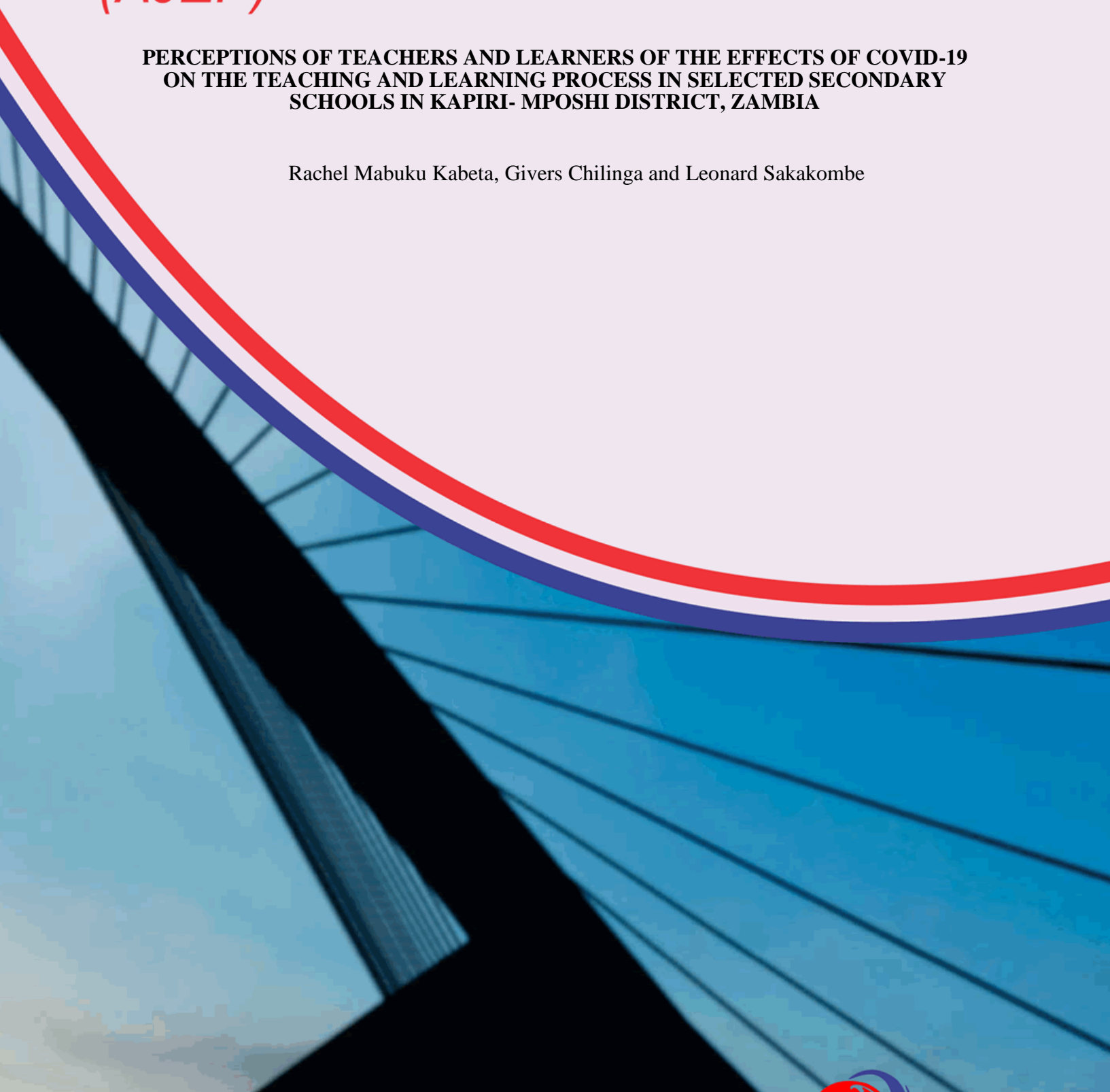


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**PERCEPTIONS OF TEACHERS AND LEARNERS OF THE EFFECTS OF COVID-19  
ON THE TEACHING AND LEARNING PROCESS IN SELECTED SECONDARY  
SCHOOLS IN KAPIRI- MPOSHI DISTRICT, ZAMBIA**

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**Perceptions of Teachers and Learners of the  
Effects of COVID-19 on the Teaching and  
Learning process in Selected Secondary Schools in  
Kapiri- Mposhi District, Zambia**

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**Abstract**

**Purpose:** The purpose of this study was to examine the perceptions of teachers and learners of the effects of Covid-19 on the teaching and learning process in the selected secondary schools in Kapiri- Mposhi District.

**Methodology:** Ten schools were selected using random sampling from the urban and rural parts of the district, from which a total of 197 participants comprising 100 grade 9 and 12 learners and 97 teachers, were sampled. A questionnaire, face to face interviews and focus group discussions were also used to collect data for this study.

**Findings:** The findings of the study revealed that COVID-19 was viewed to have had affected the teaching and learning negatively, as it was considered to have led to negative effects such as the closure of schools, loss of learning time, ineffective teaching and learning, poor or unequal access to learning opportunities, especially between learners in the urban and rural located schools regarding online learning. Out of 197 respondents, most of the participants (90.9%) agreed that COVID-19 may lead to unequal access to educational resources, and also that school closures may negatively impact teaching and learning outcomes, especially for the underprivileged. Further, 88.8%, 87.3%, 86.8% and 85.8% of the respondents were of the opinion that learners may substantially lag behind especially in reading and mathematical subjects, stigmatization of infected learners and staff may heighten absenteeism, school closures may put strain on parents and teachers to provide childcare and manage distance (remote) learning while learners were out of school, and risky behavior may increase that may lead to increased teenage pregnancies and substance abuse among learners, respectively.

**Unique Contribution to Theory, Practice and Policy:** The study contributes to literature by providing more insight on how the Covid-19 pandemic affected the teaching and learning in the selected schools, it provides knowledge and insights which could also be used to understand the effect of the pandemic on education in general and thus help in finding solutions for such emergencies in future.

**Keywords:** *COVID-19 Pandemic, Perceptions, COVID-19 Effects, Teaching and Learning, E-Learning, Blended Learning, Curriculum, Social Learning Theory*

## **INTRODUCTION**

Corona virus disease (COVID-19) is an infection which resulted from a novel severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). Therapeutic diagnosis and findings have revealed that people infected with COVID-19 can be symptomatic or asymptomatic in the early stages usually depending on ones' immune system. The first symptoms of the infection are said to be a dry cough, fever, tiredness, shortness of breath and general body weakness (Zhong et al, 2020). The corona virus disease is a highly infectious disease which spreads through droplets (WHO, 2020).

The global outbreak of the COVID-19 pandemic spread worldwide affecting almost all countries and territories. The outbreak was first identified in Wuhan, China in December 2019. The public care strategies have included handwashing, wearing face masks, physical distancing, and avoiding mass gathering and assemblies. According to Sintema, (2020), lockdown and staying at home strategies have been put in place as the needed action to flatten the curve and control the transmission of the disease. The current worldwide rapid spread of the novel corona virus disease of 2019 referred to as COVID-19 led the World Health Organization (WHO) to declare it as a full global pandemic in March, 2020. The unprecedented rapid transmission of the virus has already reached all countries in the world. According to the WHO statement on the second meeting regarding the outbreak of novel coronavirus (2019-nCov) of 2020; the spread of the corona virus has already reached all countries and all territories around the world and there were over 49 million confirmed cases and more than 1.2 million deaths worldwide as of 5<sup>th</sup> November, 2020 (2) and as of 5<sup>th</sup> November, 2020, a total of 1,854,169 COVID-19 cases and 44, 316 deaths were reported from 57 countries in Africa. The rapid transmission of the virus from person to person coupled with the lack of effective medications and vaccines has posed serious challenges to the control of the spread of the disease. Several countries instituted various containment measures, including a range of physical and social distancing measures to flatten the epidemiological curve and avert morbidity and mortality due to COVID-19 (Viner et al., 2020; Quaife et al., 2020).

The first confirmed two cases of COVID-19 in Zambia were reported in March 2020. According to the Ministry of Health as of 21<sup>st</sup> September 2020 there were 14,174 cases, 13,629 recoveries and 327 deaths. Public health awareness regarding the pandemic have been done mainly through the MOH by messages on the local radio stations and televisions. However, unlike other countries in the region, while measures were put in place to slow down the spread of the virus, Zambia did not institute a full-scale lockdown. Nonetheless, schools and tertiary education institutions were closed.

### **Statement of the Problem**

According to Nkwain and Simwanza (2020), by mid-year, several countries in the Southern Africa region that had closed schools started reopening them once they felt they had sufficiently contained

the spread of the virus and reduced the mortality. In Zambia, learners in examination classes were allowed to return to school on 1<sup>st</sup> June, 2020. On 11<sup>th</sup> September, 2020, a month after the World Health Organization (WHO) and United Children's Fund (UNICEF) had warned of the harmfulness of prolonged school closures, the President of the Republic of Zambia then announced the reopening of schools. This ended a local closure that had lasted longer than in most other countries in the region and one that threatened to deteriorate education standards in the country (Nkwain and Simwanza, 2020). This was also in view of giving the learners' face-to-face contacts in order for them to prepare for the examinations adequately. While the UN COVID-19 Emergency Report (2020), acknowledged that there were several likely challenges to be faced by schools in Zambia; a search in the current literature did not seem to show clear evidence on how the Covid-19 pandemic affected the teaching and learning and how teaching and learning was actually done in order to ensure the safety of both teachers and learners while learning during the pandemic and how Covid-19.

A few studies have been carried out on COVID-19 and education in Zambia such as by Sintema (2020) entitled the Effect of COVID-19 on the Performance of Grade 12 Students the implications for STEM Education, Hapompwe, et al (2020) also conducted a study on the Impact of COVID-19 on Zambia's General Education Examination Candidates' Academic Performance in particular reference to E-Learning Issues. However, both studies focused on performance in examinations. The other study carried out was on the understanding of the implications of COVID-19 school closures on Learners in Zambia, this study too focused on the effects of COVID-19 on the economy and education in general. This study therefore sought to find out from the teachers and the learners their perceptions on the effects of the Covid-19 pandemic on the teaching and learning process in the selected schools.

It was in view of this gap that this study endeavoured to find out how teaching and learning was done when schools were reopened amidst the Covid-19 pandemic and to further explore from the teachers and learners how the pandemic affected the teaching and learning process.

### **Purpose of the Study**

The purpose of the study was to find out the perceptions of the teachers and learners on the effect of Covid-19 on the teaching and learning process in the selected secondary schools. **Research Objective**

To find out the perceptions of the teachers and learners on the effects of Covid-19 pandemic on the Teaching and Learning Process in selected secondary schools in Kapiri Mposhi District.

### **LITERATURE REVIEW**

#### **Global Impact of COVID-19 Pandemic on Education**

The COVID-19 pandemic has affected educational systems worldwide, leading to the near-total

closures of schools, universities and colleges. Most governments decided to temporarily close educational institutions in an attempt to reduce the spread of COVID-19. According to UNESCO, (2020), the Corona virus disease (Covid-2019) resulted in the total shutting of schools in about 215 countries worldwide. It is further stated that this accounted for over 1.6 billion students in the world who were obliged to stay out of school as social distancing was being enforced globally to curtail the spread of the corona virus disease. As of July 2020, 98.6% of learners worldwide were affected by the pandemic, representing 1.725 billion children and youth, from pre-primary to higher education, in 200 countries (United Nations, 2020).

The COVID-19 pandemic has affected education, in various ways. As a result of the closure of universities and schools, teachers and students had to rapidly adapt to remote teaching and learning. Several countries instituted various containment measures, including a range of physical and social distancing measures to flatten the epidemiological curve and avert morbidity and mortality due to COVID-19.

The rapid, unexpected and 'forced' transition from face-to-face to remote teaching entailed several challenges and constraints but also opportunities that needed to be examined. Existing literature points to an emergency remote teaching (Bozkurt and Sharma, 2020) or 'emergency e-Learning' (Murphy, 2020: 492) and to difficulties associated with poor online teaching infrastructure, inexperience of teachers, the information gap (i.e., limited information and resources to all students) and the complex environment at home (Zhang et al., 2020). In addition, lack of mentoring and support (Judd et al., 2020) may have led to unequal access to educational resources, and also that school closures may have negatively impacted teaching and learning outcomes, especially for the underprivileged. The pandemic has impacted education in three major ways, including missed learning for the majority of the pre-pandemic students, loss of access to vital school- provided services and leaving more kids behind (Obiako and Adeniran, 2020)

Furthermore, Obiako and Adeniran (2020) state that a lesser percentage of learners who were in the urban areas, and likely to hail from higher-income families, stood more chances to access education during the school closures through technology, leaving behind the majority of the learners from poor homes and rural and suburban areas (Zhong, 2020). Other than this, learners in schools that lacked the resources or capacity to transition to online learning delivery were likely to miss out on learning (Leung & Sharma, 2020). There were also issues related to teachers' competencies in the use of digital instructional formats (Huber and Helm, 2020). When the majority of the learners and teachers lacked the tools for virtual learning, it was practically impossible to embark on distance learning (Olutola and Olatoye, 2015).

According to Pokhrel and Chhetri (2021), transitioning from traditional face-to-face learning to online learning was entirely a different experience for the learners and the educators, which they were expected adapt to with little or no other alternatives available and as a result the education

system and the educators adopted “Education in Emergency” through various online platforms and were compelled to adopt a system that they were not prepared for. One of the major devastating effects of COVID-19 has been inequities in education. Various studies have outlined the unequal effect of location on different dimensions of education (Karlidag- Dennis, Hazenberg & Dinh, 2020). Phelps & Sperry, (2020) argue that the pandemic caught the education sector off guard, because there were no guidelines for planning and delivering of online education for primary and secondary schools.

### **Effects and Mitigation Measures of COVID-19 on Education in Zambia**

In Zambia, during the closure of schools just like in other several countries worldwide and in the sub region, alternatives to in-class learning were introduced. Many countries including Zambia put in place alternative forms of learning such as online classrooms, web-based courses, and homeschooling, but these were inaccessible to most children in rural areas and those from poor economic background (Akseer et al., 2020; Sinha et al., 2020).

The Ministry of General Education availed an educational programme on the national broadcaster and ‘smart revision,’ an online service that allowed learners in final examination classes to prepare for examinations (UNESCO Report, 2020). Some of the measures introduced to mitigate short-term and longer- term effects of the school closures on learners included devising distance learning mechanisms. According to the Zambia Policy Report (July 2020), schools reopened for examination classes to ensure that end of year examinations continued as planned, schools were sanitized and provided with hand washing facilities and soaps, though there was still a need for more supplies in order to continue averting the effects of the coronavirus.

The distance learning mechanisms put in place included the use of internet to facilitate learning on WhatsApp and other online platforms. However, a large proportion of households in Zambia do not have access to television, radio and internet. Rural learners were the most affected, with only 11% of rural households having access to electricity (World Bank, 2020). As a result, remote-learning was ineffective and not accessed by a large proportion of students.

While the UN COVID-19 Emergency Report (2020), acknowledged that there were several likely challenges to be faced by schools in Zambia; a search in the current literature does not seem to show studies about the knowledge of COVID-19 among teachers and learners and their perspectives on the effect of COVID-19 on the teaching and learning during this pandemic period time.

### **Theoretical Framework**

This study has been guided by the school adaptation model which comes from the perspective of Social Learning theory by Bandura (1997). According to Bandura (1997) school adaptation could be considered as the process in which students learn how to act in a way suited to a new



environment. Adaptation is considered as one of the most important capacities of human behaviour and it is also a factor in human motivation and in satisfying human needs (AlZboon, 2013). Perry and Weinstein (1998) suggested that successfully adapting to the school environment and meeting new expectations and demands is marked by a variety of competencies. They further stated three main competence domains of adaptative performance that can be applied to high school students namely academic, social, and behavioural. In academic competency, students are expected to possess the meta-cognitive skills for learning; in the social domain, students should be capable of building up harmonious relationships with their peers and teachers; and in the behavioral domain, emotional self-regulation is highlighted. (Kaya and Akgün, 2016). Adaptation to high school puts higher demands on adolescents to change their own behaviors in three highly related aspects of this taxonomy, including learning adaptability, stress-handling, and interpersonal adaptability. This theory guided this study and provided deeper understanding of the process of teaching and learning during the COVID-19 pandemic. It further gives insights on how both teachers and learners needed to adapt to the changing environment of learning and teaching amidst the corona virus pandemic. (Kabeta, et al., 2022)

The synergy between the perceptions of teachers and learners on the effect of Covid- 19 pandemic on the teaching and learning of mitigation was further explained using the conceptual framework (Figure 1)

### Conceptual Framework- Effect of Covid- 19 on Teaching & Learning

This study adopted the conceptual framework captioned in figure 1. To show how the research variables interacted with each other. Covid- 19 is the independent variable that interacted with the various mitigation measures that were instituted to allow schools to re-open and these had an effect on the teaching and learning.

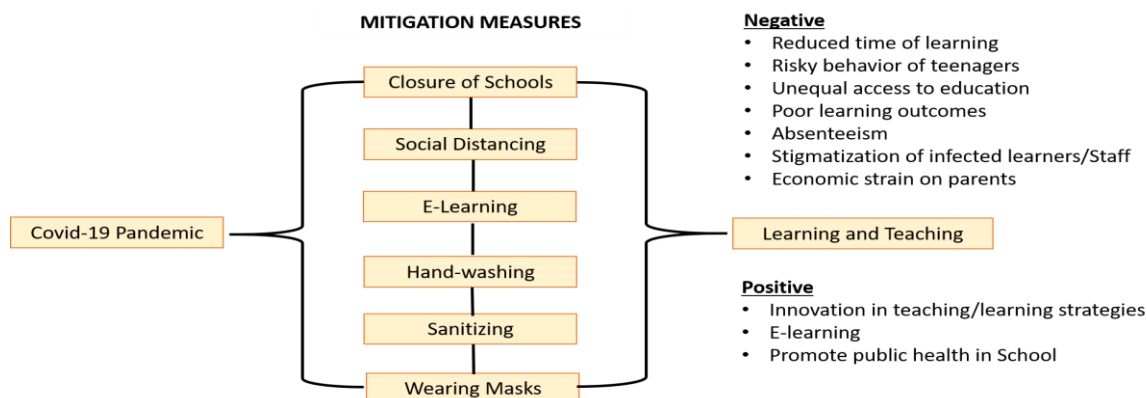


Figure 1: Conceptual Framework- Effect of Covid- 19 Pandemic on Teaching & Learning

Source: Authors 2022

## METHODOLOGY

This study adopted a descriptive cross-sectional survey research design. Both quantitative and qualitative approaches were used, the Likert type closed questionnaire was used, face to face interviews and focus group discussions (FGDs) were used to gather information in this study. The population of this study comprised all secondary school teachers and learners in Kapiri- mposhi.

This study sample size was 197, consisting of 50 grades 9 and 50 grade 12 learners, and 97 teachers from the ten selected secondary schools. Both non-probability and probability sampling techniques. A total of 10 schools were sampled simple randomly using a list of schools in the district that was obtained from the office of the District Education Board Secretary (DEBS). Purposively, the examination grades i.e., grade 9s and 12s of 2020 were sampled in all the five selected rural and five urban secondary schools where data was obtained for use in this study. Quantitative data were analyzed using SPSS Version 22 and the qualitative data were analyzed based on the categorization of responses into themes generated from the objectives of the study.

## FINDINGS AND DISCUSSION

The findings of this study are presented in line with the objective of the study as follows:

### Perceptions of Teachers and Learners on the Effects of Covid-19 on Teaching and Learning

#### Demographics of the Study

**Table 1: Participants' Demographic Characteristics (n = 197)**

Characteristic	Value		
	Frequency (n)	Percent (%)	
Gender	male	114	57.9
	female	83	42.1
Age in Years	≤ 18	90	45.7
	19 - 39	74	37.5
	≥ 40	33	16.8
Social Status	Learner	100	50.8
	Teacher	97	49.2
School Status	Rural	107	54.3
	Urban	90	45.7

Source: Authors' Field Data (2020)

**Table 2:** presents a summary of the on-scale responses (the Likert scale of 1-5 from strongly disagree to strongly agree) to the survey instruments that presented 11 statements describing aspects of teachers' and learners' perceptions about the effects of COVID-19 on the teaching and learning processes in Kapiri- mposhi district.

The findings on secondary school teachers' and learners' perceptions about effects of COVID-19, in form of descriptive statistics (percentages and frequencies) are summarized in Table 1. It must be noted that since the survey questionnaire measured the perceptions of teachers and learners



about the effects of COVID-19 on the teaching and learning processes in Kapiri- Mposhi district in terms of either agreeing or disagreeing with each of the 11 questionnaire items in this section,

**Table 2: Frequency and Percentage Analysis of Teachers and learners’ Perception of the Effects of COVID-19 on Teaching and Learning Processes in Kapiri- mposhi District.  $n = 197$**

Item description	Perception Category					
	Negative		Neutral		Perception	
	Positive				Perception	
	f	%	f	%	f	%
School closures may lead to unequal access to technology needed for continued teaching and learning	20	10.2	14	7.1	163	82.7
Stigmatization of infected learners and staff may heighten absenteeism	9	4.6	16	8.1	172	87.3
Shortened academic calendars may increase gap between low and high achieving learners	20	10.2	18	9.1	159	80.7
COVID-19 may lead to unequal access to educational resources	9	4.6	9	4.6	179	90.9
School closures may put strain on parents and teachers, to provide childcare and manage distance (remote) learning while learners are out of school	10	5.1	16	8.1	171	86.8
School closures may negatively impact teaching and learning outcomes, especially for the underprivileged	8	3.0	12	6.1	179	90.9
May promote public health in schools	24	12.2	37	18.8	136	69.0
Risky behaviors may increase that may lead to increased teenage pregnancies and substance abuse among learners	17	8.6	11	5.6	169	85.8
learners may substantially lag behind especially in reading and mathematical subjects	5	2.5	17	8.7	175	88.8
May bring about innovations in teaching and learning Strategies like use of e-platforms (zoom, TV, Podcast, etc.)	15	7.6	36	18.3	146	74.1
May lead to compromised nutrition for children in schools where food is provided: so, may impact negatively on their academic performance	37	18.8	42	21.3	21.3	59.9

Source: Author (2020).

The responses were re-coded into three categories, namely, 3 = positive perception, by combining the strongly agree (5) and agree (4) responses, neutral = 2, which was labeled 3 before collapsing the response categories, and 1 = negative perception, by combining the strongly disagree (1) and disagree (2) categories. For the purposes of interpreting the findings of this study, disagreement was considered to mean that participants had negative perception, while agreement meant a positive perception of each of the eleven questionnaire statements about COVID-19 effects.

The positive perception of the participants about the effects of COVID-19 on the teaching and learning processes was generally high going by the results as tabulated in table 1 that show that the out of the 197 respondents, 59.9% to 90.9% agreed with the 11 statements that were used to

measure the perceptions of teachers and learners about the effects of COVID-19 on the teaching and learning processes. In this regard, out of 197 respondents, most of the participants (90.9%) agreed that COVID-19 may lead to unequal access to educational resources, and also that school closures may negatively impact teaching and learning outcomes, especially for the underprivileged (Table 1). This finding is in line with the findings of the study by Judd et al., (2020). Further, 88.8%, 87.3%, 86.8% and 85.8% of the respondents were of the opinion that learners may substantially lag behind especially in reading and mathematical subjects, stigmatization of infected learners and staff may heighten absenteeism, school closures may put strain on parents and teachers to provide childcare and manage distance (remote) learning while learners are out of school, and risky behavior may increase that may lead to increased teenage pregnancies and substance abuse among learners, respectively. Results also show that, out of the 197 respondents who answered the survey questionnaire, 82.7% felt that school closures may lead to unequal access to technology needed for continued teaching and learning, and 80.7% felt that shortened academic calendars may increase gap between low and high achieving learners. In line with the findings of the current study, various other studies, it was reported that because most governments around the world had temporarily closed educational institutions in an effort to curb the spread of the COVID-19 pandemic, educational activities that existed throughout the world were inhibited (Nkwain and Simwanza, 2020; Pragholaipati, 2020; and UNESCO, 2020). This is also supported by Obiako and Adeniran, (2020) who found that the pandemic has impacted education in three major ways, including missed learning for most of the pre-pandemic students, loss of access to vital school-provided services and leaving more kids behind. Other than this, learners in schools that lack the resources or capacity to transition to online learning delivery will miss out on learning (Leung and Sharma, 2020).

However, this study also revealed that participants perceived Covid-19 as having had some positive effects on the teaching and learning processes. For instance, 74.1% of the 197 survey respondents believed COVID-19 may have brought about innovations in teaching and learning strategies like use of e-platforms (Zoom, TV, Podcast, etc.). This effect may be generally considered a positive effect of COVID-19. Additionally, of the 197 survey participants, 69.0% agreed that COVID-19 was likely to promote public health in schools, while 59.9% felt that COVID-19 may lead to compromised nutrition for children in schools where food is provided and that may impact negatively on their academic performance.

Following the descriptive analysis of data, the independent (2-tailed) samples Mann-Whitney U-test was conducted to investigate if there were significant differences between males and females, teachers and learners, rural schools and urban schools about the perceived effects of COVID-19 on the teaching and learning processes. The alpha ( $p$ ) used was  $p \leq .05$ .

Particularly, regarding the male and female respondents, the null and alternative hypotheses were

stated as follows:

*H<sub>0</sub>: There is no significant difference in perceived effects of COVID-19 on the teaching and learning processes between the male and female respondents, across the eleven items used aggregately to measure the effects variable.*

*H<sub>1</sub>: There is a significant difference in perceived effects of COVID-19 on the teaching and learning processes between the male and female respondents, across the eleven items used aggregately to measure the effects variable.*

The Mann-Whitney U-test results revealed that there were insignificant differences across all the eleven items) between the male and female respondents.

Regarding the independent (2-tailed) samples Mann-Whitney U-test carried out to find out if there were significant differences in perceived effects of COVID-19 on the teaching and learning processes between the teacher and learner respondents, across the eleven items used aggregately to measure the effects variable.

The null and alternative hypotheses were stated as follows:

*H<sub>0</sub>: There is no significant difference in perceived effects of COVID-19 on the teaching and learning processes between the teacher and learner respondents, across the eleven items used aggregately to measure the effects variable.*

*H<sub>1</sub>: There is a significant difference in perceived effects of COVID-19 on the teaching and learning processes between the teacher and learner respondents, across the eleven items used aggregately to measure the effects variable.*

The Mann-Whitney U-test results revealed a mix of significant and insignificant differences in perceived effects of COVID-19 on the teaching and learning processes between the learner and teacher respondents. Six out of the eleven items revealed significant differences, namely;

(Item1- school closures may lead to unequal access to technology needed for continued teaching and learning) between the learner (mean rank = 89.56, n = 100) and teacher respondents (mean rank = 100.74, n = 97),  $U = 3905.500$ ,  $z = -3.591$ ,  $p = .000$

(Item 2 - stigmatization of infected learners and staff may heighten absenteeism) between the learner (mean rank = 91.70, n = 100), and teacher respondents (mean rank = 106.53, n = 97),  $U = 4120.00$ ,  $z = -3.158$ ,  $p = .002$

(Item 3 - shortened academic calendars may increase gap between low and high achieving learners) between the learner (mean rank = 92.90, n=100), and teacher (mean rank = 105.29, n = 97),  $U = 4240.000$ ,  $Z = -2.218$ ,  $p = .027$

(Item 4 = COVID-19 may lead to unequal access to educational resources) between learner (mean rank = 95.24, n = 100) and the teacher respondents (mean rank = 102.88, n = 97),  $U =$

4474.000,  $Z = -1.881$ ,  $p = .060$

(Item 5 - School closures may put strain on parents and teachers, to provide childcare and manage distance (remote) learning while learners are out of school) between the learner (mean rank = 94.26,  $n = 100$ ), and the teacher respondents (mean rank = 103.89,  $n = 97$ ),  $U = 4376.000$ ,  $Z = -2.016$ ,  $p = .044$

(Item 6 - impact teaching and learning outcomes, especially for the underprivileged) between the learner (mean rank = 94.18,  $n = 100$ ) and the teacher respondents (mean rank = 103.97,  $n = 97$ ),  $U = 4368.000$ ,  $z = -2.412$ ,  $p = .016$ .

The rest (five) of the items that were used to aggregately measure the learners' and teachers' perceptions about the effects of COVID-19 on the learning processes revealed insignificant differences between the learner and the teacher respondents. Therefore, overall, it may be deduced that the status of a respondent either being a learner or a teacher has fair degree of influence of one's perceptions of the effects of COVID-19 on the learning and teaching processes.

The status of school either being rural or urban, was another variable where the independent (2-tailed) samples Mann-Whitney U-test was carried out to find out if there were significant differences in perceived effects of COVID-19 on the teaching and learning processes, across the eleven items used aggregately to measure the effects variable.

The null and alternative hypotheses were stated as follows:

*H<sub>0</sub>: There is no significant difference in perceived effects of COVID-19 on the teaching and learning processes between the rural and urban respondents, across the eleven items used aggregately to measure the effects variable.*

*H<sub>1</sub>: There is a significant difference in perceived effects of COVID-19 on the teaching and learning processes between the rural and urban respondents, across the eleven items used aggregately to measure the effects variable.*

The results of independent (2-tailed) samples Mann-Whitney U-test generally revealed insignificant differences between the rural and urban survey participants in perceived effects of COVID-19 on the teaching and learning processes across 10 of the 11 items of the questionnaire. The one item that revealed significant differences, was

*(Item 7- COVID-19 may promote public health in schools) between the learner (mean rank = 107.53,  $n = 100$ ) and teacher respondents (mean rank = 88.86,  $n = 97$ ),  $U = 3902.000$ ,  $z = -2.814$ ,  $p = .005$ .*

This is however, in contrast with the findings of Karlidag- Dennis, etal. (2020), who outlined the unequal effect of location on different dimensions of education, and Obiako and Adenirin, (2020) who stated that a lesser percentage of learners who were in the urban areas, and likely to hail from higher-income families, stand more chance to access education during school closures through technology, leaving behind most of the learners from poor homes and rural and suburban areas

(Zhong, 2020). This contrast in findings may prompt further studies as the current study did not look into this aspect.

The qualitative information about the opinions of the respondents regarding the effects of Covid-19 on the teaching and learning processes were obtained through the face-to-face interviews and the FGDs with the participants. The responses were further categorized into themes according to the objectives. Some of the key results captured using interviews and FGDs are presented below.

- The teachers' responses revealed that the teaching and learning process in the schools was greatly disrupted due to the closure of the schools and the social distancing that was implemented upon resumption of learning.
- Out of the ten schools that participated in this study three schools which are grant aided schools stated that they were following the normal schedule of teaching and learning.
- The findings from the teachers who participated in this study revealed that the teaching and learning process was negatively affected both during the closure of the schools and when the schools reopened. This was because the measures that were put in place to mitigate the spread of COVID-19 had reduced the time for teaching.
- Due to the splitting of classes the teaching time in the schools was reduced from 9 to 6 periods, in some cases. This reduction resulted into reduced contact and interaction time with learners.
- Furthermore, the splitting of classes resulted into teachers teaching 2 or 3 sessions in a day and as a result they were fatigued.
- In some schools, the study revealed that some grades were skipping days whereby they would only report two days in a week which led to a drastic reduction in learning time.

Some of the notable individual responses regarding the effects of COVID-19 on the teaching and learning processes were as follows:

One teacher said, *'teaching 2 sessions is very exhausting for the teachers, learners who needed extra attention were not getting it because the teachers are fatigued.'*

In other teacher's words, this study found out that ... *'the teaching is being hushed because the teachers are panicking in order to cover the syllabus before the examinations.'*

Another teacher observed that, ... *'teachers had a lot of work to do in order to make up for lost time, teaching had to start from where they had stopped before the closure of the schools.'* The same teacher further added that ... *'this was because not much teaching and learning took place during the closure of schools...'*

The teachers further stated that they were extremely overloaded and fatigued from teaching more than one session. For example, one teacher said ... *'we are extremely fatigued, and the teaching has become monotonous through teaching the same topics to the same class which has been split into two or three groups.'*

The teachers also revealed that the corona virus pandemic caused psychological effects on both the teachers and the learners. To emphasize this view, the following were some of the practical statements by some teachers

.... *'There was a lot of anxiety, inertia and uncertainty among learners.'* Who felt that the teachers will give them the virus?

... *'Teachers were also afraid to interact with the learners, they were scared of even marking their books for fear of getting infected with the corona virus.'*

Overall, the responses from both the teachers and learners revealed that there was not so much teaching and learning that took place during the closure of the schools.

Similarly, opinions from the Head teachers regarding the effects of learning during COVID-19 included the following.

The Ministry of Education had directed that teaching and learning should continue during this time. However, the findings from this study showed that both the teachers and learners faced a lot of challenges. The Ministry of Education had come up with the initiative of creating education channels on Zambia National Broadcasting Corporation and also schools were directed to use forums like WhatsApp and other internet options for online teaching. Regarding these strategies.

One Head teacher said .... *'The majority of the learners failed to access the online materials and lessons due to lack of internet gadgets like smart phones; the few who were able to access were those who came from wealthy families or those who lived in urban areas.'*

While another teacher said ... *'smart phones, laptops are expensive.'*

*Other notable statements captured from discussions with the Head teachers were:*

.... *'There was only one education channel on ZNBC and those in rural areas where there is no electricity had challenges to access this channel.'*

... *'There was a lot of repetition of topics.'*

... *'Some presenters of topics on the national televisions were not competent enough.'*

... *'A lot of disturbances from home environments from parents, guardians and siblings.'*

... *'Internet connectivity challenges led to some learners not covering much at home.'*

Furthermore, the learners were also asked for some opinions regarding the effects of COVID-19 on the learning and teaching processes. The responses from many learners revealed that their learning time was reduced which in turn affected the preparation (study time) which was reduced or in some cases completely scrapped off in some schools. Specifically, the following were the more notable responses from the individual learners.

*'One learner said ... 'before COVID-19 there was enough time for teaching and learning but now there is no prep time; our classes start at 07hrs to 11 hours, thereafter teachers have to teach other groups.'*

A grade 9 female learner said.... *'our parents and siblings expected us to carry out house chores*



*and especially for us girls ..., like in my case, I had several instances where, while in the middle of an online class at home, either mum or my siblings would ask me to make coffee for her or my siblings, which I found disruptive...*

Another learner said ... *'we are lagging behind in most of the subjects.'*

The other notable voices of learners included the following:

*... 'teachers are teaching in a hurried way, and they are not marking our books for fear of catching the virus.'*

*'Teacher-Learner interaction has greatly reduced; we can no longer go to consult teachers in their departmental rooms because they cite social distancing.'*

*... 'Group study has also been affected because everyone is scared of corona.'*

However, in some of the schools especially the public and rural schools, the learners in general stated that the teaching and learning was adversely affected due to lack of classroom space and furniture. For example, one voice of a learner said

*... 'We don't have enough classrooms and desks, and this makes us not to be able to maintain social distance.'*

While another learner said

*... 'As a result ... (of lack of classrooms) our schools make us to learn on alternative days, like 3 days in a week.'*

One other learner added that ... *"using masks all the time is very stressful; sometimes we feel like suffocating, and also you can't get what the teacher or your classmates are saying..."*

## **Conclusion**

The findings of this study showed that overall the COVID-19 pandemic affected the teaching and learning process in both urban and rural schools in Kapiri- mposhi district. While it is recognizable that the teaching and learning process in the district may have had various challenges, this study revealed that the COVID-19 pandemic has created new challenges in teaching and learning for secondary school teachers in the district specifically and probably in Zambia in general. These new challenges are of different dimensions ranging from psychological, health, infrastructure, methods of teaching and learning to technology. Evidently, most (59.9% to 90.9%) of the participants of the current study perceived COVID-19 as having had largely negatively affected the teaching and learning process in the district. However, the authors of the current study recommend that schools and education authorities at education and national levels to take advantage of the findings of this study and re-devise what it means to teach and learn during and after a pandemic such as Covid-19 in order to reduce the effects of pandemics of such nature in the future. Such measures, may cut across various learners and teachers of various socioeconomic backgrounds such as gender, being a learner from rural or urban schools, for example, adopting blended teaching and learning processes whereby online classes should go along with face-to-face classroom teaching. The

awareness created by the findings of this study will contribute to proper planning and preparedness for future pandemics in terms of teaching and learning. This is because when people are knowledgeable and aware of something, it becomes easier to prevent and control (Kabeta, et al., 2022)

### **Recommendations**

Further, arising from the findings of this study, the study also recommend that the Ministry of Education should consider designing some training activities aimed at reducing the effects of future pandemics like COVID-19.

- Areas where teachers, learners alike, may benefit from, both in house and in service teacher education, may include information and communication technology skills enhancement for the 21st century educational process,
- Making the face-to-face classes more interactive in the post-pandemic era, that will support teachers and learners in coping with situations due to natural disasters or when something similar to the COVID-19 pandemic occurs.
- School curriculums need to be reviewed in order to bring in new teaching methodologies that will embrace e-learning and other aspects learned through the Covid-19 pandemic.
- The government must also introduce blended learning in schools so that even when there is an emergency teaching and learning will continue and there wouldn't be social and technological shocks and unnecessary panicking in the delivery of education.

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