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Impact of Covid-19 on Early Childhood Education in Botswana

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Keywords:

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Chaos,
Negative.

This paper examined the impact of COVID-19 on the Botswana public Early Childhood Education Programme during the pandemic in the period of 2019 - 2022. COVID-19 impacted various sectors of Botswana, the education sector included. However, the education system was not adequately prepared to cater for young learners' education and therefore this had serious consequences on the lower levels of learning. The study adopted the qualitative approach and used the chaotic theory to guide the line of argument in the paper. Data were collected using open-ended questionnaires, structured interviews, focus group discussions and observation of outside equipment. The findings indicated a backlog of pupils entering the Early Childhood Education programme and Standard One after the Covid-19 pandemic. Standard One accepted learners of different competencies and parents refused to send their students back to school after re-opening because of fear of reinfection. The paper concludes that the Ministry of Education, like other levels of education, could have put something in place for ECE learners to keep on learning at home during the pandemic after three years of suspending teaching and learning.

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INTRODUCTION

This paper examines the impact COVID-19 had on Early Childhood Education in Botswana during and after the outbreak. The Coronavirus Disease 2019

(COVID-19) affected and changed the lives of people in various sectors globally. One of the affected sectors was the education system which was forced to change its pedagogical practices, teaching and learning, assessment and the use of technology

in teaching. In Botswana, Early Childhood Education (ECE) classes stopped operating for almost three years. This brought chaos at the ECE level and to the subsequent formal primary school levels fed by ECE classes. Formal schooling was negatively affected, especially Standard One classes.

Coronavirus was pronounced in December 2019 as a viral disease that originated in China, Wuhan (World Health Organisation, 2020). The disease spread like wildfire across the globe within a few months. This was viewed just more than a crisis because it had the potential to create devastating social, economic and political crisis that left deep scars in many countries globally. Lockdowns were imposed, and entertainment places and restaurants were closed. People could no longer support their families because they lost jobs and income. These resulted in impromptu decisions to prepare, respond and recover from the pandemic. There was a need to immediately strengthen and support health services globally to respond to the pandemic.

The COVID-19 pandemic brought all economic and educational sectors to a standstill. The pandemic did not affect countries equally, however, the various sectors of the countries of the world such as health, education, agriculture, and trade among others brought the economy of some countries, especially Africa 'to their knees.' One of the hardest hit sectors was the education sector because students across levels of education including children in Early Childhood Education learning had to stay indoors for almost a year without schooling. Countries that could afford technology had to change the face-to-face daily interaction of teachers and students. Educating students online became a norm and Botswana was no exception to this change. In some privately governed schools, teaching continued online because parents could afford to buy computers, laptops and the internet services required for children. In public primary and government secondary schools, the use of online teaching was a daunting exercise of numerous problems such as having too many students to teach. Another problem was the difficulty in accessing internet services for the technology needed for online teaching as well as the materials needed for teaching in rural and remote areas. The Botswana government was unprepared

for such a massive and immediate change in the education system.

Important to note from the above was that there were lessons learnt from the Coronavirus pandemic from other countries as well. It provided insights, engaged the world, empowered other people and decisions were made as to which interventional strategy would work in an emergency. Some of the following lessons were observed by Kocsis, Roesler, Marshall & Totten, (2022). First, the pandemic caused lockdowns to avoid further transmissions. Kocsis et al., (2022) observed that since the disease was airborne, it was easily transmissible and therefore, schools at all levels had to close to avoid face-to-face interaction between educators and students. School closure was mandatory for school-going children and students because they could spread the disease among themselves as well as their families and other people outside school or in public transport. Therefore, the closure of schools was to avoid overburdening the health workforce, hence, everyone needed to practice safety measures to be healthy and safe in public primary schools with ECE in Botswana. The lockdowns ended up causing fatigue to households due to the closure of schools.

Secondly, in Botswana, the movement of people was restricted to essential staff only for daily operations. Only the essential staff such as the health workforce and forces such as Botswana Prisons Services, Botswana Defence Force, Botswana Police Services and other security services were on duty to ensure that people were not moving up and down as well as to enforce the law. Thirdly, people were trained to understand public health risks and problems. Therefore, social distancing, washing of hands and wearing of masks were mandatory to make a lasting impact on public health. The lesson learnt from these practices was that, even in future, washing of hands has to be an everyday practice as well as wearing masks in the winter season where it is common to find the flu virus spreading fast. Further, working from home with the availability of resources became the norm. One thing that was acknowledged was that when people were told to work from home, they needed to have a job, a computer and a network. This led to disparities among some employees, who could not afford a computer/laptop and network. Again, what people learnt was that work is not only in the

office. The office was the traditional way of doing things, people worked effectively and efficiently from the comfort of their homes as long as the resources allowed them to do so. ECE teachers were part of the people who lacked such resources to continue working from home with their learners. For ECE programmes, it seemed as if there were no interventional strategies to educate children while they were at home. This is the focus of this paper, to understand the impact Covid-19 had on the ECE programmes in Botswana public ECE schools.

In conclusion, embracing lessons learnt from Covid 19 was the only way the Ministry of Basic Education (MOBE) could map out barriers and effectively find interventional strategies to address them. Collaboration, effective decisions, open-mindedness, and effective technology were necessary to attack the fast spreading of the disease. It was, therefore, necessary for all educational sectors, as agents of public health, to come together to tackle public health challenges from the root causes instead of waiting for a symptomatic crisis.

Background Information on ECE Learning

Early Childhood Education dates back to the 1500s and even the children were educated before that. Kamerman (2006), acknowledged various contributions of philosophers on Early Childhood Education from the 17th century. Friedrich Froebel (1782-1852), believed that children needed their own space for learning without their parents. The philosopher emphasised that playing was one of the highest expressions of human development in childhood education because it expresses what is in the child's soul. Therefore, denying a child early learning is denying a child human development. Maria Montessori (1870-1952), also argued that it is important to educate and nurture the child's senses first and then the child's intellect. The philosopher viewed the children as sources of knowledge with the teachers acting as social engineers. Lev Vygotsky (1896-1934), believed in social interaction as an important vehicle for child development of linguistic, social and cognitive skills. He argued that children should learn with others while the teacher is the facilitator in class. Jean Piaget (1896-1980), maintained that children learn by interacting with their environment actively and directly through

assimilation, accommodation and equilibration. Piaget believed that children can take an active role in the learning process and therefore should be allowed to make experiments, observations and interact with new knowledge. Erik Erikson (1902-1994) took a step further to involve and perceive parents and educators as integral in supporting and encouraging the success a child has in life at every psychological and developmental stage (Kamerman, 2006). The philosophers' contribution to ECE was based on cognitive stimulation, socialisation, child development and early education (Kamerman, 2006). Based on the philosophers' ideas, the international world also saw it necessary to encourage and strengthen ECE to provide practical, unlimited experiences, and child-centred learning that includes singing, drawing and speaking. In this regard, early childhood education is not a new phenomenon.

UNESCO (2022)'s, emphasis is that efficient and delivery of early childhood policies and services are critical to ensuring long-term learning opportunities and improved learning behaviour. Employment and health outcomes to individuals. UNESCO observed that quality early childhood education serves as an important building block to promote healthy development amongst infants and toddlers. Therefore, ECE should be seen as a human right. UNESCO (2022) acknowledged the fact that middle-income countries reduced their public education budgets; hence, reversing the hard-won gains for children, families and communities in the field of ECE. While admitting the negative impact of Covid-19 on ECE, UNESCO still encouraged countries to sustain ECE policies, monitor and evaluate them for accountability as well as strengthen them.

In 2013, an old phenomenon from 1500 on the Early Childhood Education Programme was implemented in some public primary schools across regions in Botswana; hence, in all the public primary schools designated, there are two to three ECE classes. The programme initiated children from the ages of 4 -5 years into early learning before they could be enrolled in formal schooling at Standard One. Though an important programme, not all children go through the programme because it is not available in all public primary schools. This paper highlights one

of the concerns that emerged during the major study that investigated the implementation of the ECE programme to find out how the ECE programme was actualised by agents of the programme and what language was used to orientate learners. The problem of which language of instruction was used to initiate ECE learners was the focus of the main study because, at primary school, children are initiated into formal education in Setswana at Standard One while English is taught as a subject. At Standard Two the language of instruction changes, English becomes the language of instruction while Setswana is taught as a subject (Revised National Policy on Education, 1994). However, it was not clear which language of instruction initiated children at ECE for a smooth transition into Standard One, hence, this study. It was from this study that a problem was observed that was caused by the COVID-19 emergence - delay in progression and its consequences. This problem in the delay of progression at the ECE level is of interest in this paper because it affected the teaching and learning of ECE classes, not only at the ECE level but as well as the subsequent level –Standard One that was fed by ECE classes.

LITERATURE REVIEW

This section presents a review of literature based on Early Childhood Education and Care. There is limited research on the impact of the COVID-19 pandemic on early childhood education and care, the research is general and does not focus on the classrooms, but converges at the changes that occurred in children at home and how this affected parents. Some reports highlight the impact of Covid-19 on both teachers of ECE and children.

The COVID-19 pandemic exacerbated problems and unexpected changes in the learning and teaching of ECE. The European Union (EU) report of 2021 highlights problems that affected the teachers of ECE and parents. EU (2021), reported that covid-19 pandemic imposed stress or problems on ECE staff and this led to renewed demands for recognition and better working conditions. The report indicates that the pandemic laid bare the deep inadequacies in the current systems regarding ECE learning. Teachers of ECE felt alone in the fight against the coronavirus crisis, and ECE children were the forgotten

population whilst education ministries strategised on how to teach other higher levels. Further, there were no experts in child development, child psychology and ECE to assist learners, teachers and parents. According to the report, the pandemic compounded disadvantages and poverty. On the other hand, parents struggled to reconcile their professional and private lives while working from home, facing reduction in their salaries, job losses and lack of family support.

Lack of unpreparedness to deal with the unexpected and sudden crisis that emerged during the Covid-19 period. Samuelsson, Wagner, Eriksen, & Verlang (2022) stated that there were no guidelines to help teachers familiarise themselves with new pandemic guidelines emerging in the wake of COVID-19 including protecting children from violence, family stress, economic vulnerability, increased risks of domestic violence and limited opportunities to seek help from teachers, social workers and other support structures. Hence, these inadequacies were seen as a stumbling block.

Restrategising how to teach ECE classes was done in the United States. Tekin, Jones & Kagan (2022), reported that ECE facilities in the United States were open based on local and state guidelines, and they remained open for children of essential workers. Teachers of ECE were forced to make quick decisions and emergency plans to mitigate the impact of the pandemic on their health and safety and the children in their care. Some of the problems underlined were that child enrolment remained low as compared to pre-Covid 19. Again, ECE facilities that remained open or those that re-opened had to make changes to their daily operations and safety plans to reduce the risk of COVID-19 transmission. The foregoing changes include interacting with children and families, altering group size limits, the use of masks and sanitizers, cleaning and disinfecting procedures, improved ventilation and this led to increased workload for staff and increased costs for cleaning. In addition, many teachers lost their jobs because of financial, health and safety concerns. This meant that those who returned to their jobs, the return was uneven depending on the number of children who enrolled at ECE facilities given the specific teacher to child ratio by laws. Furthermore, closure and reduced capacity impacted

negatively on children's development and this resulted in poorer outcomes with respect to children's socio-emotional learning, language development, behavioural skills and emotional regulatory skills.

Early Childhood scholars identified problems that emerged from different countries. Reimers and Schleicher (2020), surveyed from 89 countries and identified the following concerns which were raised by participants: reduced opportunities for social interaction with peers, threats to health and safety of learners, families and educators; financial decisions about education; disruptions to the continuity of learning, drastic reductions in face to face teaching and instruction time; teachers' preparedness to support digital learning; when and how to reopen schools and reduction in class sizes. This was an indication that the pandemic emerged when no one expected it.

In addition, Jalongo (2021), compiled reports of research from various countries of the world and found that children from infected families were subjected to stigmatization; massive re-organisation of family life; disconnection of children from their peers at school; informal playing activities; grief and mourning that may go unrecognised and unresolved; escalation of children living in poverty and food insecure household; increase of domestic violence, sexual exploitation and high rates of fear, depression, anxiety and post-traumatic stress disorder. In Scotland, (Watson, Sarica, Parkinson, Mitchell, & Wason, 2020) reported that parents observed behavioural, developmental, and emotional difficulties and changes in sleeping patterns amongst ECE learners. Evident was maltreatment and abuse particularly with families with high degrees of conflict while an Australian study of 2021 reported high levels of depression and stress in parents, high parenting irritability, high rates of smoking and alcohol consumption, high parenting depression and child anxiety (Westrupp et al., 2021).

Mixed outcomes were reported in New Zealand by Mitchell, Hodgen, Meagher-Lundberg & Wells (2020) on the impact of COVID-19 on ECE learning. The authors reported that ECE managers strategized and developed some plans to handle the pandemic.

A wide variety of distance learning opportunities were offered for children during lockdown. There were also common forms of communication with families that were provided such as email, telephones and Facebook. However, a low turnout of children during lockdowns was observed while some staff members also did not return for duty after reopening due to vulnerable dependants in the household, health and anxiety about returning to work. ECE managers reported financial pressure and some reported worse situations and difficulty in meeting the costs of staff salaries.

In essence, the covid-19 has exacerbated long-standing challenges in ECE and had impacted on the supply, quality and continuity of ECE learning. The reports orchestrated almost similar challenges and experiences with variations in the degree of the impact especially in families during lockdown. Some of the similarities observed were that ECE staff and children were affected emotionally. Also, inequalities and the quality of teaching and learning were affected. However, Botswana has not reported the impact of COVID-19 in ECE learning; hence, this report from public schools of ECE teachers is unique, it reports how teaching and learning were affected both in the ECE classrooms and outside as well as in the subsequent level Standard One. This is something that did not emerge from other researchers' reports and would fill the gap that exists.

Theoretical Framework

The paper is based on the Chaos Theory by Edward Lorenz (1961). The theory is concerned with studying complex and dynamic systems with unpredictable courses of events. It is relevant to this paper because the coronavirus emerged as a complex and dynamic disease with various symptoms that were difficult to handle, it was confusing, frightening and causing global chaos. Also, the lack of knowledge about the coronavirus in scientific and educational circles triggered signs of chaos and global crisis. The Chaos Theory (CT) is characterised by principles and practices that apply to Early Childhood Education (ECE) in Botswana. Lorenz above, described chaos as a science of surprises of nonlinear and unpredictable situations, it teaches people to expect the unexpected. Hence,

CT deals with non-linear things that are effectively impossible to predict and control such as turbulences and weather. According to Lorenz, chaotic situations give people new insights, power and wisdom by trying to understand the complex, chaotic dynamics of the atmosphere and steer our goals and strategies to a desired destination.

Lorenz (1961) highlights the principles of Chaos Theory. Firstly, Lorenz talks about the butterfly effect which grants the power to cause a hurricane or storm like a butterfly flapping its wings. The butterfly effect had a brief history that, had a butterfly not flapped its wings in New Mexico at the right point in space and time, the hurricane would not have happened. A butterfly that flaps its wings in one location can affect weather changes in another place. This means that small changes in the initial conditions can lead to drastic changes in the results or a completely different outcome. This means that the spread of the pandemic disease led to unpredictable changes in ECE learning that suddenly affected teaching and learning.

The second principle is unpredictability. Lorenz argued that people can never know all the initial conditions of a complex system in sufficient detail since it is impossible to measure the effect of all butterflies in the world. Therefore, it will always remain impossible because it was difficult to predict how the coronavirus would impact life globally. In this regard, scientists constantly looked for answers to address complex emerging issues: how the virus started, how it spread, the country it started from, the next country, and the reasons for a lower spread in Africa than Western countries. These initial conditions and situations made handling the virus difficult from the beginning of pandemic.

Third, chaos explores the transition between order and disorder, which often occur in surprising ways. For example, some people did not easily accept that the virus was spreading like fire and decided to continue with their normal way of life and this brought chaos to their lives as they died. The transition from a normal life to a life governed by strict rules brought disorder because people undermined the impact of the disease.

Fourth, turbulences ensure that two adjacent points in a complex system will eventually end up in very

different positions after some time. Opinions on how to handle the virus varied in countries of the world, the creation of vaccines also varied in countries that were capable of making vaccines and the rules of governing the various, handling the economic and education situations differed according to countries, hence, these turbulences landed countries in different positions depending on how they handle the pandemic. It is also believed that chaotic theory has fractals, which is a never-ending pattern that is created by repeats and processes over and over in an ongoing feedback loop. Of course, there was feedback from countries about the coronavirus and a guide for leaders to constantly make decisions on the way forward to eradicate the virus for life and continue as normal.

The CT is applicable to the impact of Covid 19 in ECE learning because the Ministry of Basic Education, school management and teachers were confronted with an unpredictable situation that brought chaotic situations in ECE learning. The disease affected the teaching fraternity, teachers and school administrators passed on, school-going children were left as orphans, and teaching came to a standstill for almost a year, thereby, making a backlog of various levels of learning that pupils had to pass through. The MOBE had to guide schools on what they could do to deal with the pandemic, and the school management had to motivate teachers to carry on, despite the difficulties and deaths of other teachers while teachers had to teach and assess their learners virtually where possible. This was not the case with ECE learning as there was no plan whatsoever for the ECE learners to continue learning from home. Their learning was drastically discontinued for over a year and hence transition became a problem and brewed other problems. Teachers' competencies in some instances especially at the tertiary level had to go beyond their everyday ones to accommodate digital learning competencies. Tertiary and private schools had to engage in non - face to face contact, flexibility and mastery of online teaching, where digital interaction has become the main way to create and transfer knowledge.

Public primary schools in Botswana did not have the opportunity to teach online because the resources were limited. Even after schools reopened, ECE

teachers idled because their children were home, they had to be redeployed to other classes. Upon the return of their learners, what was initially planned was disrupted, there was a backlog of learners who did not complete their ECE learning in 2020 and had to go for Standard One and those who were ready to start the ECE classes. The whole year of 2020 to October 2022, there was no ECE teaching and learning. ECE curriculum was not completed and the problem was transferred to teachers of Standard One when ECE schools reopened in October 2021, who had to deal with a double job of initiating learners into Standard One while familiarising learners with formal learning and teaching. This could mean that the MOBE had to re-strategize with this kind of feedback, rethink, provide new insights into dealing with the chaotic situation and steer the dynamics to a desired destination. These surprises brought about a disorderly environment to the school system, it brought schools to a turbulent situation and different unexpected results to ECE learning. There was disorderliness and turbulences because systems and staffing were shaken due to death of some teachers. The whole situation of ECE learning was confusing with limited answers on the ground. This is not to say that all principles of the Chaos Theory are applicable, but the lack of knowledge about coronavirus remains outstanding because it brought chaos to the MOBE, School Management, teachers and the education system at large.

RESEARCH METHODOLOGY

The study adopted the qualitative approach to investigate the problem in six regions of the country such as Central, North East, Kgalagadi, Ngamiland, Chobe and Gantsi. Five to six public primary schools with preschools were studied in each region. The population of the study was teachers of ECE as agents of the programme and Teachers of Standard One because they received learners from ECE classes after one year and Heads of Infants as they supervised the ECE teachers. The researcher used convenient sampling for all ECE teachers and Heads of Infants and random sampling for teachers of Standard One.

Data were collected using open-ended questionnaires, interviews, focus group discussions and observation of facilities to investigate the

problem. Open-ended questionnaires were administered first, followed by interviews to close the gaps. The latter was followed by focus group discussions with teachers to get collective views on the implementation of the ECE programme. Meetings were held with teachers of ECE and school management before the researcher left to consolidate the results and address issues that needed prompt attention. The results of the study were presented according to each key research question to make sure that each question has been adequately answered. Data were coded for confidentiality hence, primary schools were given names of alphabets and participants were coded according to regions and schools where they taught and were also given codes for ethical reasons. Data were also analysed according to each key research question to make sure that each question has been answered. The SPSS software also helped to classify information and identify the differences and similarities between schools and districts.

The study observed ethical issues hence, the proposal went through the Office of Research and Development and the Institute of Review Board. Permission was provided to conduct the research and the proposal went through the Ministry of Basic Education which also issued a permit to conduct the study. Entry into schools was done through gatekeepers such as Education Officers in each region, School Heads, Heads of Infants, and finally, the ECE and Standard One Teachers. Meetings were conducted to explain the purpose of the study with ECE and teachers of Standard One. Teachers of Standard One were randomly selected through the assistance of the Heads of Infants while all teachers were asked to participate in the study. The results were shared with the School Management, teachers of ECE and Standard One to discuss issues that needed immediate attention and also make decisions on the way forward.

RESULTS OF THE STUDY

The data were coded according to the data collection instruments and the participants. It was from the coding of the data that the researcher developed themes, patterns and trends. Some of the themes that emerged were merged and interpreted. The themes that emerged were gathered from open-

ended questionnaires, interviews and focus group discussions. It was from the SPSS data that some of the following themes were gathered.

Firstly, All the Head of Infant in six schools and teachers of ECE reported that the results of the study indicated a backlog of learners who were waiting to go into preschool before Standard One while the classes could accommodate only 25 – 30 learners, this meant rethinking of the number of students who will be admitted to ECE who have been waiting since 2020, 2021 and October 2022 when the ECE classes began as well as the resources that could accommodate the backlog of these learners. The backlog meant appropriate decision-making that should not disadvantage both the learners and teachers.

Secondly, teachers of ECE and Heads of Infants reported that the young learners who were supposed to be admitted into Standard One had different competencies. Some learners were left not even halfway through the programme. They had only been into three months of the ECE programme while others had to go straight into Standard One because their ages did not allow them to attend preschool – there was an elapse of 2 years. It was difficult for them to start a programme with different competencies of learners. This problem could have been taken seriously aback the programme itself as well as the teachers' starting point to introduce learners to formal schooling

Thirdly, most ECE teachers and Heads of Infants reported that when the time came for parents to register their children into preschool and Standard One, parents were hesitant to do so because of fear and lack of knowledge about the pandemic. This not only impacted the number of children registered for preschool and Standard One, but the teachers too in Standard One had barely any children to teach or make up a class. This could have been a lesson on the part of stakeholders and decision-makers not to leave out parents in rural areas because they lacked some knowledge on Coronavirus because most information was disseminated in English and therefore, no one was there to help them get over their fear of children dying from the virus.

Further, ECE teachers reported that they idled because they had no classes to teach, they could not

contact their learners at home and nurture their learning, and their attachment to their learners was cut. The schools assigned them other classes and duties which they were not trained for and this frustrated them even more. This made teaching a miserable job to do. On the same breath, teachers reported that parents did not have the technology to continue helping their children with online learning, had it been available. The non-availability of the internet, WI-FI and electricity was a serious drawback. Again, most parents in rural areas have not been trained to teach young learners. Given the above, teachers of ECE could have accepted the fact that they can do any work executed to them by the school administration, any responsibilities in the school should be their problem too because they are part of the school. On the other hand, counselling processes could have been put in place for them to accept the situation and take advantage of it.

All the teachers of ECE and Heads of Infant complained about the playing equipment such as seesaw, trampoline, slide and swings used by learners in playgrounds that it was rusty and needed maintenance before it could be used by learners. Teachers complained that the playing equipment was left in the rain and exposed to winds and therefore, it was not readily usable by learners and therefore it may take time for it to be used by learners. Decision makers could have noted that ECE learning is not only in the classrooms but even outside. Neglecting the playing equipment outside used by ECE learners meant that nobody ever thought of covering it with durable covers until the learners came back to school to use it. The playing equipment was used to develop other motor skills because the learners were still growing. The District Councils and School Management overlooked the caring of the playing equipment outside and yet it was expensive and costly to maintain it.

In essence, there is evidence from the results that the coronavirus affected negatively the ECE learning programme inside and outside the classrooms and that the programme became disorderly and required more planning and decision making to be done to address the long and short term problems.

Discussion of Findings

The analysis of the data showed correlated relationship between the chaotic theory and the findings with a predictable increase to a more chaotic and turbulent situation at ECE and Standard One levels. This is consistent with the findings of the study that revealed that Covid-19 negatively impacted on ECE learning in Botswana public ECE schools. The findings reported in this paper were unique and contrasted with any of the literature reported by scholars in other countries. Children who were admitted into the ECE programme in 2020 public ECE schools, had to stop schooling in April 2020 when lockdown was imposed. Since the ECE programme in Botswana takes only one year, it meant that the chance for the ECE learners who were admitted in 2020 had elapsed by the end of the year for another group to start in 2021. Even in 2021, the ECE learners did not open until October 2021 because Covid-19 was still prevalent. Therefore, the 2020 and 2021 cohorts proceeded to Standard One the following year in 2022 even though they had not completed their ECE syllabus to avoid a backlog of progression of children at home waiting to be admitted into the ECE programme and Standard One. Contrarily, during these uncertain times children had to learn, grow and develop. The Chaos Theory (CT) by Lorenz (1961) points out that unpredictable situations may lead to chaos and confusion. The chaotic situation had a butterfly effect globally, regionally and locally, it started with a small change in Wuhan (China) and led to drastic changes globally where Health Ministries had to make prompt decisions that changed learners' schooling programmes. To some extent, the situation brought disorderliness as decisions had to be made on how to continue with ECE learning under such difficult circumstances. It appears the Ministry of Basic Education failed to close the gap to reach out to young learners at home, in this chaotic situation. The scenario suggested that resources were required to keep the young learners abreast which most parents and the government could not afford.

Another predictable trend in rural areas that hampered ECE learning was that parents did not have the means to access online technology for their children to learn online. The use of technology,

together with the language of technology - English was a challenge to those who accessed technology because they needed money to pay for the Wi-Fi to access the internet while in rural areas there was no access to such technology, due to other complex issues such as lack of electricity at home. Poverty in rural and remote areas meant that children had nothing to do but just idle. Evidence indicated that not all parents from other countries accepted the switch to online learning because the parents were not trained to teach their children. This aligns with the findings of Dong, Cao, & Li (2020) that the parents themselves had neither the time nor expertise to accept a teaching role. In the same breath, other related reasons advanced were that parents and children had shortcomings in online learning, young children's inadequate self-regulation, and parents' lack of time and professional knowledge in supporting children's online learning were some of the problems that prevailed. Possibly, this did not come as a surprise since rural setups are lacking in technological measures. These findings are consistent with the situation that happened in China. The results suggested that the implementation of online learning during the pandemic had been problematic and challenging for families. The Chinese parents were neither trained nor ready to embrace online learning. If parents from China – a developed country could reject online teaching for their children then in Botswana, especially in remote areas, the situation could have been worse. The materials would be written in English, the language that parents do not speak and understand. Therefore, it seems the effectiveness of online learning would have been a non-starter given the hardships of the rural and remote areas. Defiantly, Mitchell et al., (2020) indicated that some children never stopped learning in New Zealand because distance learning was done and managers used different forms of communication with parents. This would have been difficult with parents in Botswana because technology in public primary schools as well as with parents was not available. Hence, some parents, especially in rural areas would be left out because technology requires electricity, networks and other technological equipment to effectively function which parents in some rural and remote areas could not afford.

Given the chaotic situation, it was likely that teachers of Standard One (next level from ECE) received learners who were not fully developed in various ways by the ECE programme or even those who never went through the ECE programme. Expectantly, ECE learning should develop learners' cognitive and motor skills. From a practical lane, UNESCO (2016) expects children to grow, be exposed to a range of contexts, to be placed on social interactions that also contribute to their full development and ECE learning develops such skills to a higher level. Long-term studies on ECE learning may point out that ECE assists learners with getting familiar with their environment before they can start formal schooling. This was another new insight that presented a challenge for Standard One Teachers because they had the responsibility of acclimatising the learners with the school environment as well as developing their cognitive skills, something that could have been done by teachers of ECE.

The practice of admitting children who have not been exposed to ECE learning into Standard One was an old one in public primary schools since the implementation of ECE learning. It appears teachers of Standard One got used to receiving learners who have been exposed to ECE learning. Contrary to the past situation, this meant that teachers had to move with the syllabus slowly because the learners have not been exposed to any fruitful or meaningful learning as they were fresh from home. Learners had skipped some stages. Age did not allow them to sit in ECE classrooms as they were ready for formal schooling. Consistent with the Chaos Theory, the pandemic brought about turbulences that ended up making surprisingly complex situations that forced schools to constantly change and shift positions to fight the coronavirus.

Perhaps it is necessary to highlight that lack of interventional measures for children to continue learning after closure of ECE classes brought chaotic situations to their teachers as well. The lockdown and closure of the ECE level affected teachers of ECE as they had no classes to teach after schools reopened and therefore idled. It was a norm to report for duty daily, the school management decided to designate them to other primary school levels in supervision areas to keep them busy while waiting

for ECE classes to commence. The ECE teachers complained that they were not trained to teach other levels, and therefore, did the bare minimum. In some instances, they could stand in for an absent teacher at all levels of primary schooling. One teacher said, *'We could have been given the chance to teach our children at home, the problem is that there is no technology and no internet, otherwise learning could be continuing from home.'* The verbatim provides reasonable interpretation that the ECE teachers were displaced by Covid 19. Possibly, the pandemic could have increased their stress levels because they 'lost' their children at the beginning of the term while they were still trying to bond with them. On the contrary, other countries kept the light burning by continuing to educate their children during the pandemic.

In support of keeping learners busy, Michel Lafon Education, a private company, developed a project in 1980 for Africa to support the equitable continuation of learning that used motivational books and short animated films for children (Kocsis, 2021). The project also taught life skills and tackled a wide range of themes from sexual abuse to protecting the planet. In addition to the latter, UNESCO (2020) and the Association for the Development of Education in Africa (2020) for educators, parents, and the community decided to form a bridge between school, family and the local environment. The project focused on educating children across Africa as part of a global response to COVID-19 and included animated learning videos, interactive e-books, activity workshops, colouring e-sheets, and learning games available in several languages. This programme could have had its roots in great philosophers on ECE learning. While it made a difference in ECE learners during the pandemic, Botswana walked far behind in planning for such chaotic situations to cater for young learners. While it was a nurturing activity to continue learning at home, MOBE could not provide opportunities for learners to continue learning at home and the reasons were different; they were lack of planning, lack of technology, untrained parents and lack of resources. The CT consistently confirms that the coronavirus came along in surprising ways in the ECE classrooms where the Ministry of Education discovered that more still had to be done

to reduce the number of students in classes, increase the number of classes of ECE learners, to address the backlog of learners going into Standard One classes, hence, the CT brought about fractals that led to changing patterns over and over.

In the unexpected turn of events, the findings indicated that parents did not return their children for ECE learning because of fear of COVID-19 even after the schools reopened for ECE learners. They kept their children at home and this meant that a limited number were admitted for ECE learning. Parents had fear for their children's lives because Covid-19 was ruthlessly contagious and parents, especially those in rural and remote areas, were not adequately educated about the Covid-19 pandemic. Not bringing children back to school came as a surprise to the school management and the Ministry of Education. ECE classes remained empty for some time although schools reopened. Fear of the unknown and unstable families that resulted from the passing on of parents leaving children alone or with parents, made the researcher to conclude that the leadership left the parents in rural areas behind in terms of knowledge about the coronavirus. The situation left relatives and parents equally confused about the next step forward. It was evident that adequate information did not reach parents in rural and remote areas because adverts for Covid-19 prevention were written and designed in the language they did not understand, English and or Setswana. Further, information was disseminated using technology such as Televisions, Facebook and Posters and the disadvantaged parents, who were illiterate or did not understand the language of COVID-19 communication, had no access to such technology. Therefore, parents did not want to risk their children's lives and decided to keep them at home until they found it reasonable to take them back to school.

Another pitfall indicated by the results was the issue of age, 5 years, because some children could not be admitted into the ECE programme because they had passed the age limit of ECE learning. A closer look into this issue could mean that, it may be in order to speculate that in the next 2-3 years from 2020, the ECE classes might not feed Standard One classes in their schools with children as expected because lesser numbers of children were registered for ECE

classes. This could imply that the schools have to admit learners directly from home to feed Standard One classes that are normally more than the ECE classes, hence, Standard One classes had a mixture of those who attended ECE and those who did not. This affected teaching and learning as this process was going to be seen as normal for some time. This was not a unique situation in Botswana, Tekin, Jones, & Kagan (2022); Samuelsson (2020) in Norway reported similar sentiments of parents not taking their children back to school because they were sceptical about their children returning to school before the pandemic was over.

As one of the shortcomings of the coronavirus, young children's learning and playing were put on hold and restricted for almost two years in Botswana public ECE classes even though their infection rate was very low in Botswana. It was the parents who were dying and leaving their children behind as orphans. This situation was not unique to Botswana as young children's education was put on hold worldwide (UNESCO, 2020) even though the hypothesis for the low infection rate in children was observed. The low infection in children was due to an abundance of cellular receptors for the virus in their upper airways (Bunyavanich, Do, & Vincencio, 2020). Multiple reports have demonstrated that COVID-19 is not well transmitted in schools and that teachers are unlikely to acquire the virus from children (Pfeffer 2020; Danis et al., 2020). Further studies showed that children were generally not part of the transmission chain and were uncommonly the index case in family clusters (Ludvigsson, 2020; Fretheim 2020; Zhu, Y., Bloxham, C., Hulme, K., et al, 2020). Although Quebec was the hardest-hit province in Canada, it opened elementary schools in the province, except in Montreal, and yet there was no evidence of an increase in transmission from children (Silverman, Sibbald, & Stranges, 2020). The low infection did not mean that children could have been allowed to continue schooling because they were not easily infected by the disease. This was a debatable issue regarding their teachers because they could have been the ones transmitting the disease amongst themselves or even collapsing or dying in front of their learners. Teachers had relatives who were sick and dying of the disease. This was going to have an impact on the young

children due to their teachers disappearing within a short space of time due to sickness or death caused by Covid -19 pandemic. A deeper observation into children being kept at home had a higher risk of anxiety and depression, and a greater risk of physical abuse (Sidpra et al., 2020). There could have been some untold stories of abuse of different types that this research did not follow up to discover more about ECE learners and their experiences while they were home for almost one and a half years.

The findings revealed a nuance understanding when it comes to connection between District Councils and School Management. There seems to be a disconnection in taking care of outside equipment used by ECE learners. There were insufficient measures in how outside equipment used by ECE learners will be maintained once they report back to schools, hence, there might be unexpected delays in using the equipment. The delays in using ECE outdoor equipment for games and exercises due to Covid 19 meant that the equipment remained unused in certain schools and rusted. This was another chaotic situation brought about by the pandemic, ECE children's playing equipment and other learning materials were affected because they had not been used for over a year. For schools that had the equipment that they were affected by rains and sunshine making them to rust as they were not used or moved. Teachers of ECE cried foul that the equipment needed to be serviced or replaced before it could be used by learners by the time they arrived in schools. For example, a piece of equipment is made up of multiple components such that if they lack maintenance, unwanted costs may be inevitable or they may need replacement.

In essence, the Chaos Theory merges and tallies with the confusion that the Coronavirus brought to ECE learning in Botswana public primary schools. The theory predicted and explained the chaotic situation that the pandemic brought about. It also helped to evaluate how the Covid-19 impacted negatively on the teaching and learning process of ECE in Botswana public primary schools.

Implications

This study has implications based on the results for future research. Firstly, the differences in ECE learner competence demand further research to make

a tracer study on the 2021-2022 cohort groups in Standard One to find out how the two groups; those who went through the ECE partly and those who did not but are in the same classes are coping with learning.

Secondly, evidence is needed on how teachers of Standard One handled the differences in learner's competence; those who partly did the ECE programme and those who did not due to having outgrown the ECE programme and had to go straight into Standard One.

Thirdly, research is needed to find out how the Ministry of Basic Education addressed the impact of COVID-19 on ECE teachers after they returned to classes. A reflection is vital because it is likely that the ECE teachers could have had psychological trauma regarding being used to close gaps in the school system in the absence of their ECE learners.

CONCLUSION

This study revealed unexpected results and provided significant signposts that need close monitoring and supervision of the groups concerned regarding the negative impact of COVID-19 on the Early Childhood Education Programme in Botswana. The new insights and unexpected situations need short and long-term solutions that seemed to have its roots in poor planning. The study confirmed what the Chaos Theory predicted that COVID-19 presented chaos in the ECE learning programme and practice. The backlog of children's admission into ECE and Standard One Classes created chaos. Learners progressed without being developed cognitively as well as their motor skills. We cannot exclude the possibility that teachers of Standard One had to do a double job, that of trying to make up for what was missed in ECE, acclimatizing learners with the school environment and initiating learners into formal education, which possibly could have slowed down the teaching of the Standard One programme. The Covid 19 pandemic spread so quickly that it did not give the decision-makers and stakeholders time to identify interventional strategies that could address problems emerging from the ECE classes. In essence, inequalities emerged and the quality of learning was compromised in various ways.

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