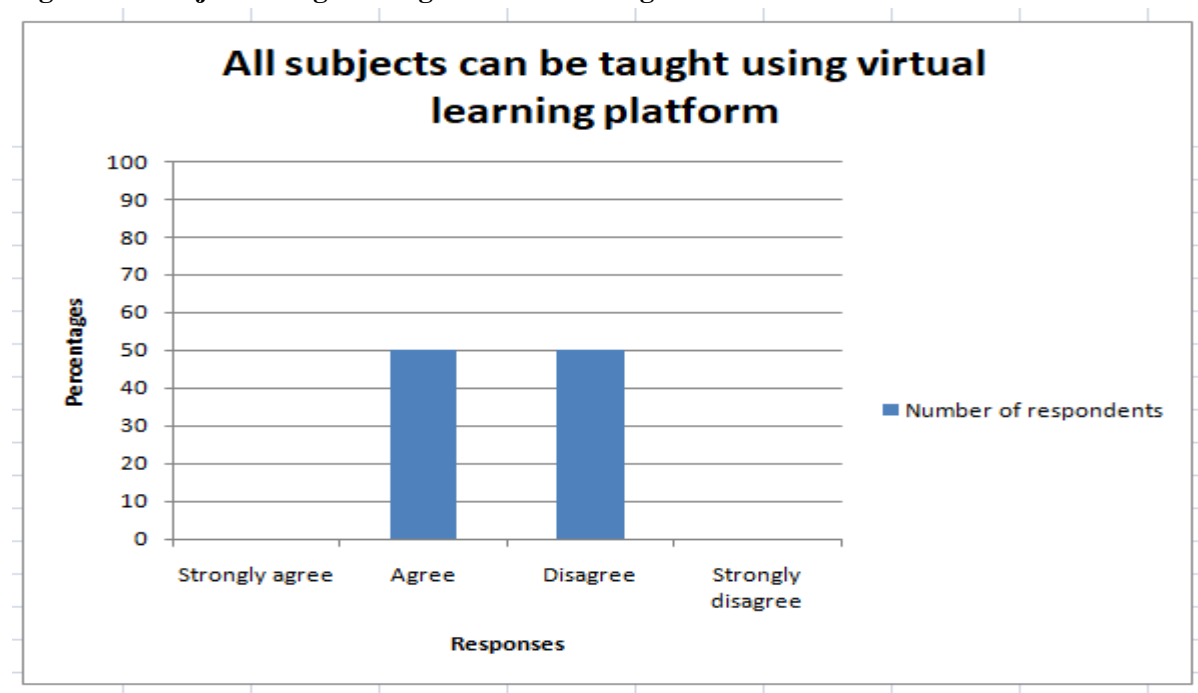
In response to the subjects in ECD which are taught using virtual learning platforms, the Head said that the platform was used to teach all the subjects. The TIC said that the virtual learning platform is being used to send homework to learners while they are at home. The responses from the other respondents are given in the table below.



**Table 2: The Subjects Taught Using the Virtual Learning Platform**

All the subjects in ECD classes are taught using a virtual learning platform.	Strongly agree	Agree	Disagree	Strongly disagree
Number of respondents	0	5	5	0

All the ECD classes did not agree that they were all not agree while 50% agreed that they used virtual taught using the virtual learning platform. 50% did learning platforms.

**Fig 2: The Subjects Taught Using Virtual Learning Platform**

### Type of Virtual Platform in Use

The Head asserts that they use the WhatsApp platform for virtual learning at the ECD level. 100% of the respondents agreed that they are they were using WhatsApp as a virtual platform to help the learners during COVID-19. The TIC agreed with what the Head had said.

### Improving the Role of Virtual Learning in ECD Classes

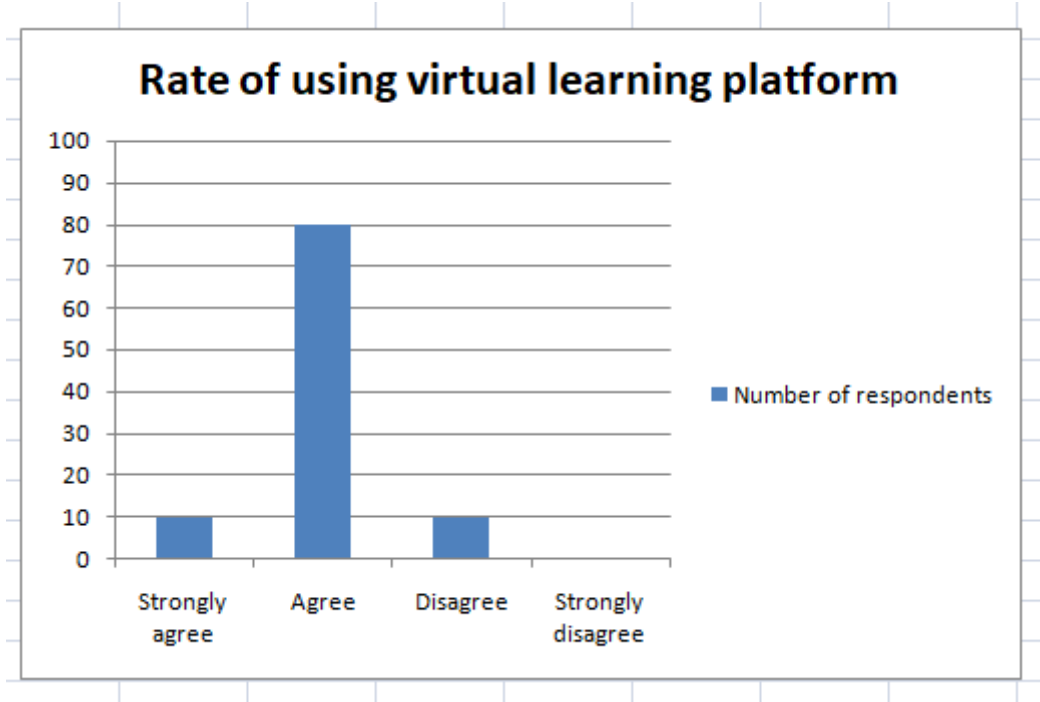
The Head strongly believes that the parents should be taught about how to use the platforms and they should be able to use material sent on the virtual platform. The parents also need to be workshopped. The TIC believes that the teachers should be trained on how to use the platforms.

**Table 3: Extent of Using Virtual Learning Platform**

Virtual learning was being used a lot in ECD classes at Little Friends Infants School.	Strongly agree	Agree	Disagree	Strongly disagree
Number of respondents	1	8	1	0

All the respondents agreed that virtual learning platform was used a lot. 10% strongly agreed and were supported by 80% who also agreed. 10 % did not agree that the virtual learning platform was used a lot in the ECD classes.

Fig 3: Extent of Using Virtual Learning Platform



Challenges of Using a Virtual Platform

The Head believes that the platform is very helpful and can be used to give feedback but it has some

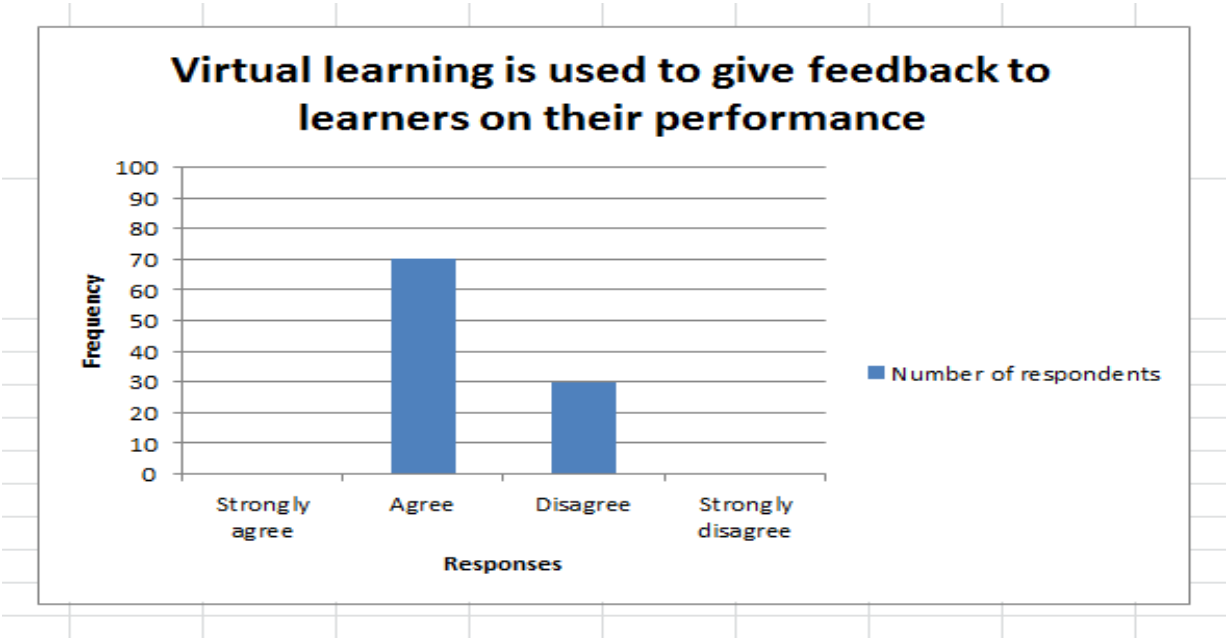
challenges. The TIC pointed out that the challenges include poor connectivity, and lack of electricity due to load shedding. Another challenge is that not all parents have time for virtual learning.

Table 4: Virtual Learning Platform and Feedback

Virtual learning is used to give feedback to learners on their performance	Strongly agree	Agree	Disagree	Strongly disagree
Number of respondents	0	7	3	0

70% agreed that virtual learning platform is used to give feedback and 30% disagreed that virtual learning platform is used to give feedback on learner performance.

Fig 4: Virtual Learning Platform and Feedback



### Understanding the Term Virtual

The Head understands the term virtual and also the importance of the virtual learning platform. In the Table, the other respondents had this to say about

their understanding of the term. The TIC said, “The word virtual is not new and people should not be myopic about it. It simply means putting on an electronic environment.

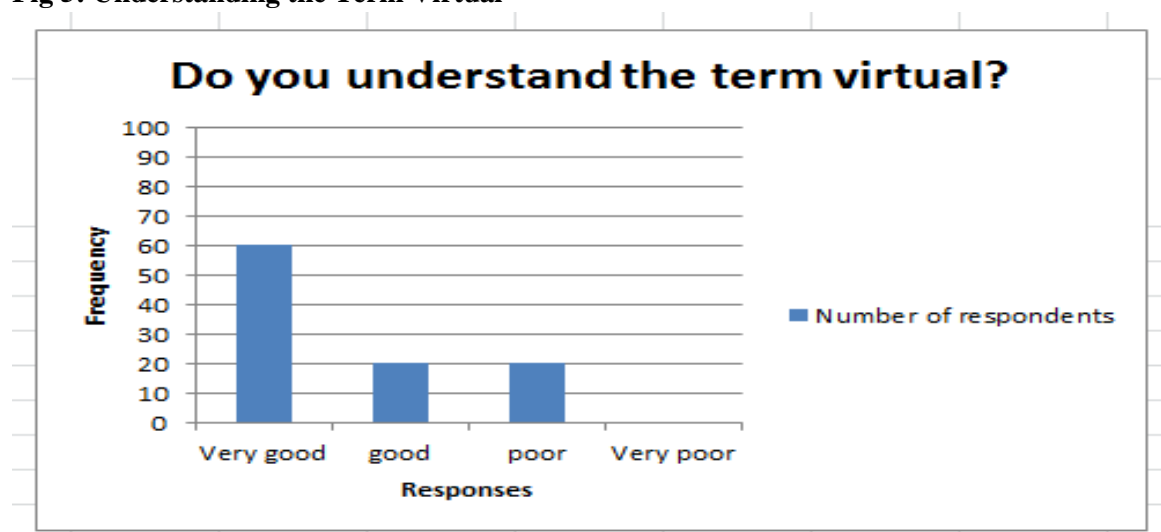
**Table 5: Understanding the Term Virtual**

Do you understand the term virtual?	Very good	good	Poor	Very poor
Number of respondents	6	2	2	0

80% of the respondents confirmed that they know the meaning of the word virtual and 20% confirmed that they have poor knowledge of the term virtual. In

short, the respondents are very much aware of the meaning of the word virtual.

**Fig 5: Understanding the Term Virtual**



### The Use of Virtual Learning in ECD Classes During COVID-19

The Head suggested that all the parents should make an effort to buy the gadgets needed for virtual

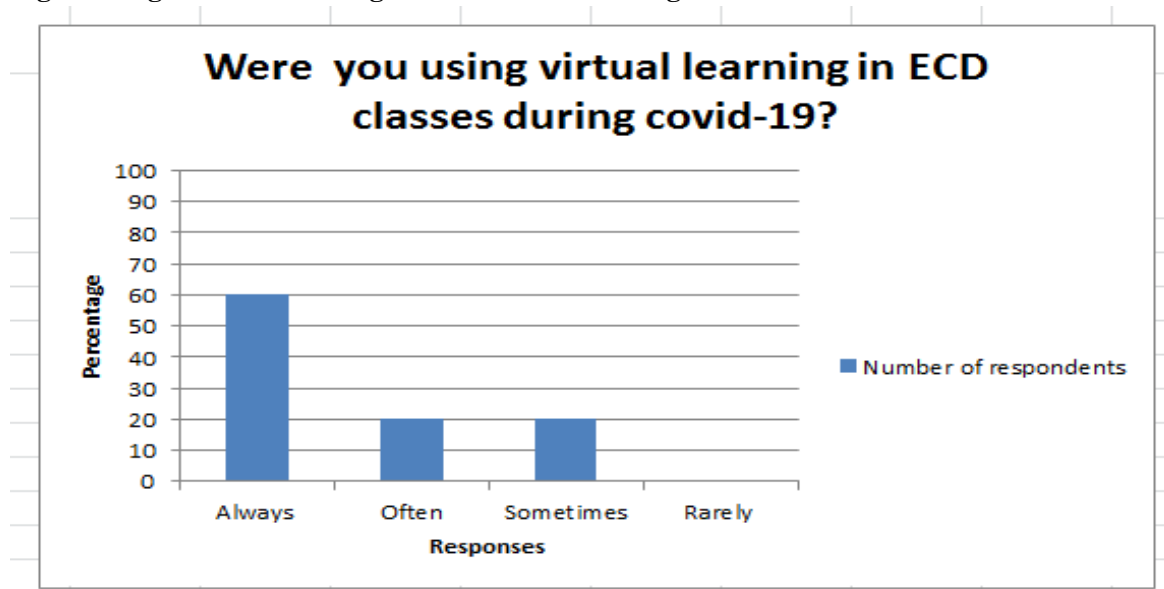
learning. The TIC suggested that all the teachers should always make use of the virtual learning platform.

**Table 6: The Use of Virtual Learning in ECD Classes During COVID-19**

Were you using virtual learning in ECD classes during COVID-19?	Always	Often	Sometimes	Rarely
Number of respondents	6	2	2	0

From the table, it is clear that 80% of the respondents used virtual learning platforms in the ECD classes during COVID-19. 20% assert that they sometimes

used virtual learning in ECD classes during COVID-19.

**Fig 6: Using Virtual Learning in ECD Classes During COVID-19****ECD Teachers Using Virtual Platform**

The Head admitted that the ECD teachers were able to use a virtual platform for learning during COVID

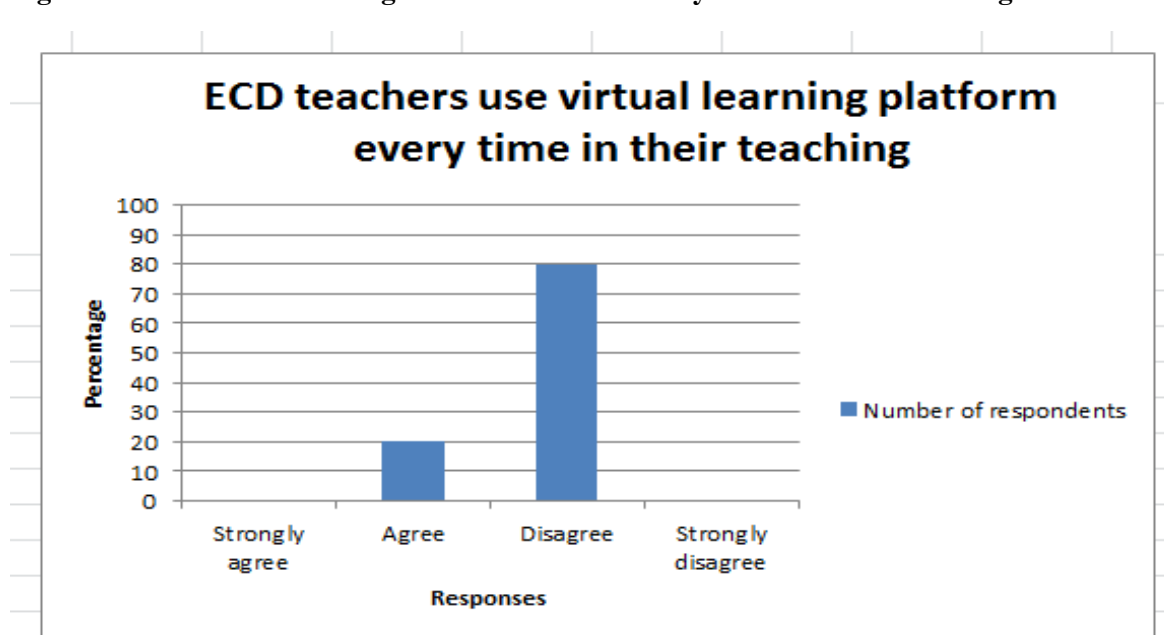
but not all of them were successful in using the platform because the learners had no ICT gadgets to make the connection. The TIC disagreed and said, “Not all teachers use the virtual learning platform”.

**Table 7: ECD Teachers Using Virtual Platforms Every Time in Their Teaching**

ECD teachers use virtual learning platforms every time they teach	Strongly agree	Agree	Disagree	Strongly disagree
Number of respondents	0	2	8	0

80% of the respondents disagree that ECD teachers use virtual learning platforms every time in their

teaching. Only 20% agree that the teachers use virtual platforms every time.

**Figure 7: ECD Teachers Using Virtual Platforms Every Time in Their Teaching**



### Technical Assistance Given by the School

The Head was quick to point out that the school has no resident technician and they outsource a

technician to maintain their machines. The TIC confirmed that the school has no resident technician to repair and maintain the ICT gadgets needed for virtual learning.

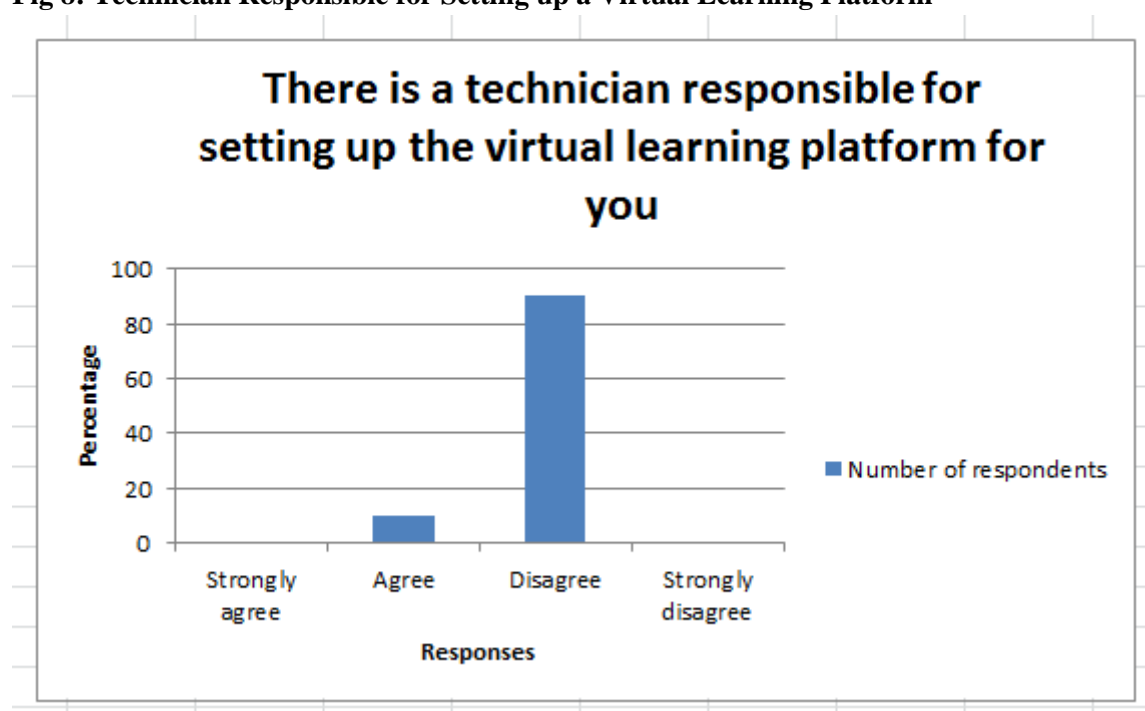
**Table 8: Technician Responsible for Setting up Virtual Learning Platform**

There is a technician responsible for setting up the virtual learning platform for you.	Strongly agree	Agree	Disagree	Strongly disagree
Number of respondents	0	1	9	0

The school does not have a technician responsible for setting up the virtual learning platform when teachers are using it. 90% of the respondents confirmed that the school does not have a technician

responsible while 10% agreed. In short, the school has no technician judging from the overwhelming response.

**Fig 8: Technician Responsible for Setting up a Virtual Learning Platform**



### Challenges Being Faced in Using a Virtual Platform

The Head said, “We have a problem with electricity, money to buy bundles and connectivity is very

poor”. The TIC supported what the Head said and it imaged that the use of virtual platforms is still in its infancy.

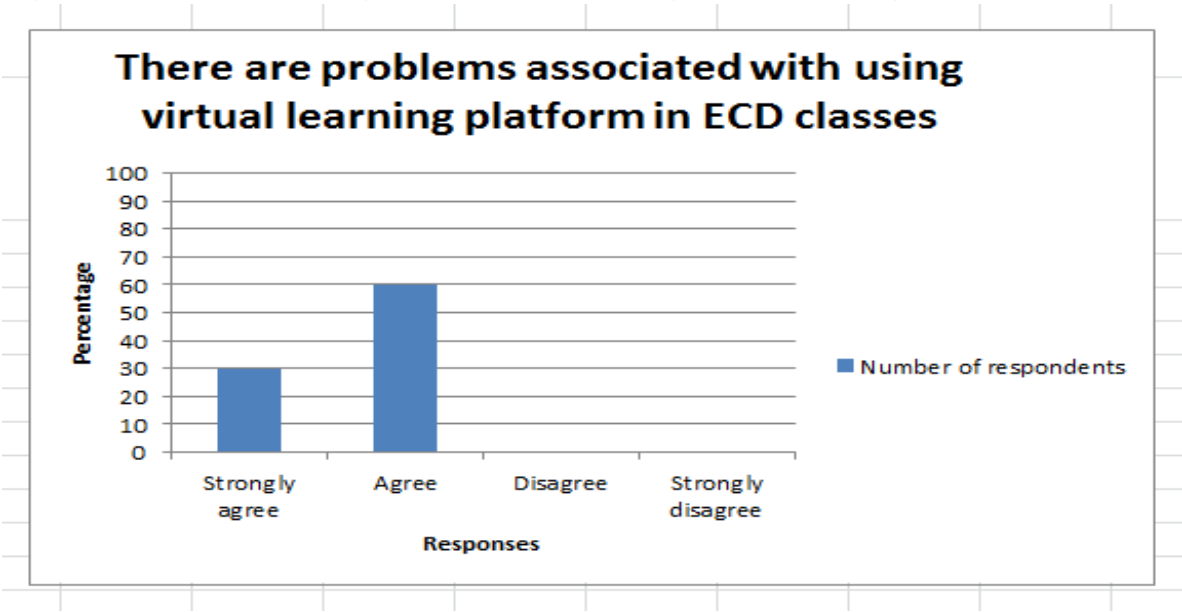
**Table 9: Are Challenges Associated with Using Virtual Learning Platforms in ECD Classes?**

There are problems associated with using virtual learning platforms in ECD classes.	Strongly agree	Agree	Disagree	Strongly disagree
Number of respondents	4	6	0	0

All the respondents that are 100% agreed that there are problems associated with teaching or using virtual learning platforms in ECD classes. 40%

strongly agree that there are problems associated with using virtual learning platforms in ECD classes.

Figure 9: Are There Challenges Associated with Using Virtual Learning Platforms in ECD Classes?



**Ways of Improving Virtual Learning in the ECD Classes**

The Head said the parents should come to the assistance of the school and this was also supported

by the TIC. The two administrators also suggested the use of workshops to help improve the teachers' knowledge.

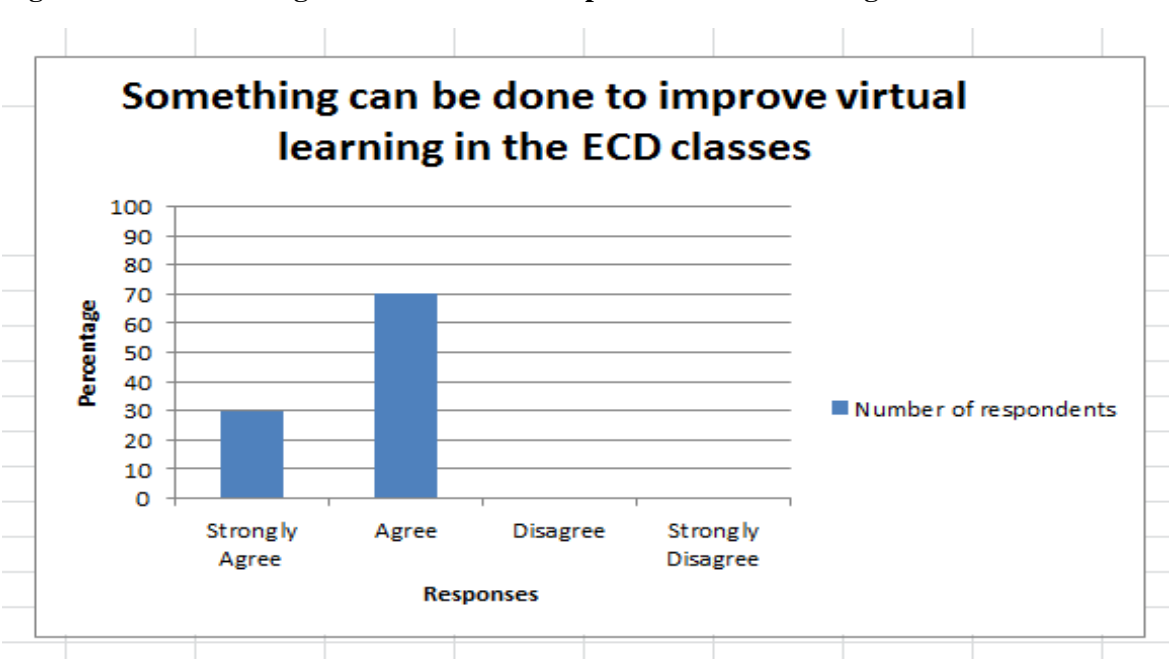
Table 10: What Strategies Can Be Used to Improve Virtual Learning in the ECD Classes

Something can be done to improve virtual learning in the ECD classes	Strongly agree	Agree	Disagree	Strongly disagree
Number of respondents	3	7	0	0

100% of the respondents agree that something can be done to improve virtual learning in the ECD classes meaning the current situation needs to be

improved. Of the 100% the other 30% strongly agree that it needs to be improved.

Figure 10: What Strategies Can Be Used to Improve Virtual Learning in the ECD Classes?



## DISCUSSION

It has emerged from the presentation that virtual learning platform was used a lot during covid-19 lockdown and the learners were exposed to the platform. From the presentations, it has militated that virtual learning has an important role in the learning process and this is impeded much by the non-availability of suitable infrastructure at the school. The erratic network connection which renders the school offline most of the times make virtual learning a nightmare on the part of the learners and the teachers. In concurring with this observation Siragusa (2012) says virtual learning environment-related- problems identified in most schools are access to sites and staying connected, and computer and internet literacy. The same sentiments are echoed by Beard, & Harper (2020) as well as by Lindner, & Murphy (2021). So, these problems observed and alluded to by the participants are problems emerging at the school which should have been looked into and prevented.

From the responses, the learners were given feedback via the virtual platform. There is a consensus that learners at the ECD level are motivated by the use of virtual learning platforms and they are given up-to-date content which promotes the idea of the lessons being learner-centred. This is supported by learners. Kehrwald, & Parker (2019) posit that, in a virtual learning environment, teachers are facilitators, providing a learning environment where learners can conduct research and engage with technological resources to become the Information, Age. According to Watson, & Watson (2022), the learner's progress among learners using a virtual learning environment varies where low-achieving learners may struggle in meeting deadlines with submitting assignments, and high-achieving learners have limits in getting beyond meeting deadlines. Thus, the role of virtual learning for ECD learners is great though to some extent these learners always need the support of the parent for them to be able to use the gadgets and to connect to the internet as they access the learning platform. While it is a noble undertaking some of the learners according to the respondents, get carried away and they end up not benefitting much.

The availability of tablets in the ECD class which has helped teachers virtualize the lessons makes teaching interesting and the majority of the learners have shown expertise in using the virtual platforms. What it means also is that the learners can adapt to new norms and they can apply new knowledge. The school has been able to communicate with the ECD children by sending audio and videos of rhymes, sounds and related topics. Virtual learning has a role to play in teaching ECD learners. To a greater extent, it has emerged that virtual learning motivates the learners and it offers the teacher a chance to be consistent as he will be able to refer to previous work. It also offers a facility for easy tracking of performance. Virtual learning lessens the teacher's role. It also offers the teacher and the learners a platform for communication. The work given to the learner is also trackable. The parents easily assess the work being given to the child.

## SUMMARY, CONCLUSION AND RECOMMENDATIONS

### Summary of Findings

The study found that teachers are willing to use virtual platforms to teach learners at ECD level but they are affected by lack of knowledge on the part of the learners and the family background of the learners. The study found that there is a problem in using virtual platforms for teaching and learning at the ECD level as the gadgets to be used were not readily available for the learners and the teachers.

From the presentation, this study found out that schools virtualized ECD learning by using WhatsApp platforms and the learners were exposed to videos and audio. The learners received educational content in the form of videos and rhymes. As supported by Kehrwald, & Parker (2019) this study has found that learners at the ECD level are motivated by the use of virtual learning platforms and they are given up-to-date content which promotes the idea of the lessons to be learner-centred. In a virtual learning environment, teachers are facilitators, providing a learning environment where learners can conduct research and engage with technological resources to become the Information Age. The schools were not spared from the challenges of electricity and lack of resources not all

parents were able to afford the tablets and the data bundles for the lessons.

The study also found out that monitoring the learners is not easy and it is made a responsibility of the parents when virtualization is adopted at the ECD level. While virtual learning has an important role in the learning process its prowess is affected by the non-availability of suitable infrastructure at the school. The erratic network connection which renders the school offline most of the time makes virtual learning a nightmare on the part of the learners and the teachers. The study found out that the school has no resident technician and they outsource a technician to maintain their machines. The study found that not all teachers and learners were successful in using the platform because the learners had no ICT gadgets to make the connection. Connectivity was one of the major challenges in using virtual platforms to teach the learners from their homes.

## Conclusion

The study concluded that teachers and learners were all enthusiastic in their quest to use virtual platforms and they were only affected by a lack of the gadgets, power, and funding for data bundles. For schools to implement the platforms effectively, this study also concluded that there is a need for teachers to be involved in ICT. Teachers need to be exposed to refresher courses where they are taught how to operate the virtual platforms and manage the virtual classes. The study concluded that a virtual learning platform was used in ECD classes during COVID-19 to send videos and audio which were useful to the ECD learners.

This study concluded that virtual learning is beneficial to ECD learners as they get engaged while they are at home in the comfort of their homes with the help of the people they know and with whom they feel free to explain their positions. The same virtual platforms are also beneficial to the teachers and the school administration as they can have their learners engaged while they are not at the school thus limiting the risk of the pandemics such as covid-19. The study has also concluded that, to a greater extent virtual learning motivates the learners and it offers the teacher a chance to be consistent as she/he will

be able to refer to previous work. Virtual learning also offers a facility for easy tracking of performance and it lessens the teacher's role. It also offers the teacher and the learners a platform for communication and easy management of tasks by the teacher and the learners. The study concluded that schools need resident technicians who can maintain their ICT machines and should not outsource as this is expensive. There was a challenge in using ICT gadgets during COVID-19 because not all the learners and teachers had ICT gadgets. The school does not have efficient gadgets such as smartphones capable of surfing through the 4 G network system.

## Recommendation

This study recommends that virtual learning be funded so that schools can even extend it during the holidays when the learners are at home. The study also recommends that virtual learning be implemented on all learning levels from ECD upwards. This study recommends that schools have resident IT technicians who maintain their machines so that they may be available every time in case of a technical problem. The schools should avoid outsourcing the technicians who maintain their machines to support virtual platforms. This is because some of these people are not very honest and instead of fixing the machines, some may take it as an opportunity to steal some parts which may result in the machines not working completely, which will then hinder online learning in the long run. The school should acquire efficient gadgets such as smartphones capable of surfing through the 4 G network system. The school should persuade Internet Service providers to install a fibre network as well as a microwave station at the school so that transmission of signals will be easy.

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