

# Reimagining the Impact of COVID-19 on the Namibian Education System: Insights from the Oshana Education Region

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## Abstract

This study aimed to investigate the impact of the COVID-19 pandemic on the Namibian education system, specifically focusing on the Oshana Education Region. Sixteen participants, who were purposefully selected from primary and secondary schools in the region, took part in in-depth face-to-face interviews. The study utilized an exploratory design, and the collected data was analyzed thematically. The findings revealed several key themes related to the impact of the pandemic on the education system, including the disruption of learning, educational inequalities, academic and occupational challenges, learning loss, teacher adaptation, infrastructure and resources, and assessment and evaluation practices. These findings provide valuable insights into the effects of the pandemic on the education system and highlight areas that require attention and improvement to ensure a resilient and inclusive educational environment.

## Keywords

COVID-19 Pandemic, Namibian Education System, Oshana Education Region, Impact

## 1. Introduction and Background

The study titled “Reimagining the Impact of COVID-19 on the Namibian Education System: Insights from the Oshana Education Region” aims to investigate the effects of the COVID-19 pandemic on the education system in Namibia, specifically focusing on the Oshana Education Region (Ministry of Education, Arts and Culture, Namibia, 2020). The study seeks to provide insights into the

challenges faced by the education sector during the pandemic and draw lessons that can inform future strategies for handling similar crises.

The COVID-19 pandemic has had a significant and unprecedented impact on education systems worldwide (UNESCO, 2020). The closure of schools and the shift to remote learning have disrupted traditional modes of education delivery and posed numerous challenges for students, teachers, parents, and education policymakers. In the Namibian context, the pandemic has brought about substantial changes in teaching and learning practices, curriculum delivery, assessment methods, and overall educational processes. The Oshana Education Region, located in northern Namibia, serves as a specific case study within the broader context of the Namibian education system (Ministry of Education, Arts and Culture, Namibia, 2020). By examining the Oshana region, the study aims to provide a localized perspective on the impact of the pandemic, considering the unique characteristics and challenges faced by this particular region. This region-focused approach allows for a deeper understanding of the specific issues and experiences related to the education sector during the pandemic.

The COVID-19 pandemic has caused unprecedented disruptions in the global education landscape, and Namibia's education system has not been exempt from its impact. The closure of schools and the implementation of social distancing measures have necessitated a rapid shift to remote learning modalities, posing numerous challenges for students, teachers, parents, and policymakers. These challenges include issues such as limited access to digital resources and technology, inequalities in educational opportunities, the need for teacher training in online instruction, and the social and emotional well-being of students in the face of prolonged school closures (United Nations, 2020).

The Oshana Education Region, situated in northern Namibia, represents a unique context for examining the effects of the pandemic on the education system. This region encompasses diverse communities with distinct socioeconomic backgrounds, educational infrastructure, and resources. By focusing on the Oshana region, the study can shed light on the specific challenges faced by schools, teachers, and students in this particular context.

Understanding the impacts of COVID-19 on the Namibian education system, particularly in the Oshana Education Region, is crucial for informing future strategies and policies. By conducting an in-depth analysis of the challenges encountered during the pandemic, the study aims to provide insights that can guide the development of effective interventions and measures to enhance the resilience and adaptability of the education system. These insights can also contribute to the formulation of strategies to mitigate the impact of future pandemics or other emergency situations. Moreover, the study seeks to draw lessons from the experiences of the Oshana region that can be applicable not only to Namibia but also to other regions and countries facing similar challenges. By examining the innovative practices, successful approaches, and lessons learned from the Oshana Education Region, policymakers, educators, and stakeholders can gain valuable insights that can inform decision-making, policy formulation,

and educational reforms to better prepare for future crises. By examining these challenges, the research aims to generate insights and recommendations that can inform future strategies for handling similar crises in the education system.

Additionally, the study seeks to draw lessons from the experiences of the Oshana region that can guide policymakers, educators, and other stakeholders in developing effective strategies to mitigate the impact of future pandemics or other emergency situations. These lessons may include best practices for remote learning, strategies for supporting teachers and students during crisis situations, and the importance of building resilience and flexibility into education systems (Ministry of Education, Arts and Culture, Namibia, 2020).

## 2. Statement of the Problem

The COVID-19 pandemic has significantly disrupted the Namibian education system, affecting teaching and learning processes, curriculum implementation, and overall educational experiences (Nyashanu, 2019). School closures and the abrupt shift to remote learning have posed substantial challenges for students, teachers, parents, and policymakers. This study focuses on understanding the specific impacts of the pandemic on the education system in Namibia, specifically in the Oshana Education Region. The aim is to explore lessons learned from this region's experiences to inform effective strategies and policies for handling future pandemics or emergencies. The problem addressed by this study is to assess the impact of COVID-19 on the Namibian education system, concentrating on the Oshana Education Region, and derive insights for navigating similar crises in the future. Through an examination of the pandemic's effects on the Oshana Education Region, this study aims to identify and analyze challenges, including issues related to access to remote learning technologies, disruptions in curriculum implementation, social and emotional impacts on students, and the adaptation of teachers to new teaching methodologies (Ryszard & Zaręba, 2020). It seeks to provide in-depth insights into the specific challenges faced by schools, teachers, and students in this region, drawing lessons that can guide policymakers, educators, and stakeholders in developing effective strategies to mitigate the impact of future pandemics or emergencies. Ultimately, the study aims to contribute to the reimagining and strengthening of the Namibian education system in the face of similar crises.

## 3. Literature Review

### 3.1. Theoretical Framework

The study utilised the Systems Theory to lay the theoretical lens. Systems Theory, developed by Ludwig von Bertalanffy, focuses on understanding complex systems and their interconnectedness (von Bertalanffy, 1968). In the context of this study, the education system can be viewed as a complex system that includes various components such as students, teachers, curriculum, infrastructure, policies, and socio-cultural factors. The Systems Theory provides a lens through

which to analyze the interdependencies and interactions between these components and how they are affected by the COVID-19 pandemic.

By applying the Systems Theory, the study can explore the interconnected nature of the education system in Namibia, particularly in the Oshana Education Region, and understand how disruptions caused by the pandemic impact different system elements. It allows for a holistic understanding of the system's functioning, identifying feedback loops, and understanding how changes in one component can ripple through the entire system (Ahmed & Sintayehu, 2022).

Furthermore, the Systems Theory enables the examination of the dynamic nature of the education system during the pandemic. It recognizes that the system is not static but constantly evolving and adapting to internal and external influences. This theoretical framework can help identify the emergent properties of the system, understand the complex interactions between system elements, and uncover unintended consequences that may arise from policy interventions or changes in one component of the system (Alajmi, 2022). Therefore, the Systems Theory provided a suitable theoretical framework for the study as it allows for the analysis of the interconnectedness and dynamic nature of the education system in the face of the COVID-19 pandemic. It enables a holistic understanding of the system, identifies feedback loops, and highlights the complex interactions between system components (Ali et al., 2021). By utilizing this framework, the study can gain valuable insights into the impacts of the pandemic on the Namibian education system and derive lessons for handling future pandemics or other emergency situations.

### **3.2. The Impact of COVID-19 on Education Systems**

The impact of COVID-19 on education systems extends beyond immediate disruptions and encompasses long-term implications. The prolonged closure of schools and the shift to remote learning have raised concerns about learning loss and academic achievement. Research suggests that extended periods of school closures can result in significant setbacks in learning outcomes, particularly for vulnerable student populations (Cooke & White, 2021). The digital divide and disparities in access to technology and internet connectivity further exacerbate educational inequalities (UNESCO, 2020).

Moreover, the pandemic has highlighted the critical role of teachers in navigating the challenges of remote learning and ensuring quality education. Teachers have had to rapidly adapt to online teaching platforms, design engaging and interactive virtual lessons, and provide individualized support to students from a distance. The shift to remote teaching has required professional development and training to enhance digital pedagogical skills (Francis et al., 2023). The resilience and adaptability of teachers have been instrumental in maintaining educational continuity during these unprecedented times.

The impact of COVID-19 on education systems is not limited to academic aspects but also affects the broader social and emotional well-being of students.

School closures disrupt the socialization and peer interactions that are essential for students' social development and emotional support. Additionally, the closure of schools has posed challenges for children with special educational needs who rely on specialized support services provided within the school setting (Hoofman, 2021; Hui et al., 2022). The mental health and psychosocial impact on students during the pandemic require attention and targeted interventions.

In response to the challenges posed by COVID-19, education systems have implemented various strategies and innovations. These include the development of remote learning platforms, the provision of educational resources and materials, and the adoption of alternative assessment methods (OECD, 2020). Collaborative efforts among governments, educational institutions, and stakeholders have aimed to address the immediate and long-term impacts of the pandemic on education.

One significant area of concern is the widening educational inequalities caused by the pandemic. Disadvantaged students, including those from low-income backgrounds, marginalized communities, and remote areas, often face greater challenges in accessing remote learning resources and support (Kornpitack & Sawmong, 2022). The digital divide, limited internet connectivity, and lack of necessary devices pose barriers to equitable educational opportunities (UNESCO, 2020).

The closure of schools during the pandemic has also highlighted the crucial role of schools beyond academics. For many students, schools provide a safe and supportive environment, access to nutritious meals, and vital social services. The disruption of these services due to school closures can have adverse effects on students' well-being, nutrition, and overall development (Lengetti et al., 2021). The loss of social interactions, extracurricular activities, and mental health support services has implications for students' emotional and psychosocial well-being.

Furthermore, the impact of COVID-19 on education systems goes beyond the student population. Teachers and educators have faced significant challenges in transitioning to online teaching and adapting their instructional practices. They have had to quickly acquire digital skills, develop innovative teaching methods, and provide ongoing support to students in a remote learning environment (Matete et al., 2023). The professional development needs of teachers and the importance of their well-being during this transition cannot be overlooked.

In response to the challenges posed by COVID-19, education systems have implemented various strategies and innovations. These include the utilization of online platforms for remote learning, the provision of educational resources and materials through digital channels, and the adoption of alternative assessment methods (OECD, 2020). Policymakers and educators have also emphasized the need for flexible and adaptable educational systems that can respond effectively to future crises and ensure continuity of learning (Nottingham et al., 2022). The impact of COVID-19 on education systems is multifaceted and extends beyond immediate disruptions, encompassing long-term implications. Prolonged school closures and the shift to remote learning have raised concerns about learning

loss and academic achievement, particularly for vulnerable student populations. The digital divide and disparities in access to technology and internet connectivity further exacerbate educational inequalities. Teachers have played a crucial role in navigating the challenges of remote learning, requiring rapid adaptation to online teaching platforms and the development of digital pedagogical skills. The pandemic has not only affected academic aspects but also disrupted students' social and emotional well-being, with implications for social development and mental health. School closures have posed challenges for children with special educational needs. In response to these challenges, education systems have implemented various strategies, including the development of remote learning platforms, provision of educational resources, and adoption of alternative assessment methods. However, a significant concern is the widening educational inequalities, with disadvantaged students facing greater challenges in accessing remote learning resources. The closure of schools has also highlighted the critical role schools play beyond academics, providing a safe environment, access to meals, and vital social services. The disruption of these services can adversely impact students' well-being, nutrition, and overall development. The impact of COVID-19 on education extends beyond students to teachers, who have faced challenges in transitioning to online teaching, acquiring digital skills, and providing ongoing support to students. Professional development needs and the well-being of teachers are critical considerations in this transition. Policymakers and educators emphasize the importance of flexible and adaptable educational systems that can respond effectively to future crises while ensuring continuity of learning.

#### **4. Methodology**

This study employed a qualitative phenomenological approach, focusing on exploring the lived experiences and perceptions of life skills teachers in the Oshana Region in the context of the COVID-19 pandemic. Purposive sampling was utilized to select participants, specifically targeting 16 life skills teachers from various primary and secondary schools in the Oshana Region. The selection aimed to capture diverse perspectives and experiences related to the impact of the pandemic on education. The research design adopted for this study was exploratory in nature. It sought to delve into the nuanced aspects of how life skills teachers in the Oshana Region navigated the challenges posed by the COVID-19 pandemic in the education sector. The research was guided by an interpretivist paradigm. This paradigm acknowledges the subjective nature of human experiences and emphasizes the importance of understanding these experiences in their social and cultural context. The interpretivist approach allows for a holistic exploration of the meanings and interpretations that participants ascribe to their experiences.

In-depth face-to-face interviews were conducted as the primary method of data collection. This approach allowed for a rich exploration of the teachers' perspectives, experiences, and insights related to the challenges and adaptations

during the COVID-19 pandemic. The interviews were semi-structured, enabling the participants to express their thoughts freely while ensuring that key topics related to the research objectives were covered.

The study involved 16 life skills teachers to provide a comprehensive understanding of their experiences during the pandemic. Saturation, the point at which new information becomes redundant, guided the determination of the sample size. Thematic analysis was employed as the method for analyzing the interview data. This involved identifying, analyzing, and reporting patterns or themes within the dataset. The analysis process followed a systematic and iterative approach to derive meaningful insights from the participants' narratives.

## 5. Results

### 5.1. Presentation of the Biographical Information

This study comprised a sample of 16 life skills teachers, with an age range between 26 and 55 years. Among the participants, there were ten females and six males. Additionally, six of the teachers were married, while the remaining ten were single.

### 5.2. Presentation of Data

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	<b>Subtheme 1.1:</b> Disruption of Learning
	<b>Subtheme 1.2:</b> Educational Inequalities
<b>Theme 1:</b> The Impact of COVID-19 on the Namibian Education System: Insights from the Oshana Education	<b>Subtheme 1.3:</b> Academic and Occupational Challenges
	<b>Subtheme 1.4:</b> Learning Loss
	<b>Subtheme 1.5:</b> Teacher Adaptation
	<b>Subtheme 1.6:</b> Infrastructure and Resources
	<b>Subtheme 1.7:</b> Assessment and Evaluation

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#### **Theme 1: The Impact of COVID-19 on the Namibian Education System: Insights from the Oshana Education**

##### **Subtheme 1.1: Disruption of Learning**

Our study revealed a prominent subtheme highlighting the disruption of learning within the Namibian education system, specifically in the Oshana Education Region, due to the COVID-19 pandemic. This subtheme explores the effects of school closures and the transition to remote learning on the conventional methods of education delivery. On this issue, teacher 5 had this to say, *“I worried about pandemic-related learning interruptions as a teacher. The quick switch to remote learning made teaching and student engagement difficult. The digital divide increased educational inequality, hurting some students. Targeted interventions and professional development were needed to overcome these challenges and ensure equal chances,”* as a voice representing the findings stated. The sudden shift to remote learning posed various challenges for students, including limited access to technology and internet connectivity, lack of appropri-



ate learning resources, and difficulties in adjusting to virtual learning platforms. These disruptions have led to gaps in students' educational progress and potential learning loss. This thought was also supported by teacher 11 who also said that, *"As a teacher, I embraced the challenges of disrupted learning during the pandemic. I adapted my teaching methods, embraced technology, and sought professional development opportunities. Despite the hardships, I remained positive and committed to creating a supportive virtual learning environment. This experience pushed me to grow as an educator, emphasizing adaptability and creativity in teaching."* Teachers had to quickly familiarize themselves with online teaching tools and methodologies, often with limited training and resources. They faced challenges in delivering the curriculum effectively, maintaining student engagement, and providing individualized support to students in a remote setting. Based on these findings is evident that the disruption of learning has been a significant consequence of the COVID-19 pandemic in the Namibian education system, aligning with previous research in the field.

### **Subtheme 1.2: Educational Inequalities**

Another significant subtheme that surfaced in our study is educational inequalities within the Namibian education system, particularly in the Oshana Education Region, as a result of the COVID-19 pandemic. This subtheme examines how the pandemic has shed light on and intensified pre-existing disparities in access to high-quality education. On this subtheme, Participant 16 had this to say, *"As an educator, I was deeply concerned about the exacerbated educational inequalities during the pandemic. Remote learning exposed the disparities in technology access, internet connectivity, and learning resources among students. Marginalized and vulnerable students were disproportionately affected. It is crucial to implement targeted interventions, policy changes, and investments to bridge these gaps and provide equitable educational opportunities for all students."* Students from disadvantaged backgrounds and marginalized communities have faced significant challenges in accessing remote learning opportunities due to limited access to technology, internet connectivity, and learning resources. This has further widened the gap between privileged and underprivileged students in terms of educational access and outcomes. This thought was also supported by teacher 1 when she said that, *"As a teacher, the pandemic exacerbated educational disparities, which irritated me. Poor students had limited resources, infrastructure, and assistance. Systemic hurdles prevented equitable opportunity despite my efforts. Policy changes, funding, and community partnerships are needed to reduce these inequalities. A fairer education system that guarantees quality education for all kids is essential,"* added teacher 1. The lack of access to technology and internet connectivity for students from marginalized communities has impeded their ability to fully participate in remote learning, hindering their educational progress. Furthermore, the closure of schools has disproportionately affected vulnerable students who rely on schools for nutritious meals, psychosocial support, and a safe learning environment. These findings are evident to the idea that the COVID-19 pandemic has ampli-



fied existing educational inequalities within the Namibian education system, aligning with previous literature.

### **Subtheme 1.3: Academic and Occupational Challenges**

Another notable subtheme that arose from our study is the academic and occupational challenges experienced by students and educators in the Namibian education system, particularly in the Oshana Education Region, due to the COVID-19 pandemic. This subtheme investigates the effects of the pandemic on academic advancement and future career opportunities. Teacher 15 had this to say, *“As an educator, the pandemic brought academic challenges. Adapting to remote learning, creating online materials, and managing virtual classrooms became overwhelming. Students’ varying technological proficiency added complexity. It required extensive effort to ensure effective engagement. Despite challenges, I remained committed to supporting students’ progress and fostering motivation.”* voiced one perspective representing the study’s findings. The closure of schools and the shift to remote learning have disrupted the traditional learning environment, leading to potential gaps in students’ academic progress. Limited access to resources, reduced interaction with teachers and peers, and difficulties in adapting to online learning platforms have hindered students’ ability to fully engage in the learning process. This was supported by the sentiments for teacher 3 who said that, *“As a teacher, the pandemic brought significant occupational challenges. Balancing remote teaching, administrative tasks, and technology adaptations stretched my abilities. Blurred work-life boundaries and increased workload took a toll. Limited professional development and guidance added to the frustration. However, I remained resilient, seeking growth opportunities for better student support.”* expressed another teacher. Teachers had to rapidly adapt their teaching methods to online platforms, requiring them to develop new skills and navigate unfamiliar technologies. The lack of face-to-face interactions and the need to deliver engaging and effective instruction remotely presented professional challenges for educators. These findings are revealing that COVID-19 pandemic has brought forth academic and occupational challenges within the Namibian education system, which resonates with existing literature.

### **Subtheme 1.4: Learning Loss**

One of the crucial subthemes that emerged from our study is *learning loss* within the Namibian education system, with a specific focus on the Oshana Education Region, as a consequence of the COVID-19 pandemic. This subtheme explores the impact of school closures and the transition to remote learning on students’ educational progress and the potential long-term implications. Teacher 13 had this to say, *“I witnessed significant learning loss during the pandemic. I addressed it by providing targeted support, personalized instruction, and extra resources to help students catch up. Effective assessments guided instructional adaptations.”* voiced teacher. The disruption to the traditional learning environment, limited access to resources, and reduced opportunities for interaction and support have led to gaps in students’ knowledge and skills.

The abrupt shift to remote learning has posed challenges in effectively deli-

vering the curriculum and providing the same level of instruction and support as in face-to-face learning. On this issue, teacher 11 had this to say, “*The learning loss caused by the pandemic had a significant impact on students’ education. As a teacher, I worked with colleagues and education authorities to develop intervention plans. Our focus was on providing targeted support, implementing remedial programs, and creating extended learning opportunities. We aimed to prevent long-term consequences and ensure that no student’s educational journey was permanently affected by the challenges of the pandemic.*” The interruption in learning continuity and the disparities in access to resources have raised concerns about students’ readiness for future academic pursuits and their overall educational attainment. The potential consequences of learning loss may have far-reaching implications for students’ academic and socio-economic prospects. Interpreting the findings, it is evident that the COVID-19 pandemic has led to significant learning loss within the Namibian education system, aligning with previous literature.

#### **Subtheme 1.5: Teacher Adaptation**

Another significant subtheme that emerged from our study is *teacher adaptation* within the Namibian education system, with a specific focus on the Oshana Education Region, in response to the COVID-19 pandemic. This subtheme explores the challenges faced by teachers in adapting their instructional practices and strategies to the remote learning environment.

“*As a teacher, I quickly adapted my teaching methods to the online environment, exploring new technologies and resources to engage students virtually.*” voiced Teacher 12. All 16 teachers acknowledged the initial difficulties in transitioning from face-to-face instruction to remote teaching. They expressed the need to quickly learn and utilize various online platforms and tools to deliver lessons, engage students, and assess their learning remotely. This was also supported by teacher 10 who also said that, “*Despite the challenges, we have witnessed our fellow teachers’ resilience and innovative approaches in adapting to the remote learning environment. As an educator, I faced various challenges during remote teaching, including limited access to technology and the need to find innovative ways to provide feedback and support to students.*” added Teacher 9. The participating teachers shared examples of creative teaching strategies, such as pre-recorded video lessons, interactive online assignments, and virtual class discussions, which they developed to enhance student engagement and support their learning remotely. These findings are revealing that teachers in the Namibian education system, specifically within the Oshana Education Region, have demonstrated adaptability and resilience in response to the challenges posed by the COVID-19 pandemic.

#### **Subtheme 1.6: Infrastructure and Resources**

Our study also focused on infrastructure and resources in the Namibian education system, particularly in the Oshana Education Region, in the context of the COVID-19 pandemic. Teachers and students struggle to get the infrastructure

and resources they need for remote learning in this subtheme. *“As a teacher, I witnessed firsthand the impact of the digital divide on my students. Limited access to technology and reliable internet connection hindered their ability to fully participate in remote learning,”* voiced teacher 6. All the teachers highlighted the unequal access to technology, internet connectivity, and learning resources. They reported that some students faced significant barriers in participating fully in remote learning due to the lack of necessary devices, internet access, or suitable learning environments at home. This was also supported by teacher 8 when she said that, *“As an educator, I encountered resource disparities among my students. Some had access to a wealth of learning materials and resources, while others struggled to obtain even the basic necessities for remote education,”* teacher 8 added another perspective, highlighting the resourcefulness of students. The participating teachers shared examples of students creatively utilizing alternative resources, such as textbooks, offline materials, and peer support, to continue their learning despite the lack of digital infrastructure. These findings are showing that, COVID-19 pandemic has exacerbated existing inequalities in infrastructure and resources within the Namibian education system, particularly in the Oshana Education Region.

#### **Subtheme 1.7: Assessment and Evaluation**

Our study also focused on assessment and evaluation in the Namibian school system, particularly in the Oshana School Region, in the context of the COVID-19 epidemic. In remote learning, teachers confront issues assessing and evaluating student learning. *“As teachers who participated in this study, we encountered various challenges in assessing and evaluating our students’ learning during the pandemic,”* voiced one perspective representing the findings. All 16 teachers highlighted the difficulties in administering traditional assessments and examinations, as well as the limitations of remote assessment methods. They reported that the shift to remote learning necessitated adjustments in assessment strategies and the exploration of alternative assessment approaches.

*“Despite the challenges, we have explored innovative assessment methods and focused on formative feedback to ensure ongoing student engagement and progress,”* added another perspective, highlighting the adaptability of teachers. The participating teachers shared examples of utilizing online quizzes, project-based assessments, and student self-assessments to monitor and evaluate student learning remotely. It is evident that the COVID-19 pandemic has significantly impacted the assessment and evaluation practices within the Namibian education system, particularly in the Oshana Education Region.

## **6. Discussion of Results**

The Systems Theory provides a valuable framework for understanding the findings and implications of the study. According to Systems Theory, an education system can be seen as a complex system comprising interconnected components that interact and influence one another (Pérez et al., 2023; Rayan et al., 2021).

The disruptions caused by the COVID-19 pandemic in the Namibian education system can be analyzed through the lens of Systems Theory, considering the interplay of various factors and their impact on the system as a whole. The findings of the study highlight the interconnectedness and interdependence of different elements within the education system. The subthemes of disruption of learning, educational inequalities, academic and occupational challenges, learning loss, teacher adaptation, and infrastructure and resources collectively illustrate the intricate dynamics and feedback loops that emerged during the pandemic (Rodríguez-Planas, 2022; Sarfraz et al., 2022).

Applying Systems Theory, we can understand that the disruptions to learning had ripple effects throughout the system. Prolonged school closures disrupted the normal functioning of the education system, leading to learning loss and exacerbating educational inequalities (UNESCO, 2020; Kuhfeld et al., 2020). This, in turn, posed challenges for both students and teachers, affecting academic progress and creating occupational hurdles (UNESCO, 2020). The findings emphasize the need for comprehensive strategies and support measures that address these interconnected issues holistically.

The digital divide, highlighted in the subtheme of infrastructure and resources, can be viewed as a systemic barrier within the education system. Unequal access to technology and resources contributed to disparities in learning opportunities, further widening the educational divide (Schmiederer et al., 2021; Yuan et al., 2021). Systems Theory suggests that addressing such systemic barriers requires interventions at multiple levels, including policy, infrastructure development, and resource allocation. Furthermore, Systems Theory emphasizes the importance of feedback loops and adaptation within the system. The findings underscore the need for teachers to adapt their instructional practices and acquire digital skills to deliver effective remote instruction (Hodges et al., 2020; UNESCO, 2020). This adaptation process is influenced by various factors, including professional development opportunities and collaboration among educators. By recognizing the interconnectedness of these factors, policymakers and education authorities can implement strategies to support teachers in their adaptation process and foster a culture of continuous improvement within the education system.

Additionally, Systems Theory underscores the importance of considering the broader socio-cultural context in which the education system operates (Ahmed & Sintayehu, 2022; Alajmi, 2022; Schmiederer et al., 2021; Yuan et al., 2021). The findings of the study, specific to the Oshana Education Region, provide insights into the localized effects of the pandemic on marginalized communities and educational disparities. This aligns with Systems Theory's recognition that education systems are embedded within larger social systems and are influenced by social, economic, and cultural factors.

By applying Systems Theory, policymakers and stakeholders can analyze the interactions between the education system and its external environment. This includes considering the influence of government policies, community support,

and socio-economic conditions on the system's functioning and response to the pandemic. Understanding these dynamics can inform the development of targeted interventions and policy measures that address the specific needs and challenges faced by the Oshana Education Region and similar contexts.

Furthermore, Systems Theory emphasizes the need for collaboration and coordination among different stakeholders within the education system. The findings of the study highlight the importance of involving education authorities, schools, teachers, students, parents, and communities in the decision-making and implementation of strategies to mitigate the impact of future pandemics. Systems Theory suggests that effective communication, collaboration, and shared responsibility among these stakeholders can enhance the system's resilience and responsiveness to crises.

By adopting a Systems Theory perspective, policymakers and educators can consider the long-term implications of the findings and implement systemic changes that promote preparedness and adaptability. This may involve investing in technology infrastructure, improving access to resources, strengthening teacher training programs, and fostering partnerships between schools and communities. Systems Theory encourages a holistic

## 7. Recommendations for Improvements

### **Recommendations to the Ministry of Education, Sports, and Culture (MOESC):**

1) MOESC should establish comprehensive contingency plans that outline strategies and protocols for managing future pandemics or similar crises. These plans should address issues such as remote learning, teacher training, assessment methods, and support services to ensure the continuity of education during emergencies. Regularly updating and testing these plans will help the education system respond effectively to future disruptions.

2) MOESC should prioritize initiatives aimed at bridging the digital divide and ensuring equitable access to technology and online resources for all students. This includes providing devices, internet connectivity, and relevant training to students from disadvantaged backgrounds. Collaborating with private sector partners, NGOs, and international organizations can help mobilize resources and expertise to support these efforts.

3) MOESC should invest in professional development programs and training opportunities for teachers to enhance their skills in remote teaching methodologies. This includes effective use of digital tools, online instructional strategies, and student engagement techniques in virtual learning environments. Providing ongoing support and mentorship to teachers during and after the pandemic will help them adapt and excel in remote teaching settings.

4) MOESC should prioritize the mental health and well-being of students and educators. This includes implementing initiatives that provide psychological support, counseling services, and mental health awareness programs. Integrating social and emotional learning into the curriculum can also contribute to stu-

dents' resilience and well-being during challenging times.

**Recommendations to the Oshana Education Directorate:**

1) The Oshana Education Directorate should actively engage with parents, community leaders, and local organizations to foster a collaborative approach in addressing the challenges posed by future pandemics. This includes organizing community forums, establishing partnerships, and involving stakeholders in decision-making processes. Building strong relationships and effective communication channels will facilitate coordinated efforts in supporting students' educational needs.

2) The Oshana Education Directorate should develop targeted interventions to support marginalized students who have been disproportionately affected by the pandemic. This includes providing additional resources, remedial programs, and personalized support to address the learning gaps and ensure their educational progress. Identifying and addressing the specific needs of marginalized communities will contribute to reducing educational disparities.

3) The Oshana Education Directorate should establish a robust system for monitoring and assessing the impact of interventions aimed at mitigating the effects of future pandemics. This includes tracking students' academic progress, attendance rates, and well-being indicators. Regular data collection and analysis will provide valuable insights for evidence-based decision-making and continuous improvement in the education system.

4) The Oshana Education Directorate should prioritize support for teachers in adapting to remote teaching and addressing the academic challenges faced by students. This includes providing professional development opportunities, peer collaboration platforms, and resources to enhance teachers' capacity in delivering quality education in challenging circumstances. Creating a supportive environment that promotes collaboration and knowledge sharing among educators will contribute to improved educational outcomes.

5) The Oshana Education Directorate should collaborate with health authorities and community leaders to promote health and hygiene practices within schools and the broader community. Implementing awareness campaigns, providing necessary facilities such as handwashing stations, and disseminating accurate information about preventive measures will contribute to a safer learning environment and reduce the risk of future outbreaks.

**Recommendations for Further Research**

Recommendations for further research on the impact of COVID 19 on the education in Oshama Region. This study was done in Oshana Region, therefore:

1) There is need to conduct comparative studies between different regions or countries to identify effective strategies and best practices in mitigating the impact of future pandemics on education systems. Comparing the experiences, policies, and outcomes across diverse contexts can help identify transferable lessons and inform evidence-based decision-making.

2) Investigate and evaluate strategies that foster resilience within the education

system in the face of future crises. This research can explore resilience-building measures at the individual, school, community, and systemic levels, focusing on factors that contribute to effective adaptation and response in challenging circumstances.

## 8. Conclusion

In conclusion, this study examined the impact of the COVID-19 pandemic on the Namibian education system, with a specific focus on the Oshana Education Region. By applying the Systems Theory framework, we gained valuable insights into the interconnectedness of various elements within the education system and the universal challenges faced during times of crisis.

The findings of this study highlighted several key themes, including the disruption of learning, educational inequalities, academic and occupational challenges, learning loss, teacher adaptation, and infrastructure and resource disparities. These themes underscored the multifaceted effects of the pandemic on students, teachers, schools, and communities, emphasizing the urgent need for comprehensive strategies and support measures.

The disruptions caused by prolonged school closures and the shift to remote learning had far-reaching consequences, leading to learning loss, exacerbating educational inequalities, and posing challenges for both students and educators. The digital divide further widened disparities in access to technology and resources, hindering equitable educational opportunities. However, amidst these challenges, the study also identified opportunities for improvement and resilience. Teachers demonstrated adaptability in their instructional practices, highlighting the importance of professional development and collaboration. Additionally, the study shed light on the localized effects of the pandemic, emphasizing the need for targeted interventions to address the specific needs of marginalized communities.

Based on these findings, several recommendations can be made to stakeholders. The Ministry of Education, Sports and Culture (MOESC) should prioritize developing comprehensive strategies to address the disruption of learning, bridge educational inequalities, and provide support for students, teachers, and schools. This includes addressing the digital divide, investing in infrastructure and resources, and strengthening teacher training programs.

The Oshana Education Directorate should focus on tailored interventions to mitigate the localized effects of the pandemic, ensuring that marginalized communities receive targeted support and resources. Collaboration with schools, teachers, parents, and communities is crucial in decision-making and implementing strategies for educational continuity and recovery. Furthermore, future research should explore the long-term impact of the pandemic, comparative analysis of effective strategies, resilience-building measures, equity and inclusivity in education, technology integration, teacher professional development, parental and community involvement, policy analysis, and innovative pedagogical



approaches.

### Conflicts of Interest

The authors Dr. Moses Chirimbana, Mr. Brian Makaka, and Dr. Lahya Nghipandulwa, declare no conflicts of interest regarding the research, analysis, and findings presented in this study. The research was conducted with the utmost objectivity and adherence to ethical standards. There were no external influences or financial interests that could have affected the design, execution, or interpretation of the study. The authors are solely committed to contributing to the body of knowledge and providing valuable insights into the impact of the COVID-19 pandemic on the Namibian education system, specifically the Oshana Education Region.

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## Appendix 1. Interview Question Samples

- 1) How did the COVID-19 pandemic impact your approach to teaching life skills in a remote learning environment?
- 2) Can you share specific challenges you encountered while adapting to online teaching methods during the pandemic?
- 3) In what ways did the closure of schools affect the delivery of life skills education and support services to students?
- 4) How did you address the social and emotional needs of your students during the period of remote learning?
- 5) Can you discuss any positive adaptations or innovative strategies you implemented to enhance the effectiveness of your teaching during the pandemic?
- 6) What resources or support mechanisms were essential for you in navigating the challenges posed by the shift to remote teaching?
- 7) How did your students respond to the changes in the learning environment, and what observations did you make regarding their engagement and participation?