



Analysing the socio-economic effects of COVID-19 on students in a South African University

TS MOLETE



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requirements for the degree *Master of Business
Administration* at the North-West University

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DECLARATION

I, **Tume Molete**, declare that this study: **"Analysing the socio-economic effects of COVID-19 on students in a South African university"**, consists wholly of my original work, with proper citations for all sources.

This research pertains to the attainment of a Master of Business Administration degree, which is being presented to the North-West University. The present submission has not been previously submitted by the undersigned or any other individual as part of a degree program at any other institution.

DEDICATION

This dissertation is dedicated to my parents:

Jonathan Kowang

and

Lydia Kowang.

Thank you for encouraging me to set my own destiny and for supporting me in everything I do.

I appreciate your support when things got too much to bear; you are the best.

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I have been afforded the opportunity to pursue an MBA for the past two years. The completion of this task would not have been possible without the assistance of the individuals listed below, to whom I am extremely grateful. I am most grateful to the Almighty Lord. During what appeared to be one of my life's most difficult but crucial periods, God's grace sustained me through each obstacle and triumph.

My heartfelt appreciation goes to my husband, Thabo Molete, for his unwavering support during this journey. To my brother and sister, Kgomotso Kowang and Lesedi Kowang, I appreciate your unwavering faith in me.

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ABSTRACT

The impact of the COVID-19 pandemic has been felt across all domains of society, including South Africa. Early in 2020, the COVID-19 pandemic emerged, profoundly impacting every facet of social, economic, and cultural existence. The government's initial implementation of a lockdown strategy aimed at mitigating the transmission of the virus and reducing the rate of infection was first met with positive reception. However, as the duration of the lockdown persisted, and its consequences became apparent, inevitable adverse repercussions emerged. The country's higher education authorities decided to switch to online mode for the academic year, deviating from the conventional in-person teaching and learning method.

The research aims to ascertain the effects of the coronavirus pandemic on students enrolled in South African universities. The study utilised a quantitative research design for its investigation, and the three secondary objectives play a significant role in facilitating the attainment of the fundamental aims. Purposive sampling was used, where the researcher gathered data from one hundred and ten respondents through questionnaires using Google Forms. The researcher adhered to all Protection of Personal Information (POPI) Act-mandated ethical concerns and regulations. Before the study, ethics approval was acquired from the relevant ethics committee to ensure that ethical conduct was maintained throughout all phases of the study.

A summary of the main results regarding the effects of the COVID-19 pandemic on the higher education sector concluded the study. The quantitative data was analysed using the Statistical Package for Social Sciences (SPSS). Practical recommendations were provided on how universities must rethink and reimagine themselves to overcome future disruptions.

Keywords:

Challenges, COVID-19 Pandemic, Economic effects, Higher education, Online teaching and learning, Social effects, Technology

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LIST OF ACRONYMS

ADSL	Asymmetric Digital Subscriber Line
AIDS	Acquired Immune Deficiency Syndrome
DHET	Department of Higher Education and Training
EU	European Union
HE	Higher Education
HEI	Higher Education Institution
IAU	International Association of Universities
IMF	International Monetary Fund
IT	Information Technology
NIDS	National Income Dynamics Study
NSFAS	National Student Financial Aid Scheme
NWU	North-West University
OECD	Organisation for Economic Co-operation and Development
POPIA	Protection of Personal Information Act
RDGC	Researchers Data Gatekeepers Committee
SCT	Social Cognitive Theory
SLT	Social Learning Theory
SPSS	Statistical Package for Social Sciences

CHAPTER 1 INTRODUCTION AND PROBLEM STATEMENT

1.1 INTRODUCTION

The impact of the COVID-19 pandemic has been observed in higher educational institutions worldwide, extending beyond its initial outbreak in Wuhan, China (Toquero, 2020:1). According to Chitiga-Mabugu *et al.* (2020:82), the ongoing COVID-19 was first discovered in China in November 2019, and South Africa recorded its first case on the first of March 2020. Since then, the virus has increased at an alarming rate in South Africa, and the outbreak has changed many people's lives, including students in universities. The COVID-19 pandemic, which has affected approximately 1.6 million students in more than 200 countries, has caused the most significant disruption of educational systems in human history (Pokhrel & Chhetri, 2021:133). The COVID-19 pandemic impacted the lives of students, including being displaced from their homes and campuses, financial hardships, the loss of internships, and the necessity to acquire new technologies in addition to the content of their modules (Govindarajan & Srivastava, 2020:8).

The outbreak was unforeseen and impacted undergraduate students as they were still getting used to tertiary life as the lockdown started early; this also harmed Postgraduate students with experimentation being more diverted to COVID-19-related research (Havard, 2020). A study by Cada (2021:86) asserts that frequent class attendance and parents' socio-economic level benefit undergraduate students' academic success. It is undeniable that the pandemic has caused significant disruptions, prompting a need to reconsider and redefine higher education. Specifically, it presents an occasion to confront the prevailing inequities that persist within higher education systems, which the transition to online teaching and learning has further intensified. The importance of internet service accessibility and affordability has never been more critical than now (Nyar, 2021:2).

Despite originating as a health concern, it is undeniable that COVID-19 has exerted a significant influence on various aspects of life. The pandemic has resulted in an unavoidable disruption to both social and economic aspects, leading to the most substantial global recession since the economic crisis that occurred in the early to mid-20th century. The International Monetary Fund (IMF) (2020:2) reported that the global economy is anticipated to experience a downturn due to widespread disruptions caused by the Coronavirus pandemic.

1.2 BACKGROUND OF THE STUDY

The implementation of lockdown and social distancing protocols in response to the COVID-19 epidemic has resulted in the widespread shutdown of educational institutions, including schools, training institutes, and higher education facilities across numerous countries (Pokhrel & Chhetri, 2021:133). The pandemic has brought unusual disruption and uncertainty to many universities worldwide. It has required the higher education sector to make changes that have been overdue by highlighting existing challenges that students face during their study period. The realities of the pandemic have made it mandatory for universities to revise their teaching approach and how they render services to students. Students faced several challenges, including being displaced from their homes and campuses, financial hardships, the loss of internships, and the necessity to acquire new technologies in addition to the content of their modules (Govindarajan & Srivastava, 2020:8).

The COVID-19 pandemic has presented a unique opportunity to facilitate the implementation of digital learning methodologies (Dhawan 2020:5). Furthermore, it should be noted that the positive result of online education is dependent upon various aspects, such as reliable internet connectivity, robust learning software, proficient digital literacy, as well as the availability and accessibility of technological resources. The higher education sector is currently facing significant challenges in the areas of technology, finance, human resources, and collaboration due to the impact of the COVID-19 pandemic (Ramdhany, 2020:1). The closure of universities has resulted in the discontinuation of employment opportunities for specific students, such as those

who were engaged in part-time work in libraries or cafeterias. Additionally, students benefiting from food parcels through university meal programs were deprived of this resource (Nyar, 2021:83).

The pandemic and its subsequent consequences have enduring impacts on both students and universities. Hence, it is imperative to gather reliable data to evaluate the influence of the pandemic on the well-being of students and their academic achievements. The research aims to investigate the experiences of university students during the COVID-19 pandemic. It included examining their concerns over the pandemic and its effects on several aspects, such as education, daily life, career possibilities, the economy, and mental health problems.

1.3 PROBLEM STATEMENT

The COVID-19 pandemic has sparked a transformation in higher education regarding how it serves the public and gives students the information and skills they need to properly contribute to the SA economy. Authors, including Kuh *et al.* (2007:200), have discovered that disadvantaged students frequently need more skills and support to manage independently. Poor economic growth and high youth unemployment are adding to the broader difficulties the South African Higher education sector faces. COVID-19 has impacted parents' salaries funding university students, and the profit levels of companies offering bursaries to students have dropped. In a study conducted by the National Income Dynamics Study (NIDS), approximately 17 million people were employed in February 2020, but the number decreased to 14 million in April 2020 (Omarjee, 2020).

There is a wide variety of challenges regarding access to technology among students; those from disadvantaged backgrounds need help to continue with their studies due to limited resources during the lockdown period (Nicola & Alfari, 2020:186). The shift to an online teaching mode in a short time saved the academic year. However, the difference in geographical and socio-economic environments is causing some students to experience stressful learning situations due to a lack of internet connectivity, poor

network coverage, and a lack of electricity. Considering the above, the problem investigated focuses on researching issues faced by students in a university setting caused by the COVID-19 pandemic.

1.4 RESEARCH OBJECTIVES

1.4.1 Primary Objective

The primary research objective of the study is to determine whether COVID-19 has a socio-economic effect on university students.

1.4.2 Secondary Objectives

The following objectives have been identified and outlined for the study:

- To analyse the economic effects of COVID-19 on university students.
- To analyse the social effects of COVID-19 on university students.
- To establish the possible effects of COVID-19 on the academe of university students.

1.5 RESEARCH QUESTIONS

To be able to attain the above-mentioned objectives of the study, the following research questions are developed:

- What are the economic effects of COVID-19 on university students?
- What are the social effects of COVID-19 on university students?
- What are the effects of COVID-19 on the academe of university students?

1.6 ENVISAGED CONTRIBUTION

Other universities can utilise the results of this study to examine the impact of the pandemic on students and the difficulties they faced throughout the period of lockdown. This study assists in providing valuable contributions toward identifying optimal solutions that can effectively support students, thereby compelling universities to establish an improved student environment. The topic must be analysed and scrutinised in order to gain knowledge.

1.7 DEFINITION OF KEY TERMS

1.7.1 Pandemic

The term pandemic has most typically been used to define diseases that are new or relate to novel variants of existing organisms, such as the development of HIV/AIDS in the early 1980s and historical epidemics of diseases such as plague (Morens *et al.*, 2009:1018-1021). The COVID-19 pandemic presents an unusual situation that substantially threatens businesses and can potentially induce swift transformations. According to Alexandar (2005:171), the pandemic's significance causes unpredictability, disrupting normal operations. It may have disastrous social, economic, and financial consequences for individuals, society, and the economy.

1.7.2 Leadership

The capacity and process of guiding, influencing, and encouraging a group of individuals or a team toward reaching a common goal or aim is referred to as leadership (Gandolfi & Stone, 2018:263). A leader possesses the traits, abilities, and behaviours necessary to effectively motivate, guide, and coordinate the activities of others in order to complete tasks or solve issues. Traveler (2019:15) states that it is

crucial to note that leadership is not restricted to a particular role or position. People can display these traits in various circumstances, including work environments, community groups, sports teams, and more.

1.7.3 University

A university is an institution of higher learning that awards academic degrees in various courses (Lattuca, 2003). Universities serve as an educational institution that offers a conducive environment for students to acquire knowledge, develop skills, and cultivate competence in their respective fields of study. Universities often provide a wide array of academic offerings, including several disciplines. Additionally, they furnish students with valuable resources such as libraries and laboratories. Moreover, universities allow students to engage in extracurricular activities, pursue research endeavours, and establish professional networks.

1.7.4 Online Learning

Online learning is defined by Singh and Thurman (2019:289) as the process of learning through digital platforms and the Internet and is often known as e-learning or remote education. Due to technological advancements and the broad availability of high-speed internet connections, it has grown in popularity recently. Moore *et al.* (2011:129) add that the platform enables students to engage in distance learning, facilitating the completion of courses and attaining academic degrees without necessitating actual presence on campus.

1.8 ETHICAL CONSIDERATIONS

According to Oosthuizen *et al.* (2020:393), research ethics refers to the code of behaviour that guides researchers in performing and disseminating scientific research.

The researcher adheres to all regulations governing academic research. Ethical norms such as confidentiality and sensitivity of information gathered from respondents and the organisation were adhered to during the study. In addition, permission to perform the study has been obtained from the organisation. The researcher was responsible for ensuring that all areas of data preparation and collection, questionnaire distribution, and data analysis were managed.

1.9 SCOPE OF THE STUDY

The section displays the research topic, the industry being investigated, and the location.

1.9.1 Field of Study

The research domain pertains to a higher education institution (HEI), North-West University (NWU), where the influence of the COVID-19 pandemic on students is examined.

1.9.2 Geographical Boundary

The study focused on a public university with three campuses in the two provinces, namely Gauteng and North West. The geographical features of South Africa depicting its nine provinces are illustrated in Figure 1.1 below.

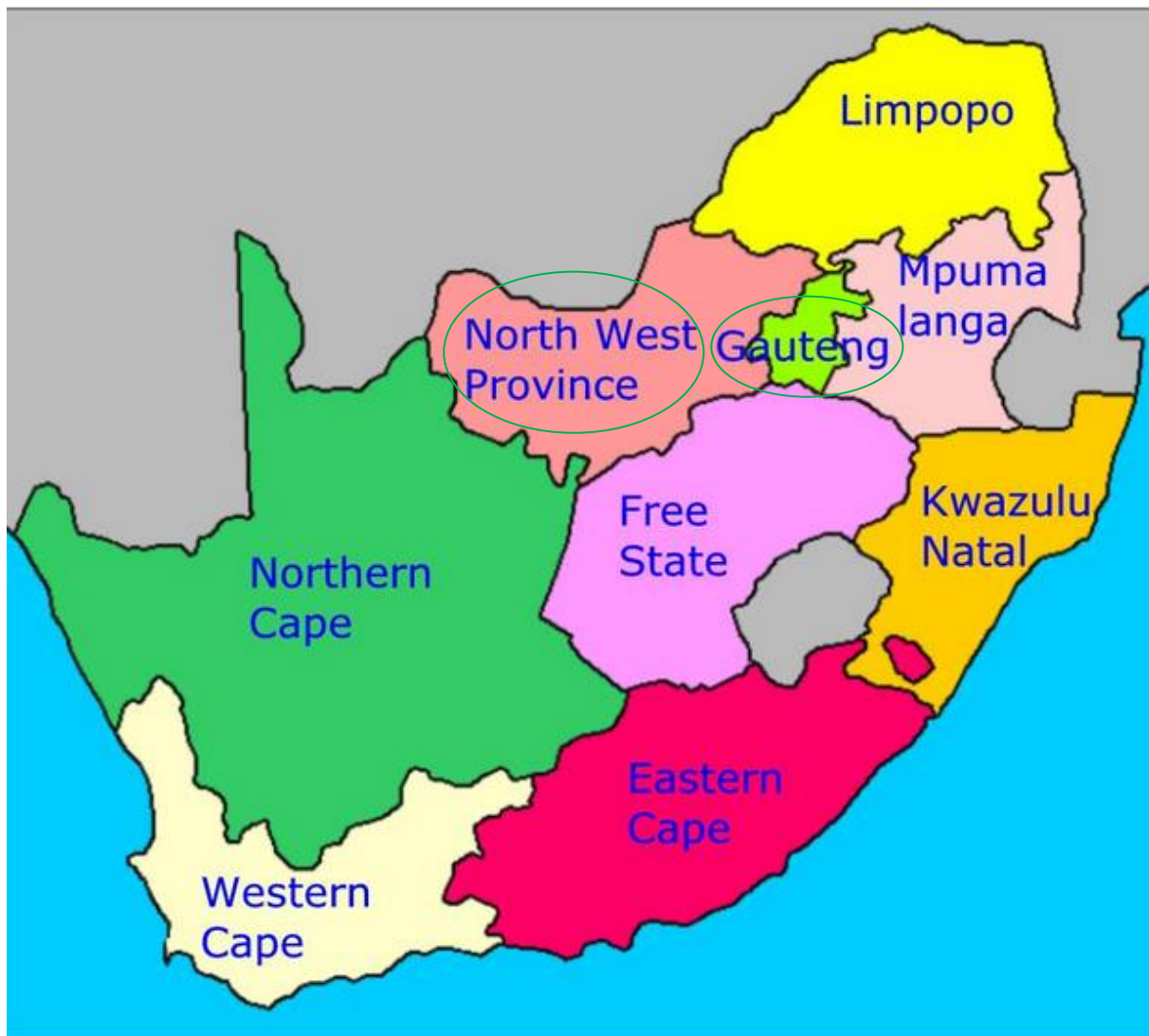


Figure 1.1: Map of South Africa

Source: Adapted from www.sa-venues.com (2021).

1.9.3 Higher Education and the COVID-19 Pandemic

Due to the pandemic, HEIs in 185 countries were forced to cease on 1 April 2020 (Marinoni *et al.*, 2020:8). The pandemic has substantially affected the Higher Education (HE) sectors. COVID-19 had an impact on global teaching and learning, resulting in the transition from in-class instruction to distance education. The transition from face-to-face to remote learning was not without obstacles, the most significant of which were access to technological capabilities, skills, and pedagogies for distance learning and the demands of particular academic disciplines.

Concurrently, the transition to distance teaching and learning strategies allowed for providing more flexible learning options, such as blended or hybrid learning (Marinoni *et al.*, 2020:11). The employees of HEIs are expected to work under intense pressure to adapt to the recently established educational systems successfully (Wong *et al.*, 2021:328). The COVID-19 pandemic has exerted a substantial influence on how academics carry out research, engage in social interactions, and facilitate the process of education.

1.10 CHAPTER OUTLINE

The study is divided into five chapters as outlined below.

1.10.1 Chapter 1: Introduction and Problem Statement

In this chapter, the introduction and background of the research were discussed, including the study's objectives, and problem statement. In addition, ethical considerations for the study were presented.

1.10.2 Chapter 2: Literature Review

This chapter reviews and discusses the relevant literature on the topic.

1.10.3 Chapter 3: Research Design and Methods

This chapter thoroughly analyses the research methods utilised in this study. It also gives an overview and explanation of the research approach, research questions and goals, and methods for gathering data.

1.10.4 Chapter 4: Data Analysis and Discussion of Results

Chapter four gives an analysis of the results and provides a comprehensive discussion of the results.

1.10.5 Chapter 5: Conclusion, Recommendations, and Limitations

This chapter concludes the study and provides a summary of its results. This chapter also provides recommendations based on the study's literature and empirical results.

A comprehensive analysis of the literature relating to the research topic is provided in the following chapter.

CHAPTER 2 LITERATURE REVIEW

2.1 INTRODUCTION

The outbreak of COVID-19 in 2019 has generated a myriad of domestic and global disruptions, with the ensuing consequences ushering in significant socio-economic implications. The academic environment was not an exception from the COVID-19-related effects in the face of the various measures (including lockdowns) instituted at national and global levels to harness the spread of the pandemic. The COVID-19 pandemic has impacted approximately 1.6 million students in close to 200 countries and has caused the most significant disruption in academia (Pokhrel & Chhetri, 2021:133).

Considering the above, universities also instituted diverse measures to align their functions with the prevailing realities of the COVID-19 pandemic era. This included, among other measures, shutting down the universities and transitioning from face-to-face to remote learning. However, a study by Cada (2021:86) revealed that frequent class attendance and parents' socio-economic levels benefit undergraduate students' academic success. The transition to remote teaching negatively affected South African students from socio-economically poor backgrounds who may have to study in cramped homes with domestic responsibilities and contend with the noisy neighbourhood (Shoba, 2020). Furthermore, due to the unpredictability of the redesigned academic program, even students who did not come from socio-economically challenged homes were possibly more exposed to stress and anxiety.

As stated by Peverill *et al.* (2020:101), low socio-economic status is commonly linked to inequalities in access to resources, including economic resources (e.g., wages and employment) and social resources (e.g., education and health care). While the closure of universities was intended to prevent the spread of the virus, transitioning from face-to-face to virtual learning platforms ushered in a completely different learning environment for students and lecturers. Therefore, students and lecturers were compelled to adjust because there were few or no other avenues to follow in navigating

the COVID-19 pandemic (Pokhrel & Chhetri, 2021:135). Subedi *et al.* (2020:9) note that E-learning resources have been essential in facilitating student learning during the time schools and universities were closed due to the pandemic.

2.2 THE STUDY'S CONCEPTUAL FRAMEWORK

A conceptual framework informed by the literature review was developed and utilised as the foundation for this study. Figure 2.1 provides a graphical presentation of the conceptual framework of this research.

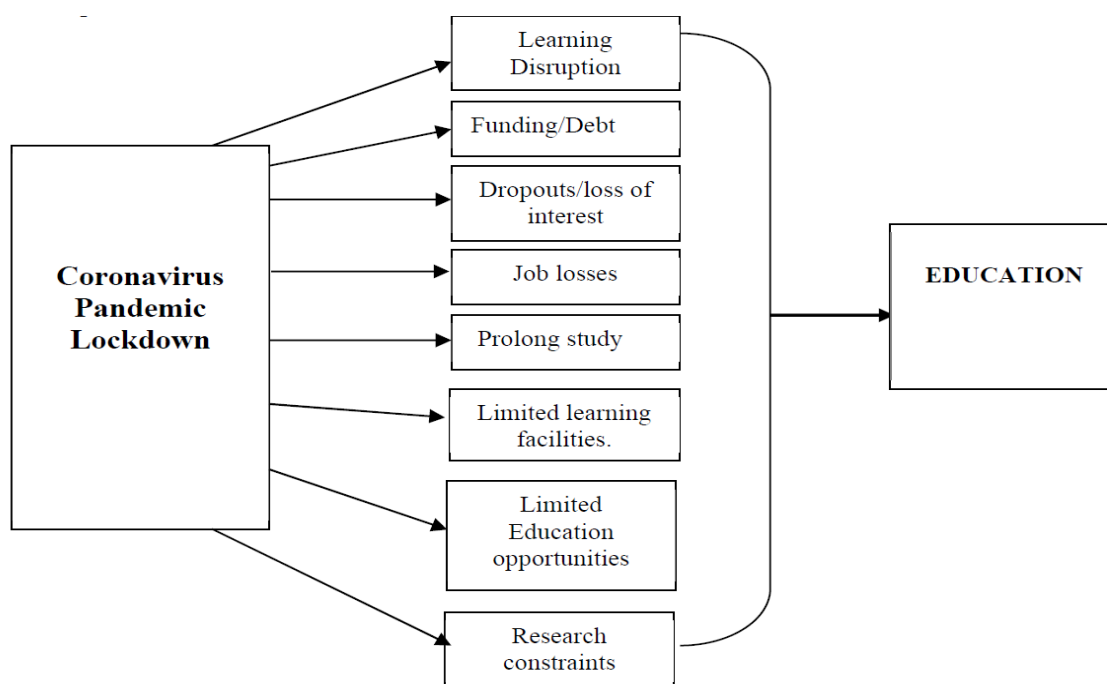


Figure 2.1: An Integrated Conceptual Framework of the Study

Source: Adapted from Onyema *et al.* (2020:108).

2.3 THEORETICAL FRAMEWORK

There is a seeming deficiency of theories directly underpinning socio-economic consequences and human behaviours in the face of pandemics such as COVID-19. Therefore, the study's theoretical foundation is based on two underlying theories.

These theories include the Social Learning Theory and the Keynesian Theory of Income and Employment. Subsequently, the transformation from face-to-face or on-campus teaching and learning to a virtual approach motivates the application of the Social Cognitive Theory (SCT) which associates student behaviour, individualities, and learning environment with their academic achievements to a teaching and learning framework (Limniou *et al.*, 2021:1). During the initial COVID-19 lockdown, the use of digital devices and applications facilitated social and cognitive interactions, enabling students to engage in independent learning through digital means. The assumption is that students' learning process and academic performance could be impacted by their individual characteristics, specifically their digital literacy.

Many students are facing financial difficulties due to job and income losses due to COVID-19. Therefore, the Keynesian theory of income and employment can be linked to this study. Moreover, the closure of universities has resulted in the discontinuation of employment opportunities for certain students, specifically those who were engaged in part-time work, e.g. libraries. The result of the student losing these employment opportunities means they cannot afford certain things they used to spend their income on. Students from socio-economically disadvantaged homes who depend on parental financial support for their tuition fees encounter difficulties in meeting these obligations without a stable wage.

2.3.1 Social Cognitive Theory

The SCT, introduced by Albert Bandura in the 1960s as the Social Learning Theory (SLT), states that learning transpires in a social setting with a dynamic and reciprocal interaction of the person, environment, and behaviour. The objective of the SCT is to elucidate how people adjust their behaviour using control and reinforcement to achieve goal-directed behaviour that can be sustained over time (Ramirez *et al.*, 2012:303).

According to Luszczynska and Schwarzer (2005:127), the SCT consists of the following six constructs:

- Reciprocal Determinism is a central concept of the SCT, referring to the dynamic and reciprocal interaction of person and behaviour.

- Behavioural Capability refers to a person's ability to perform a behaviour through essential knowledge and skills.
- Observational Learning asserts that people can witness and observe behaviour conducted by others and then reproduce those actions.
- Reinforcements – the internal or external responses to a person's behaviour that affect the likelihood of continuing or discontinuing the behaviour.
- Expectations refer to the anticipated consequences of a person's behaviour and outcome expectations, which can be health-related or not.
- Self-efficacy pertains to the level of an individual's confidence in his or her capability to accomplish behaviours necessary for certain attainments.

Institutional support also has a significant and positive effect on self-efficacy, which is strongly linked to student well-being in education and academic research (Hossain *et al.*, 2021:21; Kumar *et al.*, 2021:2464). In terms of the observational learning construct of the SCT, some student's academic performance can be enhanced through witnessing and observing the conduct of others and drawing inspiration from such. Once again, it has been seen that certain students exhibit high levels of academic achievement through the pedagogical approach of experiential learning.

2.3.2 The Keynesian Theory of Income and Employment

On the economic dimension, the Keynesian theory of income and employment, proposed by the British economist John Maynard Keynes in the 1930s, emphasised the relationship between income, output, and expenditure. From the Keynesian theory of income and employment, it can be deduced that for people to be able to spend within societies, there is a need for income (Blinder, 2020). The theory additionally states that transactions are two-sided, meaning that one person's income is another person's expenditure. Moreover, it can also be derived that effective demand is equal to income and output. Therefore, the state of equilibrium in national income is achieved when the whole demand is equal to the total supply. According to the theories put out by Keynes, the presence of effective demand plays a crucial role in determining employment

levels. Keynes argues that when effective demand is present, it stimulates economic productivity, leading to revenue generation (Dosi *et al.*, 2013:1598).

While economic growth is stimulated by increasing aggregate demand, in the Keynesian framework, the COVID-19 pandemic and its accompanying lockdowns ushered in supply bottlenecks to economic growth, contrary to the expected (i.e., a deficiency of aggregate demand). However, the negative impacts of the pandemic on economic growth meant that many people lost jobs, resulting in a loss of income. This phenomenon extends to university students, particularly those from disadvantaged socio-economic origins, who depend on parental income and financial support from government and private sector entities.

2.4 UNDERSTANDING THE PANDEMIC CRISIS IN THE CONTEXT OF HIGHER EDUCATION INSTITUTIONS

Irrespective of the topographical location or prosperity, the COVID-19 pandemic has directly affected all countries around the globe. It is not a secret that the lockdown and shutdown measures instituted by different countries, including South Africa, to curb the spread of the COVID-19 virus negatively impacted socio-economic and educational activities. While these two social moves were contemplated as the immediately available emergency preventive measures against the COVID-19 pandemic, they imparted tremendous effects on many functional and structural aspects of the higher education sector (Dasgupta & Crunkhorn, 2020:1).

In South Africa, the educational sector, in particular, saw the closure of all universities. Consequently, both students and lecturers resorted to online learning and teaching systems. The shift from in-person learning and teaching methods to virtual platforms brought about numerous socio-economic and educational issues that substantially impacted university students, particularly those from disadvantaged socio-economic backgrounds. These challenges form the focus of the discussion in this section.

2.4.1 Social Implications

The shared common factors among diverse countries such as Germany, South Africa, Nigeria, and France encompass limited availability of resources such as laptops, data, and internet access (Department of Higher Education and Training [DHET], 2020:47). Additionally, the presence of a suitable home environment and, particularly in developing nations, a reliable electricity supply are also significant considerations. This research defines social issues as the outcome of student experiences, lack of interaction with other students, worries about physical and mental health, access to basic services, and access to technology during the pandemic.

In response to mitigating the transmission of the COVID-19 virus, a significant number of university students were required to vacate their respective accommodations in hostels and student residences. However, numerous students did not have any other housing options outside of these campus residences (Cheng, 2020). This saw students moving back to their places of origin, which could have been better for learning purposes, especially for those with poor socio-economic backgrounds. Such students had to struggle to cope with the obstructive learning environment, culminating in a negative effect on their overall performance of the student. However, certain university students in South Africa were permitted to return to campuses, depending on the lockdown level (e.g., lockdown level 2), while still adhering to the online learning approach.

2.4.1.1 Travel Restrictions

Current research indicates that students experience economic, social, and psychological consequences when they are away from their normal study schedule (Pokhrel & Chhetri, 2021:133). Imposition of travel restrictions entailed that students are barred from engaging in social activities outside their places of residence, and this can trigger physical and mental strain in some instances. At the start of the lockdown, international students were probably the most affected by travel restrictions, as they had to address the ramifications of university closures on campus and in their host country. Students had to choose between returning home with limited information about when they might return or remaining in their host country with restricted

employment opportunities (Organisation for Economic Co-operation and Development [OECD], 2020).

Figure 2.2 demonstrates the challenges attributed to travel restrictions on international students.

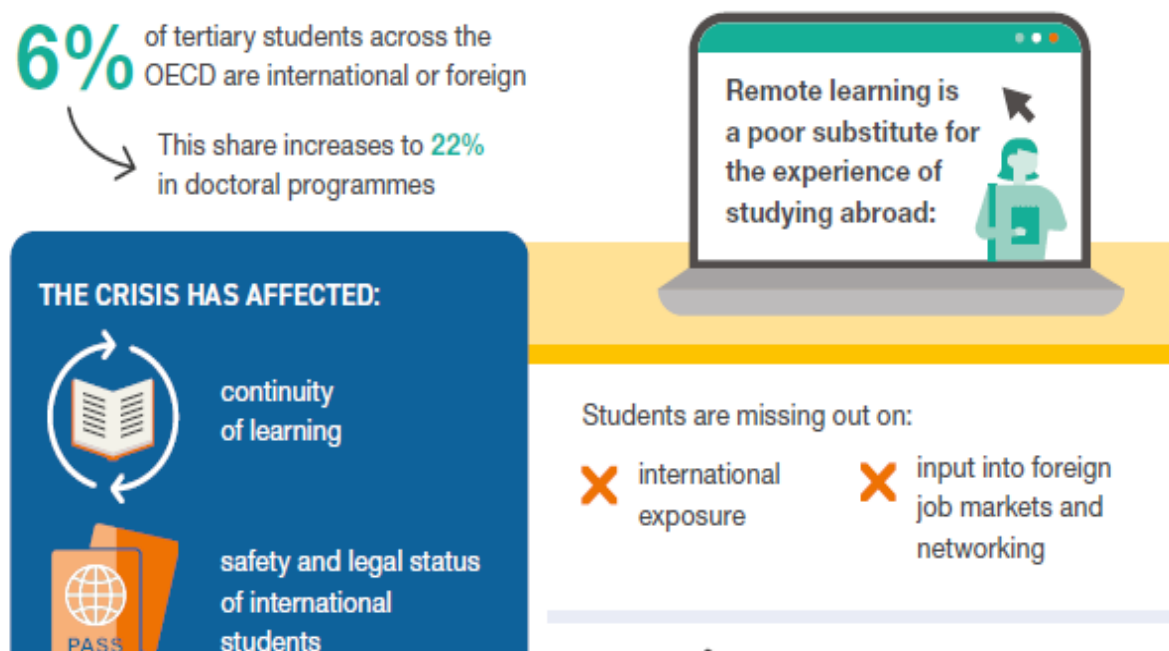


Figure 2.2: International student mobility

Source: Adapted from OECD (2020).

2.4.1.2 Physical and Mental Health

The COVID-19 pandemic has exacerbated the physical and mental health risk factors among university students, as well as other health concerns that pose a threat to their academic achievements (Mbous *et al.*, 2022:2). The development of mental health issues such as anxiety disorders and post-traumatic stress disorders are found to have increased among students due to the COVID-19 pandemic (Naidu, 2020). The practice of adhering to social distancing measures may have resulted in cognitive strain, negative affective states, and increased aggression due to factors such as dread of the unfamiliar, diminished sleep quality, or a sense of emotional detachment (Zhang *et al.*, 2020:2). According to Cao *et al.* (2020:4), a study conducted on students

regarding the psychological impact of the COVID-19 pandemic revealed that 24% of university students in China reported anxiety symptoms.

Dependence on virtual learning methods meant that university students spent increased time on technological devices such as mobile cellular phones, laptops, desktops, and other devices. From an ergonomic perspective, spending more time on these technological devices is prone to physical and mental health challenges. According to Buckle and Devereux (2002:207), musculoskeletal disorders, in particular, can cause pain and functional injuries to a person's upper and lower body. The processing of overwhelming information about the pandemic originating from conspiracy theories resulting in depression and anxiety is another social concern experienced by students. The fear of the unknown coalesced with the isolation created by the pandemic, producing a prolific setting for robust conspiracy theories to flourish (Moffitt *et al.*, 2021:8). This strong wave of disinformation made it challenging to manage and respond to the pandemic at both individual and collective levels.

2.4.1.3 The Use of Technology

Traditional face-to-face on-campus classes have been known as an effective method of teaching and learning for the longest time. Satisfactory results were produced by this method and it was never questioned until the world experienced the COVID-19 pandemic. HEIs have looked to leverage technology to provide online courses and learning opportunities as a substitute for in-person instruction to maintain the flow of education despite the lockdown (Schleicher, 2020). Nevertheless, some universities encountered difficulties and faced challenges due to their limited expertise and insufficient time to develop innovative methods for delivering teaching and assignments.

Shifting from traditional to online teaching approaches necessitated an advancement of the technical capacity of university students. In this regard, technological gadgets such as laptops, desktops, routers, and smartphones had to be acquired (Dhawan, 2020). This all contributed further to the financial burdens suffered by university students during the progression of the COVID-19 pandemic. In addition, the cost of data to access the Internet is very expensive in countries like South Africa, where

everyone cannot afford it, especially those from a poor socio-economic background (Faraj, 2020). In some instances, even if the internet access data was available, it was exhausted before performing the required academic activities due to other internet-related connection issues.

2.4.2 Economic Implications

The emergence of the COVID-19 pandemic also caused a severe economic downturn that negatively impacted university students (Gewalt *et al.*, 2022:3). This study defines economic issues as the occurrence of job losses among students, the reduction in income experienced by student's family members, and the probability of students being unable to meet their debt obligations in full during the current academic year as a result of the COVID-19 pandemic. The pandemic resulted in a massive income shock for numerous households in both developed and developing countries. This mainly emanated from the surging unemployment and underemployment rates during the onset of the COVID-19 pandemic and its progression.

South Africa lost more than six hundred thousand jobs in the formal sector during the lockdown period (Stats SA, 2020). Job losses were reported by all sectors in the first quarter of the year. Many businesses had to shut down as there was a sharp decline in the demand for their goods and services. In most households, especially those typified by inferior socio-economic status, the resultant declines in household income reduced their propensity to invest in education. Deteriorations in household income conditions also triggered the ignition of other financial-related university student challenges, such as loss of accommodation, increased debt on tuition fees, inadequate food provisions, and increased anxiety along with depression.

2.4.2.1 National Student Financial Aid Scheme

Prior to the pandemic, many public, private, and non-profit establishments were spending considerable amounts on funding tertiary education. However, the decline in revenue streams meant that these organisations had to stop or cut down on the number of bursaries and scholarships extended to university students at different academic levels (Petersen, 2020). In the context of South African HEIs and the public

sector, Dr Blade Nzimande, the Minister of Higher Education, Science, and Innovation, has indicated that the National Student Financial Aid Scheme (NSFAS) has encountered a financial deficit as a result of the COVID-19 pandemic (DHET, 2021). This has posed challenges for the government's student financial aid program in sustaining support for students during university closures, focusing on ensuring student access to learning and implementing multimodal teaching methods. Moreover, the extension of the academic year in 2020 exacerbated NSFAS's financial hardships as additional funds required during this period needed to be allocated and budgeted for.

Due to the pandemic, the deteriorating economic situation in South Africa entailed that NSFAS had to receive more applications from students who did not meet the funding criteria in previous years but are qualifying now due to their parents' lost jobs (Macupe, 2021). According to a study published by Higher Education South Africa (2021:7), a comprehensive nationwide survey that was conducted among 24 of the 26 university students revealed the following:

- 51% of students who receive financial aid from NSFAS possess laptops, but 69% of students who do not receive financial aid from NSFAS own laptops.
- 16% of students possess the means to connect to home wireless Internet. However, a significant discrepancy arises when comparing the access to home Wi-Fi between students who get financial aid from NSFAS and those who do not. Specifically, just 7% of NSFAS students have Wi-Fi at home, while a significantly higher proportion of non-NSFAS students, almost 33%, enjoy this privilege.
- 54% of the respondents possess a conducive environment for studying, while the remaining 46% do not. However, a closer examination reveals that among students receiving financial aid from NSFAS, only 40% have access to a quiet study space, in contrast to 58% of students who do not receive NSFAS assistance.

2.4.2.2 Internships

Many university students, particularly postgraduates, rely on employment within the university and other external institutions (Zheng *et al.*, 2022:3). The implementation of COVID-19 mitigating mechanisms, which led to the closure of universities, meant that a lot of typical student jobs such as research assistants or waitressing were lost during the pandemic. This further deteriorated the financial situation of university students and, in the process, widened the pre-existing financial inequalities across diverse socio-economic statuses, particularly in developing countries such as South Africa, characterised by a high degree of inequality (Meier *et al.*, 2022:8).

The COVID-19 pandemic has disproportionately impacted the professional opportunities available to university students preparing for internships and future university graduates (Molock & Parchem, 2020:2399). Due to the financial and operational challenges ushered in by the emergence of COVID-19, many commercial establishments had to transform their internship programs by revoking, postponing, reducing the number, or moving the internship to online platforms. Besides being a springboard for acquiring the on-the-job experience required at diverse workplaces, internships are also a valuable source of income for students participating in the programs before their graduation (Zhang *et al.*, 2022:6). Hence, the modifications of internship programs mentioned herein meant partial or complete loss of this income.

2.4.2.3 Access to Electricity and Technology

In South Africa, the extent of the digital divide is illustrated by the fact that while 97.5% of students reside in municipalities where more than 50% of households have access to electricity, 53.15 % reside in municipalities where 10% to 20% of households have internet access (Whitelaw *et al.*, 2020). The effects of the transition to online learning in higher education on students worldwide have varied depending on their social and economic circumstances and contextual factors. Universities shifted from the traditional classroom style to an online delivery system to avoid bringing the sector to a standstill or risk inactivity. The pandemic was a reminder that Africa has internet access that is less than 40% of the global average (Faraj, 2020). The sudden transition occurred overnight, leaving institutions ill-equipped and needing more space or time to strategise and implement a gradual implementation process. Motala and Menon

(2020:87) highlighted that the University of Johannesburg had to familiarise both staff and students with online teaching and learning tools due to the complexity of the process.

A substantial proportion of the student population in South Africa resides in rural areas. In 2019, the proportion of South Africa's population residing in urban areas constituted approximately 66% of the nation's overall population (Plecher, 2020). This reflects the student population's distribution, particularly in rural provinces such as Eastern Cape, Mpumalanga, and Limpopo. Hlatshwayo (2019:26) states that Internet access in households and workplaces becomes a challenge during load-shedding imposed by Eskom, further compromising online learning quality. Despite the advantages of an e-learning model, many students and families lack the resources and technology systems required to keep up with academic requirements. Shifting from traditional to online teaching approaches necessitated an advancement of the technical capacity of university students. Technological gadgets such as laptops, desktops, routers, and smartphones must be acquired (Dhawan, 2020). This all contributed further to the financial burdens suffered by university students during the progression of the COVID-19 pandemic. Moreover, the cost of data access to the Internet is prohibitive in countries such as South Africa, where it can only be afforded by some, especially those from poor socio-economic backgrounds (Faraj, 2020).

2.5 THE IMPACT OF COVID-19 CRISIS ON TEACHING AND LEARNING

The most notable teaching and learning implications of the COVID-19 pandemic on university students are remote teaching and learning transition challenges. This is further zoomed in and viewed regarding access to technology, online competence, academic dishonesty, and privacy and confidentiality (Turnbull *et al.*, 2022:6401). In the domain of technology access, online learning problems that affect university students are conditional on numerous factors, such as the quality of telecommunications infrastructure and the availability of and access to software and

hardware platforms required to sustain virtual learning. In this regard, Internet access and connectivity are among the most significant impediments to online teaching and learning. This issue was more prevalent in remote areas where internet connectivity is challenging and provides limited upload and download speeds (Lassoued *et al.*, 2020:232). Lubbe (2005:4) asserts that the geographical features of mountains, dense vegetation, and widely spaced-out residences in rural areas are not favourable for Information Technology (IT) infrastructure. Consequently, these factors contribute to the limited accessibility of internet connectivity through mobile cellular phone towers and the unavailability of fibre and Asymmetric Digital Subscriber Line (ADSL) connections.

Lecturers and students should possess proficiency and assurance in both the pedagogical and technological dimensions of online learning. According to Mouchantaf (2020:1259), the discrepancy in digital literacy could be well attributed to a lack of institutional support. Academic dishonesty, mainly in the form of plagiarism, was also a common challenge among university students. This is despite the awareness among students that utilisation of another author's work without due acknowledgement is wrong and unethical conduct condemned in academic spheres. Davies *et al.* (2020:32) conducted a research study of four universities in China, which revealed that plagiarism was problematic for English language assessments in an online environment. Online exams and assessments were also typified by cheating since lecturers could not readily identify each examination candidate (Lassoued *et al.*, 2020:232). Permitting the students to control their assessment environment impedes authenticity.

Other teaching and learning implications of the COVID-19 pandemic on university students were centred on student internships and placements, graduation during the pandemic, internationalisation, student consultations, and distance learning. In line with general expectations, student internships and placements were among the main activities affected by the pandemic, owing to the nature of health and safety restrictions imposed by most countries worldwide, making it extremely challenging to accept students. The imposition of travel restrictions during different stages of the pandemic harmed international internships and placements, resulting in a substantial decline in

the offer of student internships and placements at the majority of institutions (International Association of Universities [IAU], 2022).

International academic activities were also among the most adversely affected by the COVID-19 pandemic. Due to various countries' imposition of travel and other health and safety restrictions, students and academic personnel could not attend or participate in physical conferences, training workshops, and university academic exchange programs (IAU, 2022). This meant missing out on the benefits of face-to-face or physical interactions and networking opportunities. Moreover, differing time zones exacerbated the difficulty of organising and participating in virtual conferences and workshops. Face-to-face student consultations were also disrupted during the pandemic despite being essential in enhancing student performance. The student is the focus of the teaching and learning process. Hence, the eventual objective of teaching is to reveal the best in the student and to develop his or her total being. Thus, academic consultation is meant to support students who have difficulties in their university life. While the impact of COVID-19 is mainly directed at the experience of students shifting from face-to-face to virtual learning, not much is documented about the experience of distance learning students who were deemed familiar with online learning before the emergence of the pandemic. It must be recognised that the COVID-19 pandemic has also affected and unavoidably reshaped the study, work, and social lives of distance-learning students (Aristeidou & Cross, 2021:263).

2.6 RESPONSES TO COVID-19 EFFECTS BY UNIVERSITIES

In response to the challenges and circumstances posed by the COVID-19 pandemic, universities were compelled to implement and establish procedures aimed at aligning their academic roles and activities with the mitigating actions implemented by different governments to control the transmission of the virus. The transition from traditional face-to-face learning to virtual learning, or the combination of both modalities, has presented numerous challenges. These challenges encompass various aspects, such as accessibility to online platforms and software, issues related to plagiarism and academic integrity, the process of transitioning from in-person to online learning, and

concerns regarding privacy and confidentiality. In actuality, addressing these difficulties often involved modifications to the policies and procedures of the university. According to Gros and García-Peñalvo (2016:67), the primary challenge for university communities was to identify and adopt new information technologies and services for the management of knowledge and learning processes.

Although a significant number of students are aware that engaging in plagiarism, which involves reproducing someone else's academic work without proper attribution, is an unethical and undesirable practice in academia, this knowledge does not seem to dissuade many university students from engaging in such behaviour (Sales *et al.*, 2020:8). The authors emphasised that universities had to adopt and expand the implementation as well as the application of tools such as Turnitin and PeerMark to mitigate instances of online academic dishonesty. These technologies both validate students and confirm the novelty and authenticity of their work. Adaptive trust-based e-assessment systems such as the TeSLA project, which deploys tools such as facial recognition, voice recognition, keystroke analysis, forensic analysis of writing, and plagiarism detection, were also adopted by some universities to mitigate academic dishonesty (Mellar *et al.*, 2018:1). These technologies were amalgamated with proactive measures aimed at educating students on the ethical implications of committing academic misconduct.

To enhance instructor and student success in online teaching and learning, universities had to execute training to alleviate the difficulties associated with success in an online teaching and learning environment. Such barriers included a deficiency of digital literacy, which called for training on particular information technologies for both lecturers and students (Hartshorn & McMurry, 2020:140). According to the authors, while recognising that the COVID-19 pandemic offered no latitude for preparing universities and students for the virtual learning environment, information technologies and platforms such as Zoom, WhatsApp, and Facebook became almost universal among students as well as lecturers and will probably live on in the teaching and learning environment even in the post-COVID-19 pandemic era. Therefore, ongoing investment in faculty and student training to utilise these online platforms could assist in maintaining high-quality university degree programs, even after returning to face-to-face teaching and learning.

Another significant concern the universities had to respond to during the pandemic is the privacy and confidentiality of information shared on virtual platforms. In this regard, effective measures implemented by universities to protect the privacy and confidentiality of users and information shared on platforms such as Zoom included the utilisation of waiting rooms, user authentication through passwords, and granting access to users discretely from waiting rooms once they had joined a session (Romero-Ivanova *et al.*, 2020:80). However, the technological means to protect privacy and confidentiality by validating user access should additionally be supported by policies on how stored data can be utilised. Issues of concern in this context include data ownership, data sharing, consent to supply data, and maintaining anonymity (Avella *et al.*, 2016:13). Ideally, these concerns should be addressed prior to the implementation of online teaching and learning rather than in a reactive manner as privacy and confidentiality issues arise.

2.7 CHAPTER SUMMARY

The COVID-19 mitigating measures in their entirety at both national and institutional levels ushered in socio-economic and teaching and learning implications on university students, irrespective of the geographical location or the level of prosperity. Social implications included obstructive learning environments resulting from students moving out of university residences back to their places of origin, the absence of essential social support systems, especially in the case of international students, and physical and mental health risks. Economic implications included loss of income, a decline in funding opportunities, loss of student employment, postponement or withdrawal of internship offers, cost of acquiring technical gadgets such as laptops, and cost of data for accessing the Internet. Teaching implications comprised challenges of transitioning from face-to-face to virtual learning, internet connectivity issues, discrepancies in comprehending online teaching and learning styles, academic dishonesty, and concerns of privacy and confidentiality of information shared on online teaching and learning platforms.

In the face of the socio-economic implications mentioned above, universities had to devise and implement several approaches to respond to the implications of the COVID-19 pandemic on teaching and learning. These approaches included embracing amenable approaches to technology application that fully reflected the exceptional circumstances of students in specific geographical locations and settings.

The study's research methodology and ethical considerations were discussed in the following chapter.

CHAPTER 3 RESEARCH DESIGN AND METHODS

3.1 INTRODUCTION

This chapter provides an overview of the research design and methodology applied to accomplish the objectives of the study. The previous chapters provided an overview of the study's context and reasoning and a comprehensive literature review on the socio-economic effects of COVID-19 on students. A summary of the population under study, the sampling procedure, and the data collection method utilised for the research were summarised. Figure 3.1 serves as a guiding framework for the research methodology's study methods, techniques, and approaches.

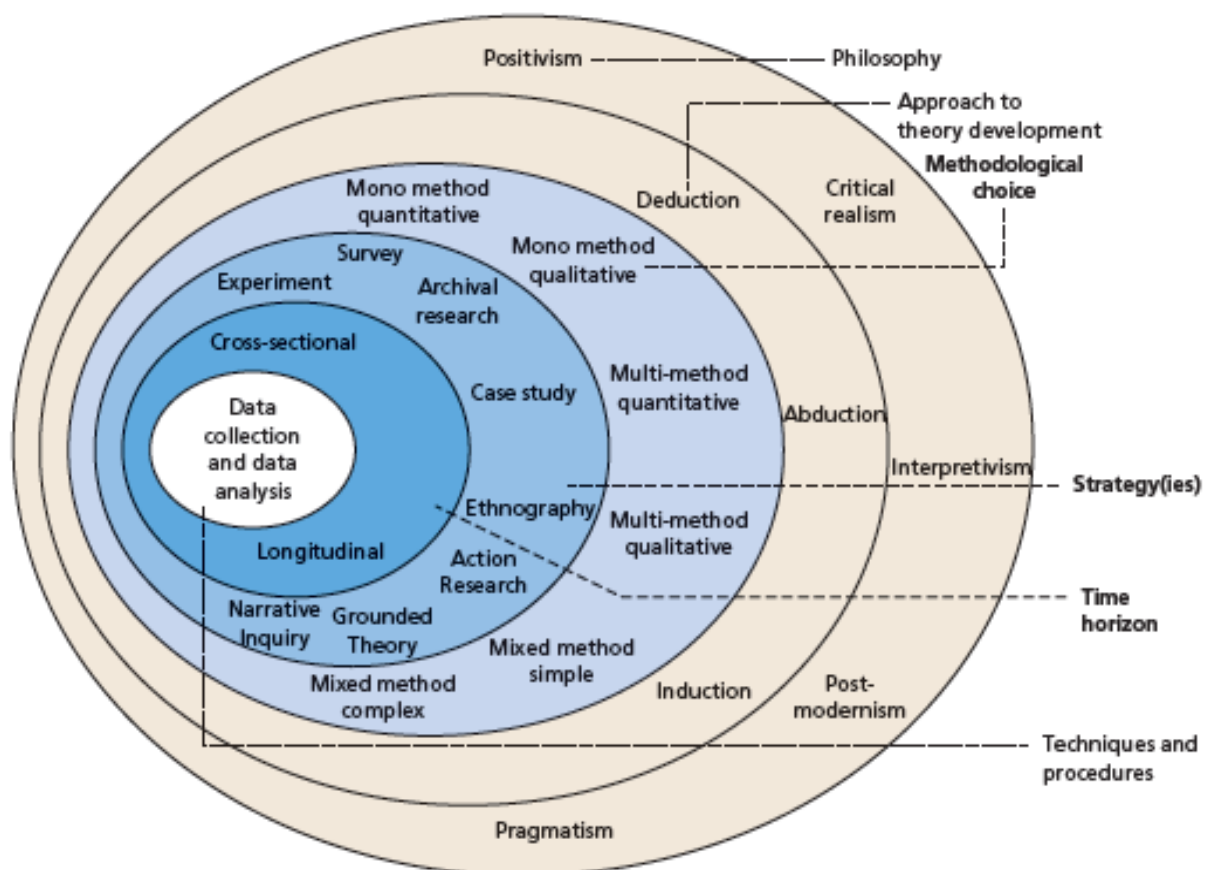


Figure 3.1: Research Onion

Source: Adapted from Saunders *et al.* (2016:164).

The research methodology consisted of two main components: a comprehensive evaluation of existing literature and an empirical study. According to Saunders *et al.* (2016:130), the exploration onion is identified as the central framework for researchers to use when collecting information.

3.2 RESEARCH PARADIGM

The research paradigm investigated social phenomena intending to contribute to understanding and explanations (Saunders *et al.*, 2007:112). In this research, an interpretative paradigm was used. According to Bryman (2016:20), an interpretative model is built on people's knowledge of the issue from their views and experiences rather than how the researcher perceives it. It is affirmed by Pham (2018:3) that the interpretivist paradigm has the advantage that the researcher identifies objects, people, or events and gains a profound understanding of these in a social context. The research encourages the researcher to engage with the respondents to gain a comprehensive grasp of the specific concepts, meanings, objectives, beliefs, perspectives, and self-perceptions that persons hold (Bryman, 2016:14).

3.3 RESEARCH APPROACH

According to Saunders *et al.* (2007:117), it is beneficial to align research approaches with certain research philosophies as this is helpful in making informed judgments regarding data collection and analysis in a study. Philosophical assumptions play a significant role in a research approach. As stated by Creswell and Creswell (2018:17), research can be conducted using three distinct approaches: quantitative, qualitative, and mixed methods. In general, researchers employ the quantitative method to investigate matters that demand numerical data, the qualitative method to address inquiries that require textual data, and the mixed methods approach to tackle issues

that require both textual and numerical data (Williams, 2007:65). A quantitative research approach was used for this study, as illustrated in Figure 3.2 below.

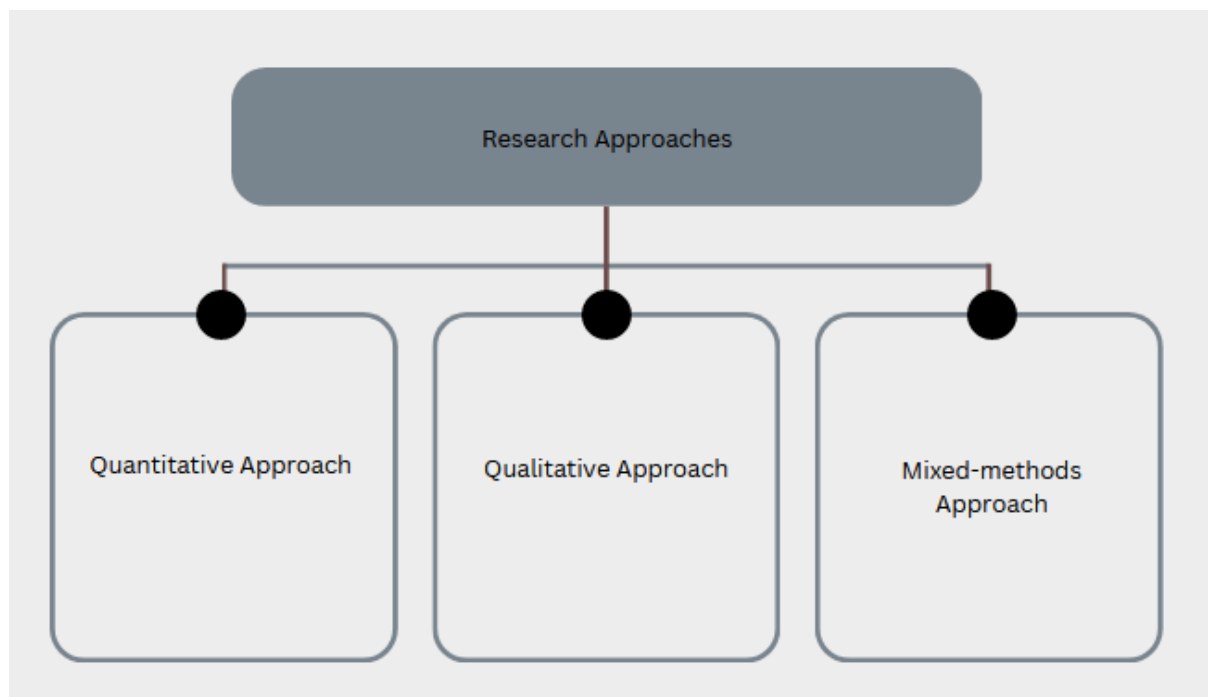


Figure 3.2: Research Approaches

Source: Adapted from Creswell and Creswell (2018:16).

3.4 RESEARCH DESIGN

A research design uses empirical evidence to resolve a research question (Oosthuizen *et al.*, 2020:390). It includes all the methods used by the researcher. Consequently, it is known as the master plan that directs how specific research concerns are addressed. As a result, the research design outlines every essential aspect of the study, including the strategies for sampling, measuring, and analysing data to answer the primary research questions. The quantitative method is used as the study's research design, and structured questionnaires serve as the primary data collection instrument to achieve the study's objectives. Quantitative research was selected because, as stated by Young and Hren (2017:9), it gathers and discovers various types

of positions and knowledge that are widespread in society and is built on the foundation of epistemological and ontological principles. Furthermore, the researcher chose the quantitative method because data computing equipment makes it possible to process and analyse data quickly, even with larger sample sizes.

3.5 POPULATION

According to Hu (2014:766), the research population is described as a group of the target population from which the sample is drawn. The study population is larger than the sample frame and comprises the specific individuals chosen to participate in a study. According to Creswell and Poth (2018:153), it is recommended that all respondents in a study must have experienced the phenomenon under study and be able to articulate their lived experiences. The target population consists of undergraduate students who are registered at the NWU under the School of Economics in the Faculty of Economic and Management Sciences. Students at the Potchefstroom, Mahikeng, and Vanderbijlpark campuses were included. It is practically not possible to research the entire population. Therefore, the researcher chose a sample whose results indicated the entire population. The respondents were able to relate their personal experiences with the impacts of COVID-19 during their studies.

3.5.1 Sampling Technique

A sampling design refers to a particular methodology employed to obtain a representative sample from a designated population. It refers to the method or approach used by the researcher to choose the sample (Leedy & Ormrod, 2018:280). Sampling is a necessary methodological approach in research, as studying the entire population is sometimes unfeasible and rarely economically viable. Quantitative researchers frequently want to be able to generalise about groups more significant than their study sample. To generalise the study's results to the entire population, a

sample should be representative of the broader population (Greener & Martelli, 2018:68).

A purposive sample is a non-probability sample chosen based on demographic characteristics and the purpose of the study. Non-probability sampling means that the likelihood that a respondent was chosen is unknown, but the researcher chooses based on their judgment (Struwig & Stead, 2001:15). The latter involves the identification and selection of individuals who possess experience in a particular area of interest. The authors highlight the significance of availability, willingness to participate, and capacity to articulate and ruminate upon perspectives and experiences.

Students from the Faculty of Economic and Management Sciences from the three campuses of the NWU were purposefully selected for the study and included. The study's sample comprises seven hundred respondents. The university and the NWU Research Data Gatekeeper's Committee requested permission to access the respondents. There was no conflict of interest as the researcher has no direct link with the students, for instance, lecturing or dealing with students' records.

The researcher sent an email containing a Google Form link to the questionnaire to lecturers in the School of Economics. The lecturers posted the questionnaire on the Efundi site for the students to access. After that, the researcher accessed the information of all the responses on the Google Form. Prior to completing the questionnaire, respondents were obligated to provide their signature on the consent form. The researcher acquired a permission letter from the organisation to minimise conflict and put a formal agreement in place.

3.5.2 Sample Size

The sample size refers to the number of individuals or observations that are included in a study. According to Majid (2018:5), the research study's sample size should possess the capability and importance to ensure that the researcher can confidently establish that the study's results are not attributed to chance fluctuations within the target population. The chosen research sample consisted of 700 students from the

NWU's Potchefstroom, Mahikeng, and Vanderbijlpark campus in the Faculty of Economic and Management Sciences. A total of 110 students completed the questionnaire on the Efund site.

3.5.3 Inclusion and Exclusion Criteria

Full-time registered students studying at the Faculty of Economic and Management Sciences under the School of Economics were eligible to participate in the study. The population does not exclude any student in terms of language, race, or disability, and all genders were included in the study. The study population was geographically dispersed over the Gauteng and North West regions. The inclusion criteria for the study limited participation to students from a specific faculty, hence excluding students from other faculties.

3.6 DATA COLLECTION

A crucial component of research in all fields is gathering data. This study applied quantitative research procedures. While the specific data collection methods may vary across different academic disciplines, ensuring the accuracy and ethicality of data collection remains a fundamental goal. Irrespective of the researcher's philosophical framework or the method employed for data collection, a substantial quantity of information was generated throughout the research process (Sutton & Austin, 2015:226).

This study included two distinct data collection strategies. Firstly, a comprehensive examination of the existing literature was undertaken in order to get relevant insights into the effects of COVID-19 on students inside a HEI. The data obtained by the researcher in this study were compared to those of other South African and international studies that examined similar topics. The second strategy was a questionnaire that was sent to students to complete on the Efund site of the NWU.

3.6.1 Questionnaire

This study utilised primary data obtained from the questionnaires attached in Annexure A. The questionnaires consist of both open and closed-ended questions, and the sections are divided into four parts. According to Hyman and Sierra (2016:2), closed-ended questions are used because they enhance speedy feedback, are easier to answer, and are faster to capture, code, and analyse the data. The role of the respondents was to complete the questionnaire accurately and to do so with honesty.

Due to the quantitative nature of the study, a questionnaire was uploaded on Efundi via a link. A Google Form with a link was created and then posted on the Efundi platform for students to complete. The students remain anonymous when completing the questionnaire. Respondents are more likely to discuss difficult problems and provide more extensive and honest comments when they are anonymous. According to Johnson (2008:34), quantitative research relies on the measurement of variables to generate statistics for testing hypotheses and making predictions. Quantitative research uses questionnaires, surveys, and experiments to collect data that is then characterised using statistics (Lichtman, 2012:140).

The questionnaires have a combination of open-ended and closed-ended questions, and the sections were grouped into four distinct sections. In total, Sections A and B consisted of eighteen questions that the respondents had to answer. Closed-ended questions are utilised due to their ability to facilitate prompt responses, simplicity in answering, and efficiency in capturing, coding, and analysing data (Hyman & Sierra, 2016:2).

3.7 DATA ANALYSIS

Prior to doing the presentation and analysis, all obtained data was systematically structured and thoroughly examined to ascertain its accuracy, validity, and completeness. The Statistical Package for Social Sciences (SPSS) allowed for effective data presentation through the use of tabulation, the development of charts

and graphs, and the calculation of percentages and frequencies. The researcher used the quantitative method for the data analysis, and spreadsheets were utilised to input the measurable data collected via questionnaires. The factor analysis was inconclusive, therefore the statistician recommended that it be omitted.

The NWU's Statistical Consultation Service was consulted to ensure trustworthiness. Using SPSS, the closed-ended questions were evaluated, and the most frequently used approach was descriptive analysis. The researcher established a connection between the narrative and the underlying concepts, contributing to a broader understanding of knowledge. This connection was achieved by a comprehensive analysis referring to the three research objectives and literature.

3.8 VALIDITY AND RELIABILITY

3.8.1 Validity

Validity refers to the application and appropriateness of the procedures utilised and the precision with which the results accurately reflect the data (Noble & Smith, 2015:34). In this study, a valid and reliable methodology was used. The questionnaires were pretested, and the data was collected from reliable sources. If a study process or instrument is true, accurate, meaningful, and appropriate, then it is valid (Enon, 1998). For this research, a pilot study was conducted to determine which questions were unclear before distributing the questionnaires. The pilot study consisted of five typical respondents to point out mistakes in the questions and determine whether the questions addressed the objectives.

3.8.2 Reliability

Reliability is defined as the consistency of a measurement over time, as the same instrument generates identical results when administered at different times (Greener & Martelli, 2018:49). The measuring instrument must be transparent and easy to read

so that the respondent can replicate the same procedure and obtain the same results multiple times. Greener and Martelli (2018:49) further highlight that the measurement cannot be valid if the study is not credible.

The study used Cronbach's alpha coefficients to determine the reliability of the results. Cronbach's alpha coefficient quantifies the consistency of the covariance between the variables. Variables containing low-scale items are acceptable with an alpha of 0.60 and satisfactory with an alpha of 0.50 (Taber, 2018:1278). Inter-item correlations are calculated as an additional reliability statistic in addition to alpha. Pallant (2020) considers a level of r equal to 0.10 to be appropriate. According to Bryman (2016:45), it is impossible to ensure both reliability and validity separately; for example, an instrument can only be considered valid if it is deemed trustworthy.

3.9 ETHICAL CONSIDERATIONS

Research ethics consist of a set of ethical principles that researchers are obliged to adhere to during their study. Saunders et al. (2016:228) define research ethics as the ethical conduct of researchers concerning the rights of individuals affected by their research endeavours. An ethical design that is both methodologically sound and virtuously appropriate for the respondents is an essential component of any research study. Respondents consented to participate in the study; therefore, their participation was voluntary. The researcher was responsible for maintaining the confidentiality of the respondent's data.

In accordance with the NWU research ethical rules, the following standards have been met:

- Prior to conducting the research, approval was obtained from the relevant ethics committee (EMS-REC). The letter of ethical approval is included in Annexure D. The EMS-REC concluded that this study posed a low risk.

- The researcher was granted clearance to proceed with the research from the institution's relevant gatekeeper (RDGC). Annexure E contains the approval letter from the RDGC.
- The respondents were provided with information regarding the voluntary nature of their involvement and their freedom to withdraw from the study at any point during the research procedure.
- Respondent's consent to participate in the study was obtained at the beginning of the questionnaire. The informed consent form is supplied as Annexure B.
- The respondent's right to privacy, dignity, and reputation were always respected.
- The researcher pledged to provide only the truth and to give data that was free of bias.
- The researcher presents all the study results and reports from various points of view.
- All references included in this research were adhered to in compliance with the citing requirements of NWU.
- To comply with the requirements of the Protection of Personal Information Act (POPI Act) and mitigate the risk of potential bias and conflicts of interest, the researcher refrained from engaging in direct communication with the respondents. Subsequently, the lecturers at the School of Economics were provided with a hyperlink that directed them to the Google Forms questionnaire, which they disseminated on the Efundi platform.

3.10 CHAPTER SUMMARY

This chapter provided justification and context for the quantitative research methodology. In addition to elaborating on the information presented in Chapter 1, this chapter examined the various research methodologies used in the study. The sampling technique, population, data collection tool, and data gathering procedures were all discussed. Steps were taken to increase the validity and reliability of the research

results. Finally, the ethical considerations that were taken into account during this investigation are highlighted.

The research outcomes and data analysis are presented in the following chapter.

CHAPTER 4 DATA ANALYSIS AND DISCUSSION OF RESULTS

4.1 INTRODUCTION

The main objective of this chapter is to focus on the analysis, interpretation, and presentation of the collected data. This study aimed to analyse how the socio-economic effects of the COVID-19 epidemic have affected university students. The researcher distributed questionnaires to respondents using a hyperlink generated with Google Forms, enabling them to complete them electronically conveniently. The chosen research sample comprised 700 students from the NWU's Potchefstroom, Mahikeng and Vanderbijlpark campus in the Faculty of Economic and Management Sciences under the School of Economics. One hundred and ten respondents completed the questionnaire, and the collected responses are reasonably accurate and representative of the overall population.

The results of this study focused on addressing the following empirical research questions:

- What are the economic challenges faced by students due to COVID-19?
- What are the social effects of COVID-19 on university students?
- What are the effects of COVID-19 on the academe of university students?

The primary objective of quantitative research is to systematically gather empirical data to communicate concepts and ideas using numerical values, statistical analysis, and other quantifiable methods. The study involves a statistical analysis of the collected data, followed by the subsequent interpretation and inference of the results. The

quantified data was divided into three sections, namely reliability analysis, descriptive analysis, and correlation analysis. This analysis was carried out using the SPSS version 28 software tools.

The results in this chapter are presented in the following sections:

- Analysis of respondents' demographics
- Reliability analysis
- Descriptive analysis
- Correlation analysis
- Discussion

4.2 DEMOGRAPHICS

The demographic data allowed the researcher to learn more about the respondents' backgrounds and experiences, which helped contextualise the collected data. The demographic information comprised the respondent's gender, age, and level of education.

4.2.1 Gender of Respondents

The gender-related demographic data indicated that the male respondents predominated compared to the female respondents. Of the total of one hundred and ten completed questionnaires, 63 were males and 47 were females. A higher percentage of respondents were male as opposed to female. Figure 4.1 provides a summary of the respondents' genders.

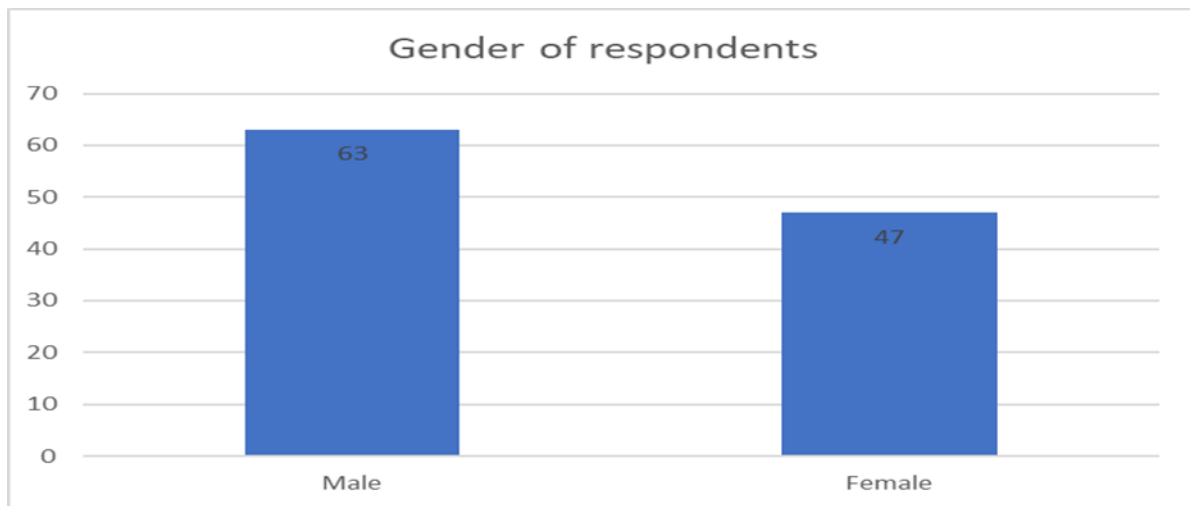


Figure 4.1: Gender of Respondents

4.2.2 Age of Respondents

The respondents were further categorised based on their age groupings. Figure 4.2 indicates that 11% of the respondents were below 18–20, 54% were 21–25, and 35% were 26 and older. Therefore, a significant portion of the respondents were aged between 21 and 25.

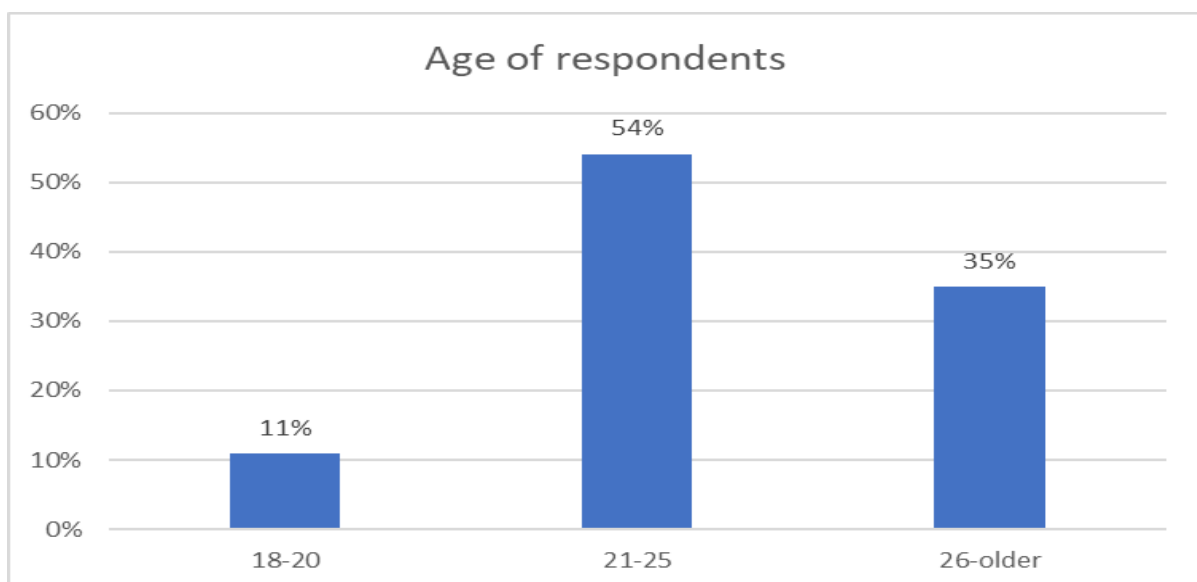


Figure 4.2: Age of Respondents

4.2.3 Level of Education

In addition, the study required the respondents to indicate their academic level during the pandemic. The results show that most of the students were from the third-year group. The study covered students from the School of Economics. When asked about the level of education during the COVID-19 pandemic, 17% indicated that they were in their first year, 21,6% were in their second year, and 61,3% were in their third year, respectively.

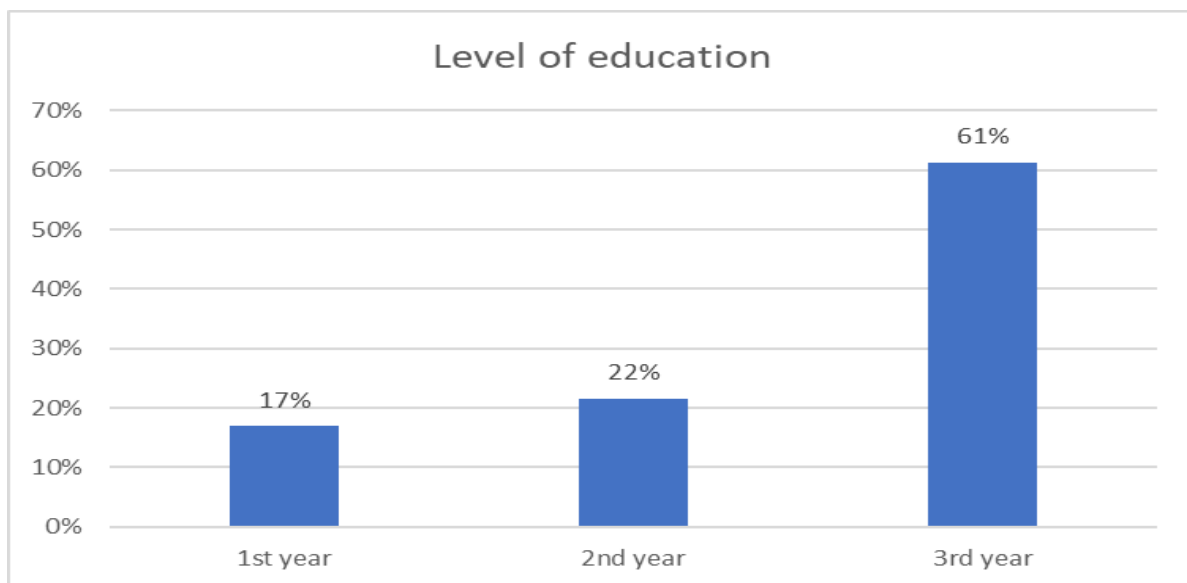


Figure 4.3: Level of Education

4.3 RELIABILITY ANALYSIS

Cronbach's alpha (α) coefficient, which Lee Cronbach established in 1951, quantifies the internal consistency of a scale or test (Tavakol & Dennick, 2011:53). It is denoted by a number ranging from 0 to 1. A value for Cronbach's alpha reliability coefficient close to 1 is deemed high. This indicates that the scale's items are internally consistent. However, DeVellis and Thorpe (2021:15) suggest that items with scales consisting of fewer than ten items are more prone to yield lower Cronbach alpha values. In this scenario, it is advisable to include the mean inter-item correlation as an additional approach to validate the reliability.

Table 4.1 presents Cronbach's alpha coefficients, which show values in the proximity of 0.6, ranging from 0.502 to 0.641. According to Taber (2018:1278), an acceptable range is typically defined as falling between 0.45 and 0.98, although it is essential to note that this range is not regarded as optimal. The researcher can attribute these values to the minimal sample size of 110 respondents.

Table 4.1: Cronbach's Alpha Coefficients

Subscale	Cronbach's Alpha (α)	N of items	Mean Inter-item correlation	Internal consistency
Part B	0.502	5	0.162	Acceptable
Part C	0.641	6	0.218	Adequate
Part D	0.591	4	0.264	Acceptable

Concerning the social effects of COVID-19 on students (part B), the range of the inter-item correlation is from 0.143 (low positive correlation) to 0.414 (medium positive correlation), and the mean inter-item correlation is 0.162. As Taber (2018:1279) supports, the correlation indicates satisfactory reliability, and the inter-item correlation of 0.162 is deemed optimal. Part C, the economic effects, shows an inter-item correlation ranging from 0.133 to 0.487 with a mean inter-item correlation of 0.218. The inter-item correlation for the teaching and learning (part C) runs from 0.156 to 0.475 with a mean inter-item correlation of 0.264. The observed correlation demonstrates a desirable level of reliability, suggesting that the respondents consistently provided accurate responses to the questions. Based on the available evidence, the researcher concluded that the obtained results are highly reliable, while the questions measured effectively their intended objective.

4.4 DESCRIPTIVE ANALYSIS

4.4.1 Descriptive Statistics on Social Effects of COVID-19

The study aimed to ascertain the extent to which respondents agreed or disagreed with the statements made concerning the social impact on university students caused by COVID-19. The university experience, for most students who are not enrolled in distance programs, is predominantly characterised by a highly social environment. Social contact is crucial in higher education, encompassing various aspects such as classrooms, hostels, and sporting and cultural events.

Statement 1: The noise level at home prevented you from studying.

An analysis of Figure 4.4 gives the responses regarding the noise levels that prevented students from studying while at home during the pandemic. An average of 56% of respondents disagreed with the statement, while 44% indicated that the noise levels in their neighbourhood interfered with their ability to study. According to Sentop Dumen and Saher (2020:3489), the implementation of stringent lockdown measures aimed at curbing the transmission of COVID-19 has resulted in a notable reduction in environmental noise levels. Simultaneously, these measures have also produced new noise conditions within residential spaces

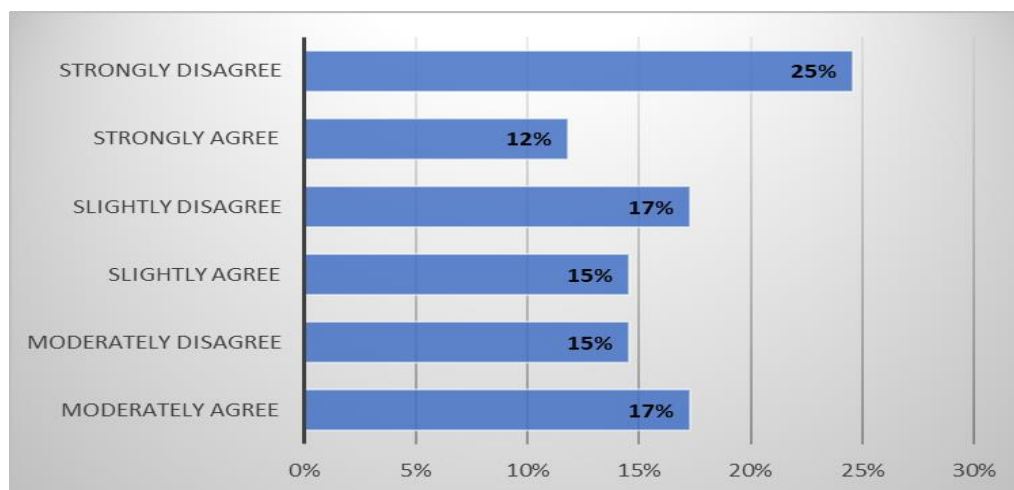


Figure 4.4: The extent to which noise levels affected students

Statement 2: You can access the lecture materials without experiencing any technological difficulties at home caused by an unstable Internet connection.

The study aimed to determine if an Internet connection interrupted students from accessing the lecture materials. From the results, 52% of the respondents indicated that they experienced technological difficulties caused by an unstable Internet connection while trying to access lecture materials, and 48% disagreed with the statement; see Figure 4.5.

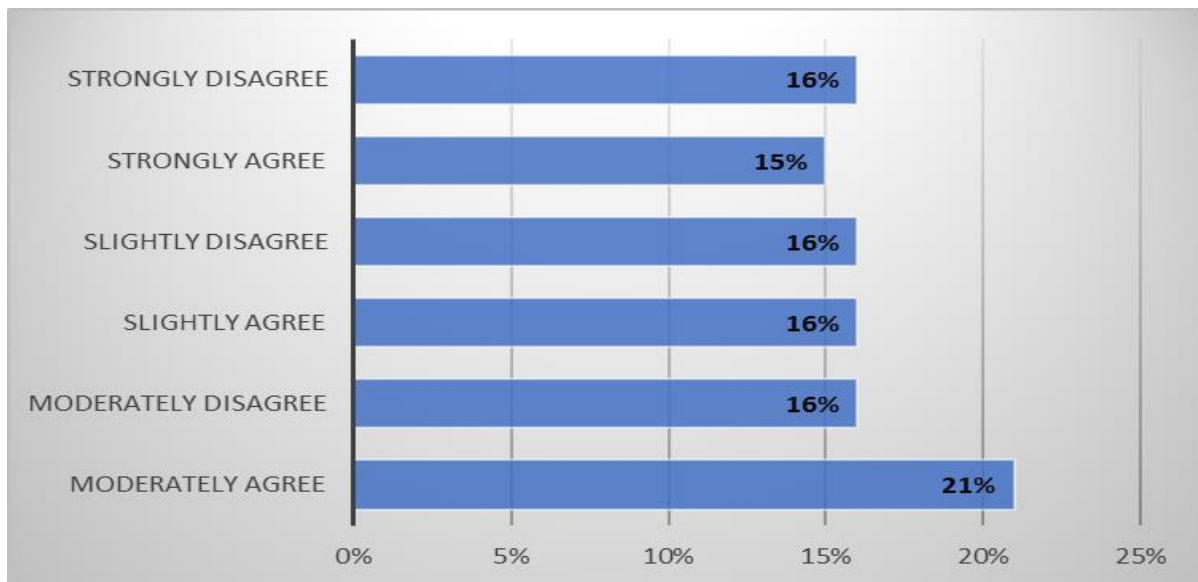


Figure 4.5: The extent to which overcrowding affected students

Statement 3: You don't have enough room to study in your overcrowded home.

The study aimed to ascertain the extent to which respondents agreed or disagreed with the statements made in Figure 4.6 concerning the challenges faced with overcrowding in homes while studying. The findings revealed that 24% of the respondents strongly agreed, 14% slightly agreed, 11% moderately agreed, 29% strongly disagreed with the statement, 15% slightly disagreed, and 8% moderately disagreed, respectively.

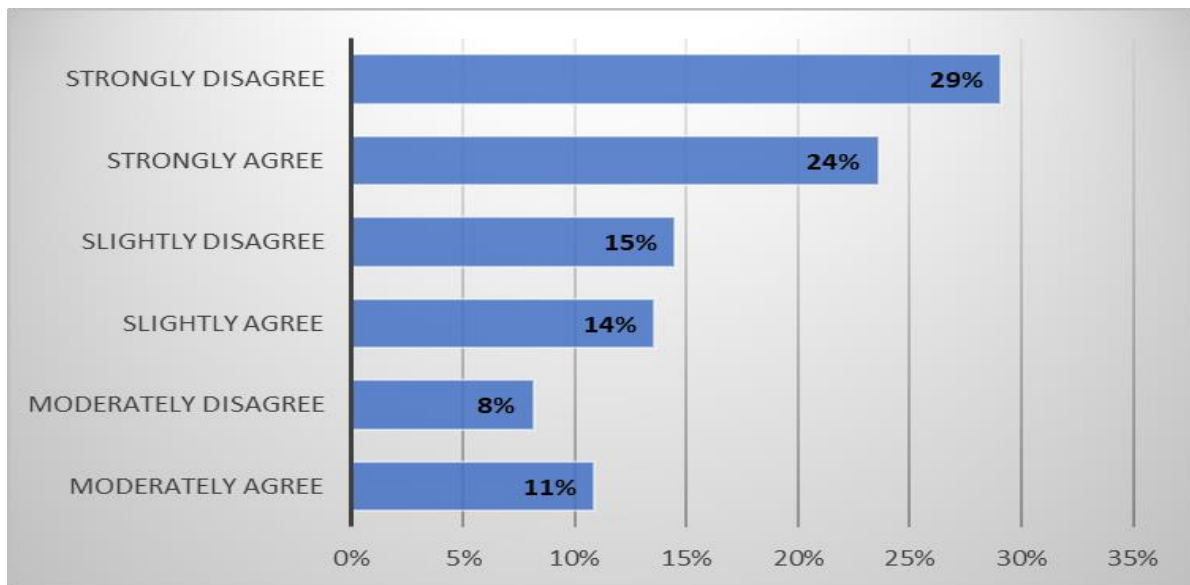


Figure 4.6: Challenges faced with overcrowding in homes

Statement 4: At home, you have access to needs like electricity and water.

The study aimed to determine whether students had access to basic needs such as water and electricity during the pandemic while at home after leaving their university residences or student communes. The findings revealed that 75% agreed they had access to basic needs such as water and electricity, while 25% disagreed; see Figure 4.7.

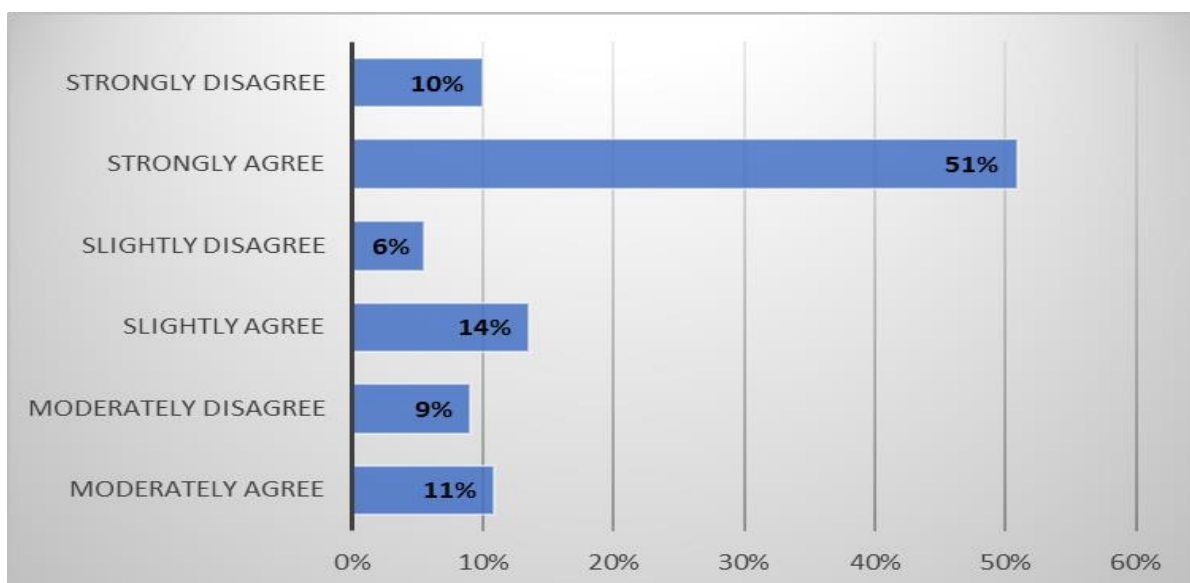


Figure 4.7: Access to water and electricity

Statement 5: Travel restrictions have disrupted your research goals or yearly plans.

The study aimed to ascertain the extent to which respondents agreed or disagreed with the statements made in Figure 4.8 concerning the impact of travel restrictions on research. An average of 69% of the respondents indicated they were affected by the restrictions, while 31% disagreed.

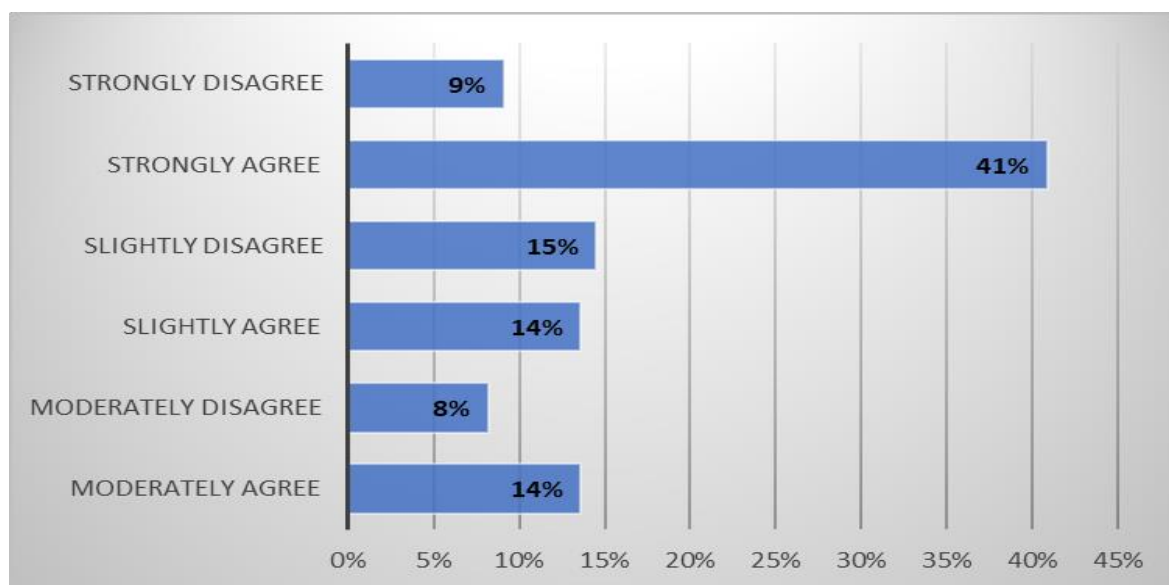


Figure 4.8: Extent to which travel restrictions disrupted research goals

4.4.2 Descriptive Statistics on How the Academe was Affected by COVID-19

Statement 6: I was well prepared to take part in the online exams.

This study aimed to determine the degree to which students were impacted by the alteration in exam assessment methods implemented during the pandemic. An analysis of Figure 4.9 describes the percentage of respondents regarding how prepared they were to participate in online exams during lockdown. According to the results, the majority of respondents, which is an average of 66%, agreed that they were well prepared to take part in the online exams, and 34% indicated that they were not.

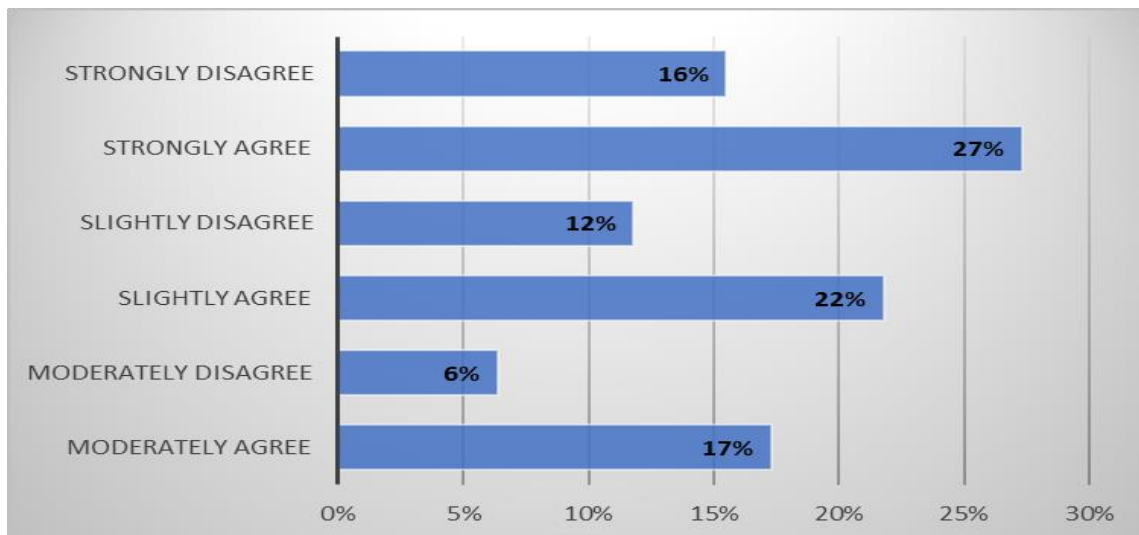


Figure 4.9: The extent to which students were prepared for online exams

Statement 7: The conferences that I was planning to attend were disrupted by the pandemic.

The study aimed to ascertain the extent to which respondents agreed or disagreed with the statements made in Figure 4.10 concerning planned conferences. The results show that 47% of respondents strongly agreed that their planned conferences were affected by the COVID-19 disruptions, 15% slightly agreed, and a further 19% moderately agreed with the statement. In comparison, 20% indicated that they were not affected.

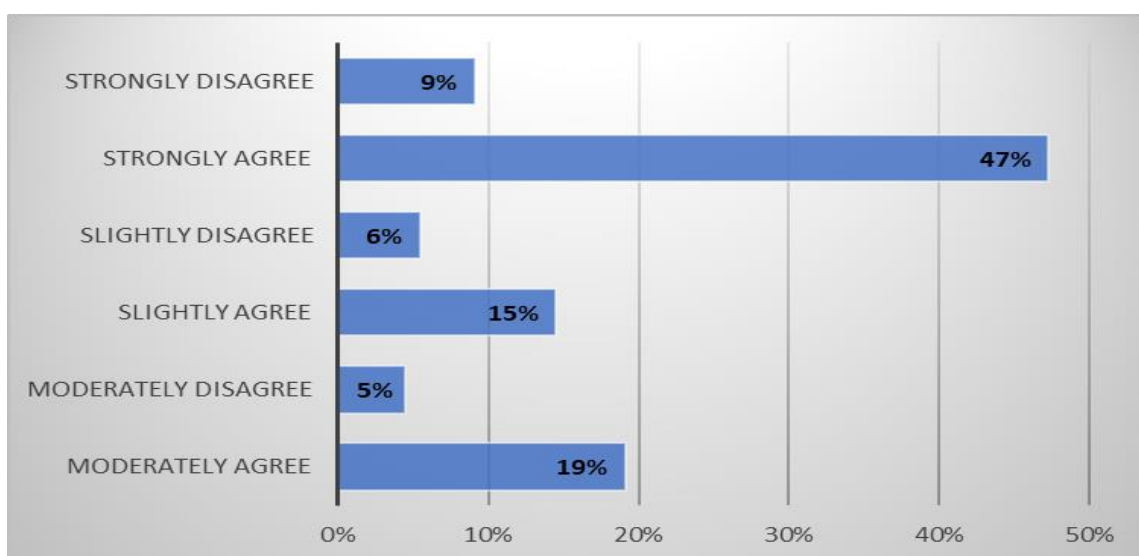


Figure 4.10: The extent to which planned conferences were disrupted

Statement 8: Having access to the library contributes positively to my academics

An analysis of Figure 4.11 provides a response to how having access to the library contributes to students' academics. An average of 82%, the majority of the respondents, agreed that having library access contributes positively to their academics, while 18% disagreed.

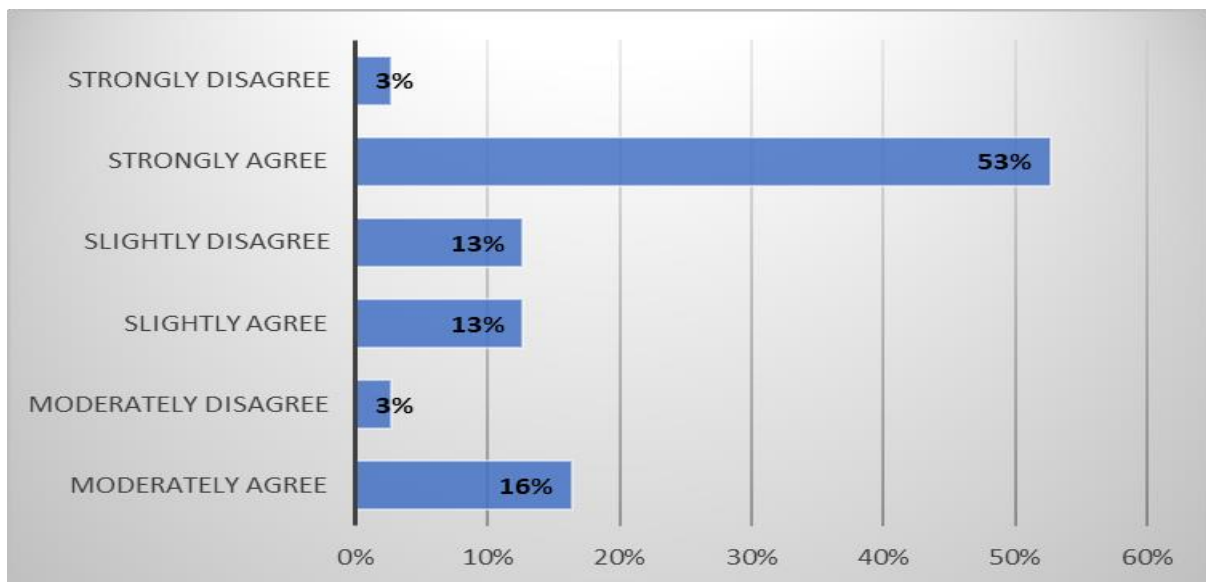


Figure 4.11: Positive contribution from having access to the library

Statement 9: Hard copies of textbooks are preferred over electronic versions.

The study aimed to determine the extent to which respondents agreed or disagreed with the statements made in Figure 4.12 regarding textbooks. The findings revealed that 84% of the respondents agreed that they preferred hard copies over online versions, while 16% indicated that they were in favour of electronic versions.

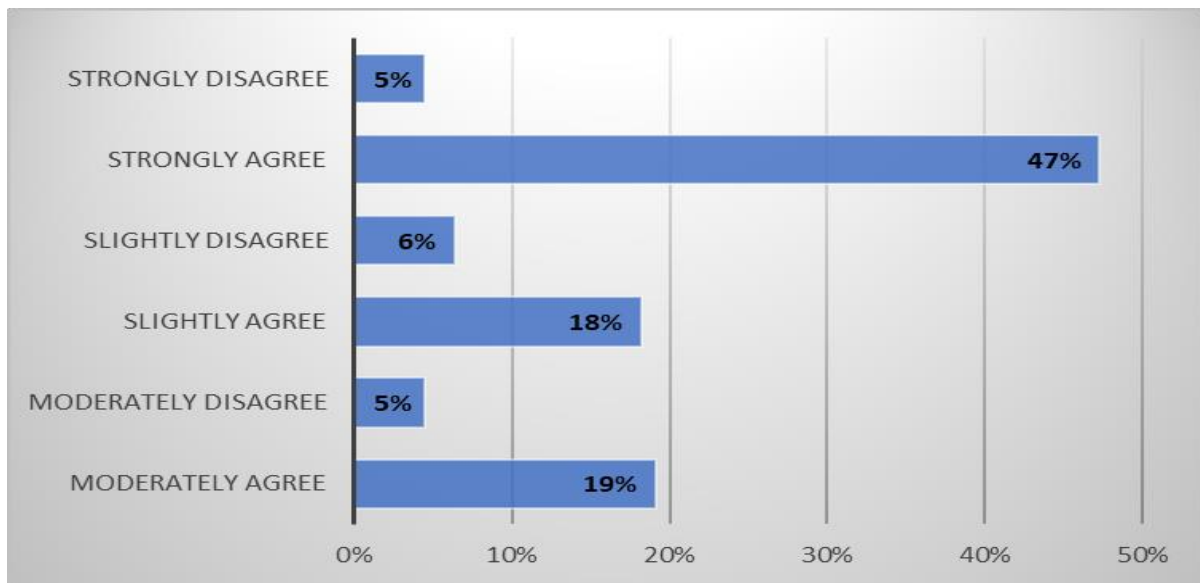


Figure 4.12: Preference of hard copies over electronic versions

4.4.3 Descriptive Statistics on Economic Effects of COVID-19

Statement 10: The income level of your parents

The study sought to determine the extent to which income levels of parents were affected during the pandemic, as some students depend on household income for their tuition fees. On the aspect of income, 14% of the respondents indicated that the pandemic did not impact the income levels of their parents, 17% of the respondents agreed to a small extent that their parent's income was affected, 28% of the respondents indicated that they were affected to a moderate extent, 20% of the respondents indicated that their parent's income was affected to a great extent; see Figure 4.13. In comparison, 15% agreed to a very great extent that they were negatively affected.

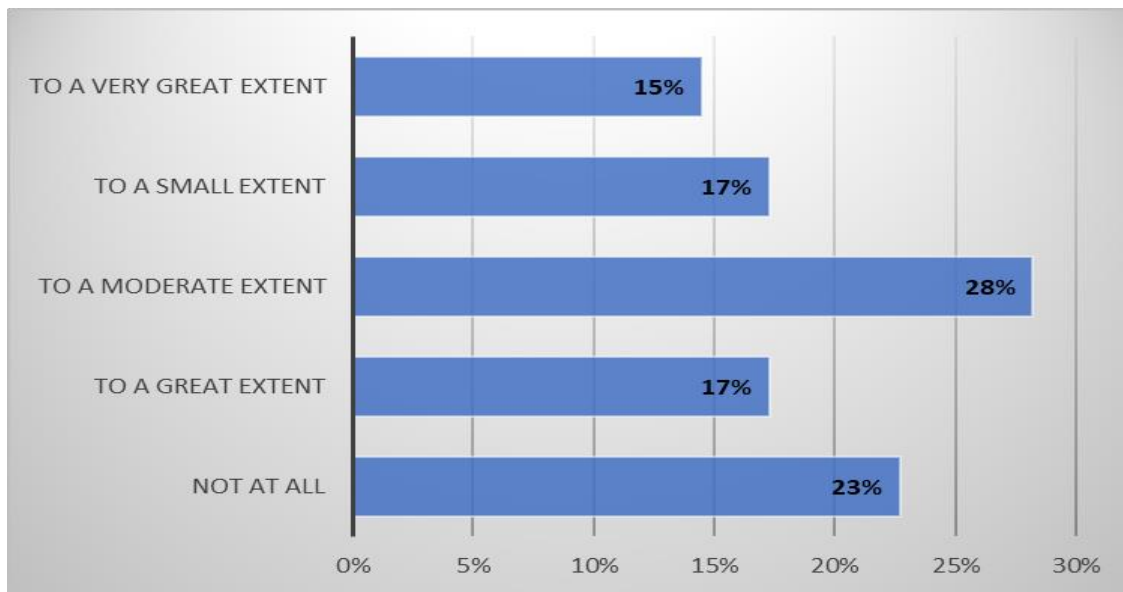


Figure 4.13: The extent to which income levels of parents were affected

Statement 11: I was able to apply for internships for the following year

An analysis of Figure 4.14 revealed that 48% of the respondents indicated that they were not able to apply for internships for the following year, 20% of the respondents agreed to a small extent, 15% of the respondents indicated that they were affected to a moderate extent, 11% of the respondents indicated to a great extent. In comparison, 6% agreed to a very great extent that they could not apply for internships.

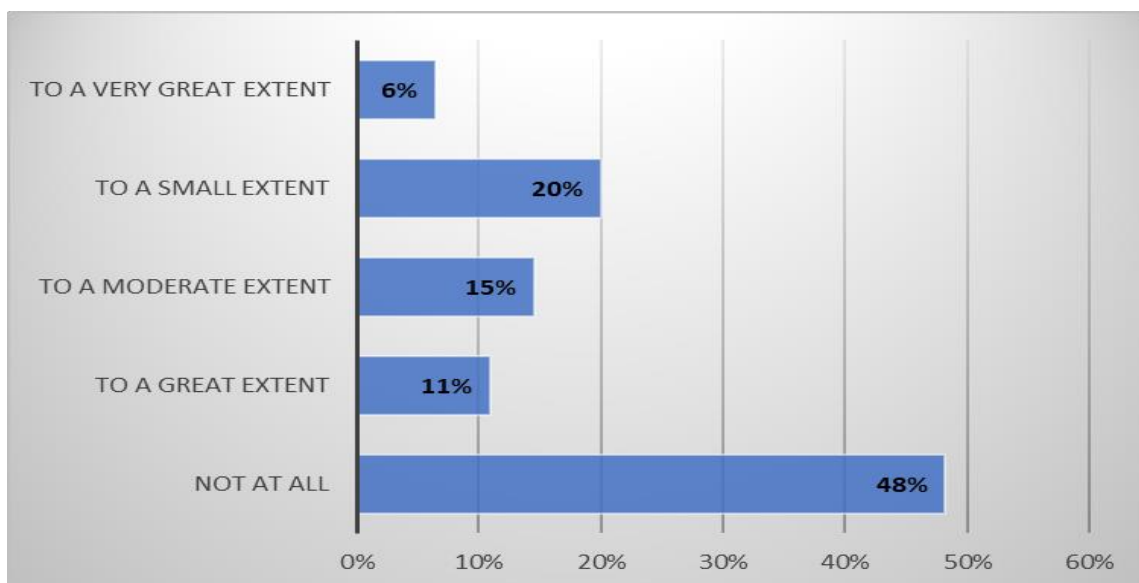


Figure 4.14: The extent to which applications for internships were affected

Statement 12: The issuing of data to students was applied consistently by the university

13% of the respondents indicated that the issuing of data was not applied consistently, 21% of the respondents agreed to a small extent that there was consistency, 25% of the respondents indicated to a moderate extent, 10% of the respondents indicated that it was consistent to a great extent; see Figure 4.15. Lastly, 10% agreed to a great extent that there was consistency in data issuing.

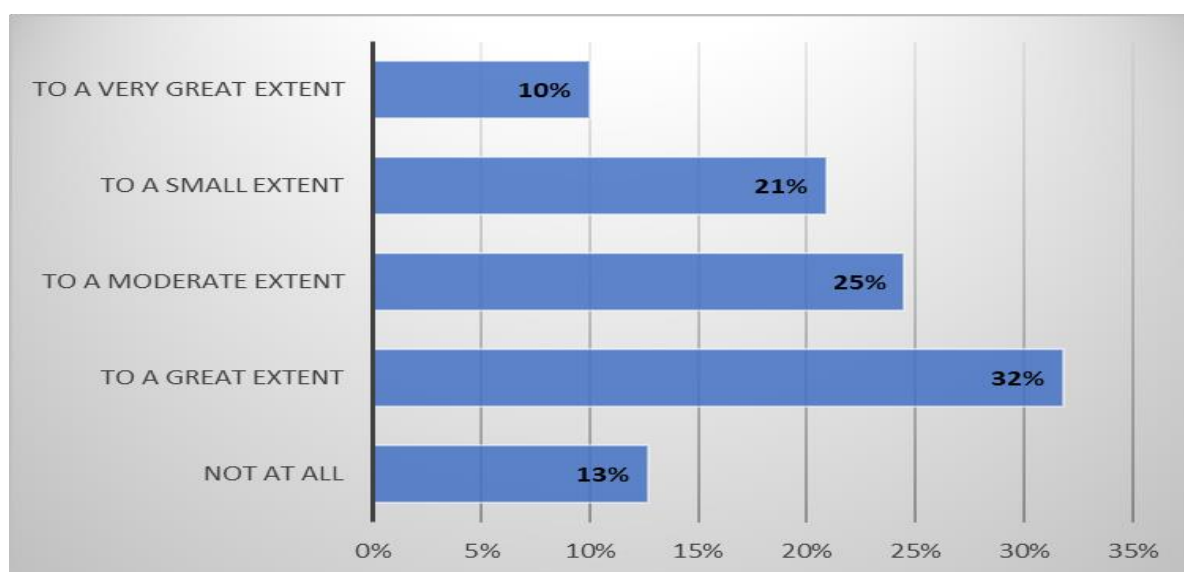


Figure 4.15: The extent to which the issuing of data was applied

Statement 13: The pandemic had an impact on the bursaries I am receiving

The study aimed to ascertain the extent to which respondents agreed or disagreed with the statements made in Figure 4.16 concerning the impact of the pandemic on bursaries. 35% of the respondents indicated that the pandemic did not have an impact on the bursaries that they are receiving, 14% of the respondents agreed to a small extent that their bursaries were affected, 17% of the respondents indicated that they were affected to a moderate extent, 15% of the respondents indicated that they were affected to a great extent. In comparison, 15% agreed to a very great extent that the bursaries were negatively affected.

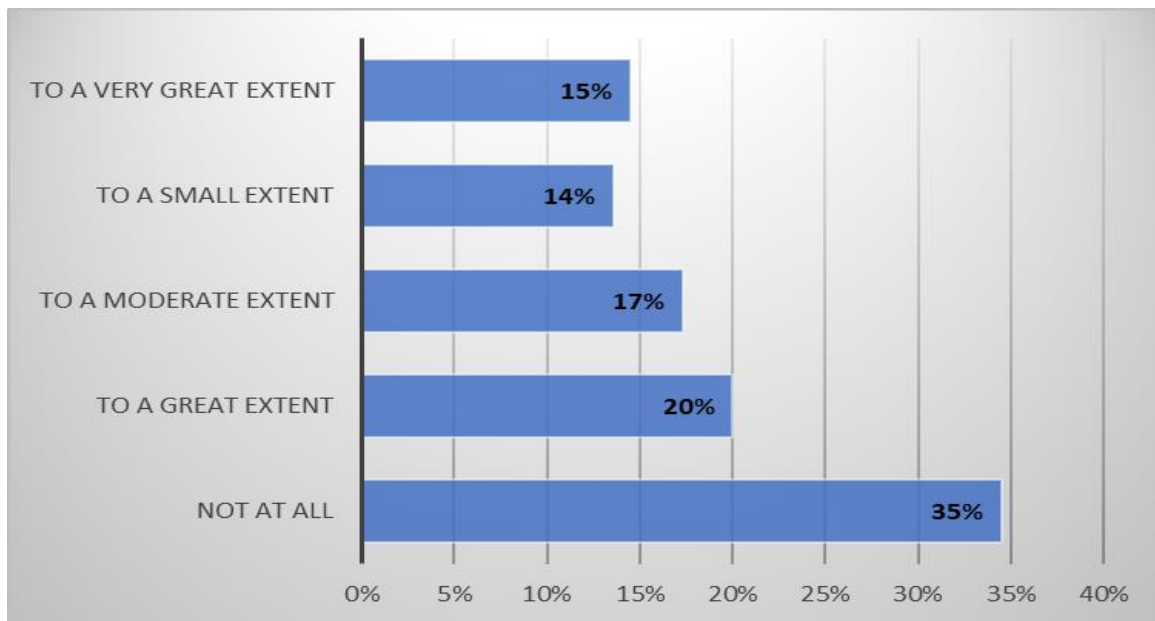


Figure 4.16: The extent to which bursaries were affected

Statement 14: My student debt increased during the pandemic

The study aimed to determine if student debt increased during the pandemic. The results from Figure 4.19 indicated that 38% of the respondents' debt did not increase during the pandemic, 17% of the respondents agreed to a small extent that their debt increased, 14% of the respondents indicated to a moderate extent, 17% of the respondents agreed to a great extent. In comparison, 15% agreed to a very great extent that their student debt increased.

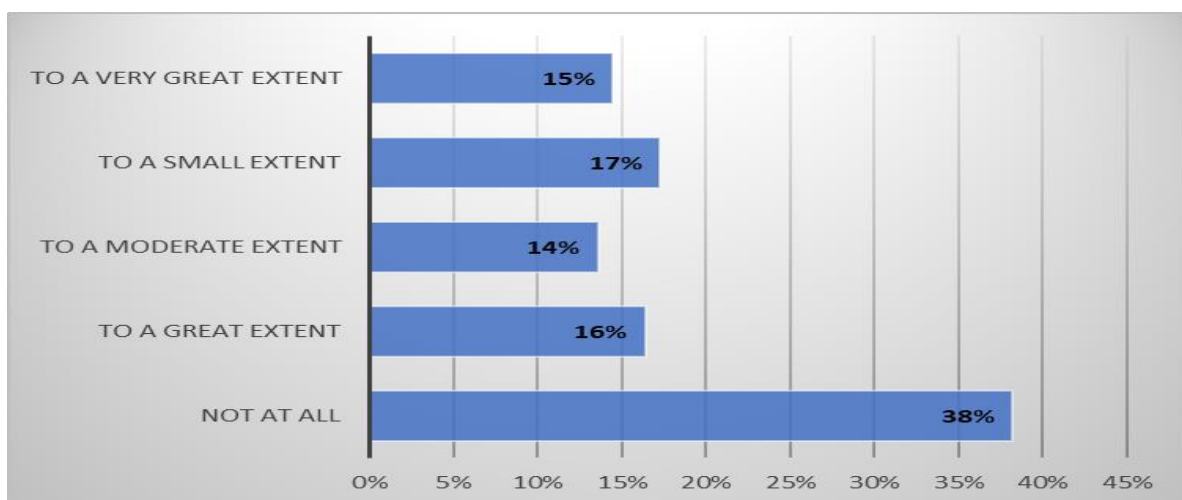


Figure 4.17: The extent to which student debt increased during the pandemic

Statement 15: My income was affected by the termination of student temporary contracts.

On the aspect of the termination of student temporary contracts during the lockdown, 42% of the respondents indicated that their income was not affected, 9% of the respondents agreed to a small extent that their income was affected, 18% of the respondents indicated that they were affected to a moderate extent, 18% of the respondents indicated that their income was affected to a great extent; see Figure 4.18. In comparison, 13% agreed to a very great extent that their income was affected by the termination of student temporary contracts.

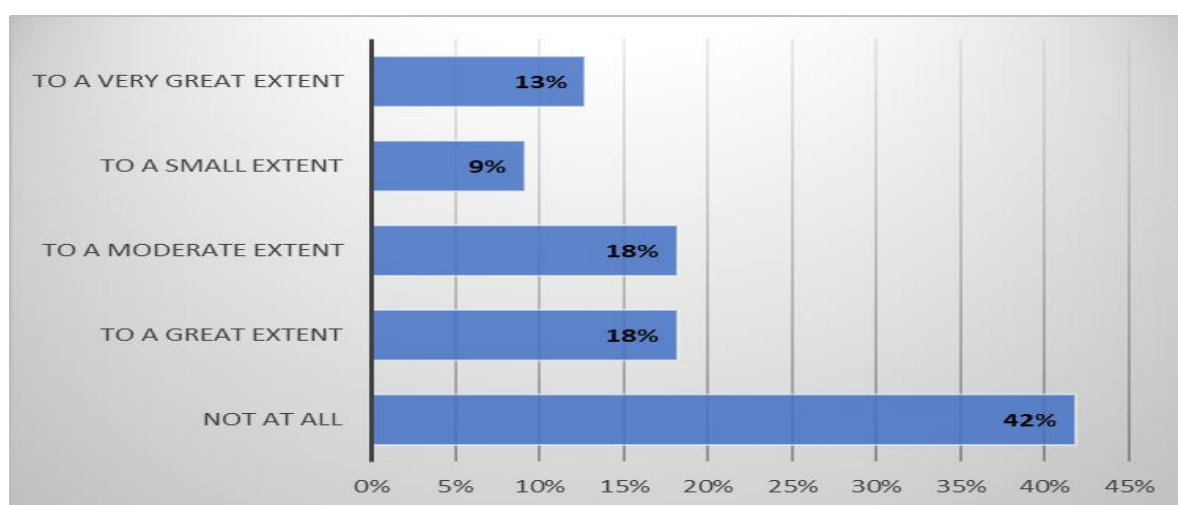


Figure 4.18: The extent to which temporary student contracts were affected

4.4.4 Overall Mean and Standard Deviation

4.4.4.1 Section A: Social Effects

The overall mean response value and standard deviation in Table 4.2 are 4.36 and 0.11, respectively. Given that the standard deviation (0.11) is closer to zero, the response values are therefore clustered more closely to the overall mean (4.36). The obtained findings indicate that the respondents perceive the factors listed in Table 4.2 as substantial barriers to social implications. The main obstacles for the students appear to be access to water and electricity ($M=5.35$) and disruptions to travel restrictions ($M=5.05$).

Table 4.2: Mean and Standard Deviation on Social Effects Factors

Social Effects on Students			
Statement	Mean	Standard Deviation	N
The noise level at home prevented you from studying.	3.65	2.187	110
You can access the lecture materials without experiencing any technological difficulties at home caused by an unstable Internet connection.	3.86	2.169	110
You don't have enough room to study in your overcrowded home.	3.9	2.415	110
At home, you have access to needs like electricity and water.	5.35	2.169	110
Travel restrictions have disrupted your research goals or yearly plans.	5.05	2.141	110
Overall Mean and Standard Deviation	4.36	0.11	

4.4.4.2 Section B: Teaching and Learning Effects

The overall mean response value and standard deviation in Table 4.3 are 5.42 and 0.22, respectively. Since the standard deviation (0.22) is closer to zero, the response values are clustered more closely to the overall mean (5.42). The perceptions of

respondents indicate that having access to the library (M=5.77) and hard copies of textbooks (M=5.69) are significant elements in their academe.

Table 4.3: Mean and Standard Deviation on Teaching and Learning Factors

Academe			
Statement	Mean	Standard Deviation	N
I was well prepared to take part in the online exams.	4.67	2.172	110
The conferences that I was planning to attend were disrupted by the pandemic.	5.53	1.980	110
Having access to the library contributes positively to my academics	5.77	1.701	110
Hard copies of textbooks are preferred over electronic versions.	5.69	1.739	110
Overall Mean and Standard Deviation	5.42	0.22	

4.4.4.3 Section C: Economic effects

The overall mean response value and standard deviation in Table 4.4 are 2.61 and 0.13, respectively. Since the standard deviation (0.13) is closer to zero, the response values are clustered more closely to the overall mean (2.61). The perceptions of respondents indicate that the income levels of parents (M=2.84) and bursaries (M=2.86) had significant economic effects on students.

Table 4.4: Mean and Standard Deviation on Economic Factors

Economic Effects on Students			
Statement	Mean	Standard Deviation	N
The income level of your parents	2.84	1.351	110
I was able to apply for internships for the following year	2.07	1.283	110
The issuing of data to students was applied consistently by the university	3.05	1.203	110
The pandemic had an impact on the bursaries I am receiving	2.66	1.486	110
My student debt increased during the pandemic	2.52	1.496	110
My income was affected by student temp contracts	2.51	1.495	110
Overall Mean and Standard Deviation	2.61	0.13	

4.5 CORRELATION ANALYSIS

The chi-square test is a statistical test utilised to ascertain whether two categorical variables are significantly associated (Pandis, 2016:898). The researcher performed Pearson's chi-square test; however, the p-value was more than 0.05, which means that the relationship between the variables was not statistically significant. Therefore, there is no need to report on the correlation test. According to Aggarwal and

Ranganathan (2020:16), the correlation coefficient seeks to identify a linear association. Therefore, it is essential to note that this reasoning may be faulty when a non-linear relationship exists between two variables.

4.6 DISCUSSION

4.6.1 Social Effects on Students During the Pandemic

During the pandemic, students experienced technological difficulties. 54% of the respondents indicated that the unstable internet connection made accessing lecture materials difficult. This notion is also supported by the earlier study conducted by Salakhova *et al.* (2022:5), which revealed that the organisational factors influencing distance learning include the assessment of electronic platforms and apps (such as Zoom and Teams) in terms of their technological preparedness and the quality of available online materials. Furthermore, the results of the analysis revealed that 68% of respondents agree that the travel restrictions have disrupted their research goals or yearly plans. Consequently, students who had intended to engage in activities such as data gathering or collaborating with their research supervisors were unable to proceed as planned, either deferring their plans until a subsequent year or facing significant delays.

The results of the study revealed that 75% of respondents had access to basic needs such as water and electricity, while 25% indicated that they lacked access. According to Nicola and Alfari (2020:191), the difference in geographical environments is causing some students to experience stressful learning situations due to a lack of electricity. Praghlapati (2020:4) argued that numerous students have suffered from anxiety as a result of the COVID-19 pandemic, which has harmed their academic performance and learning outcomes. This researcher suggested that HEIs offer psychological and counselling services to aid students' academic development. From this section, it can be concluded that COVID-19 impacted the social well-being of university students, especially those from disadvantaged backgrounds.

4.6.2 The Effects on Teaching and Learning During the Pandemic

The results of the study revealed that 66% of the respondents were prepared to take part in the online exams. The study's results align with earlier research conducted by Zhang *et al.* (2020:55), which revealed that students expressed satisfaction with online learning due to its efficacy during the COVID-19 pandemic. According to Khlaif *et al.* (2021:95), effective online teaching and learning occurs when all students have equal access to facilities and lectures.

Academics frequently perceive conferences and other face-to-face gatherings as a strategic allocation of resources towards their professional development and advancement. Conferences provide significant prospects for individuals to attain acknowledgement and receive constructive evaluations of their scholarly endeavours. They also provide a platform to create professional relationships with potential peers and collaborators from diverse geographical locations. The results reveal that 47% of the respondents strongly agree that the pandemic disrupted their conference plans. According to Weissgerber *et al.* (2020:2), conference organisers were requested to assist in alleviating the impact of conference and travel cancellations on researchers by livestreaming conferences to allow remote participation and facilitating online networking events.

The successful completion of the 2020 academic year in South Africa and other regions demonstrates the capacity of institutions to adapt and remain resilient in the midst of the pandemic. Using digital resources in education can benefit students with consistent internet access and a preference for digital materials. However, it can also present drawbacks for students lacking reliable internet access or those who prefer physical learning materials. The results of the data analysis indicated that 82% of the respondents agree that having access to the library contributes positively to their academics. A study by Rafiq *et al.* (2021:4) revealed that the COVID-19 pandemic has exerted a substantial influence on library services, leading to a considerable shift towards the provision of virtual or remote services by numerous libraries.

The transition to virtual learning posed significant challenges in terms of converting activities into electronic formats while maintaining the same level of involvement. The results from the study revealed that 85% of the respondents prefer hard copies of

textbooks rather than electronic versions. A study by Knutson and Fowler (2009:3) revealed that despite the numerous advantages of utilising electronic resources, students continue to favour printed books that can be borrowed from the library and utilised for collaborative learning. It can be concluded from the results that almost 90% of the respondents strongly agreed or agreed with the statements indicating that the COVID-19 pandemic affected student's learning in higher education. The data reported here appear to be consistent with the results of prior research, indicating that COVID-19 has had various degrees of influence on student academic achievement.

4.6.3 The Economic Effects of COVID-19 on Students

The government's response to the epidemic can be broadly categorised into two main approaches, each with distinct objectives. The first approach prioritises public health and the preservation of human lives, which entails implementing measures such as economic shutdowns. The second approach emphasises economic growth and the maintenance of livelihoods, necessitating the continuation of commercial activities. Financial shocks can be identified by several factors, including the occurrence of job loss among students as a result of the COVID-19 pandemic, the reduction in income experienced by student's family members due to COVID-19, the extent of changes in student's monthly earnings caused by COVID-19, and the probability of students being unable to meet their debt obligations in full during the current academic year.

The results disclosed that 60% of the respondents indicated that the income levels of their parents were affected during the pandemic, and a further 17% agreed that it was to a small extent. In comparison, 23% indicated that they were not affected at all. Earlier research conducted by Ranchhod and Daniels (2021:44) found that in their sample of 6000 adults between the ages of 18 and 59 who were categorised as employed, it decreased from 57% in February 2020 to 48% in April 2020. Furthermore, the authors highlighted that one out of every three people employed in February in their sample either experienced job loss due to the lockdown or were unable to work and hence earned no wages throughout April.

35% of the respondents indicated that the pandemic did not impact the bursaries that they are receiving, 14% of the respondents agreed to a small extent that their bursaries

were affected, 17% of the respondents indicated that they were affected to a moderate extent, 20% of the respondents indicated that their bursaries were affected to a great extent. In comparison, 15% agreed to a very great extent that they were negatively affected. The results revealed that 48% of the respondents agreed that they could not apply for internships in the following year, 20% indicated a small extent, 15 % indicated a moderate extent, 11% indicated a great extent, and 6% indicated a great extent.

4.7 CORRELATION ANALYSIS

The chi-square test is a statistical test utilised to ascertain whether two categorical variables are significantly associated (Pandis, 2016:898). The researcher performed Pearson's chi-square test; however, the p-value was more than 0.05, which means that the relationship between the variables was not statistically significant. Therefore, there is no need to report on the correlation test. According to Aggarwal and Ranganathan (2020:16), the correlation coefficient seeks to identify a linear association. Therefore, it is essential to note that this reasoning may be faulty when a non-linear relationship exists between two variables.

4.8 CHAPTER SUMMARY

The primary objective of this chapter was to present, interpret, and analyse the data that was collected from students studying at the NWU. The data reported in this chapter was obtained through the administration of questionnaires. The data was analysed using the statistical software SPSS. Cronbach's alpha was utilised as a metric to assess the internal consistency of the survey items, aiming to ascertain the reliability of the scale.

The following chapter contains the study's conclusions, recommendations, and limitations.

CHAPTER 5 CONCLUSIONS, RECOMMENDATIONS AND LIMITATIONS

5.1 INTRODUCTION

This chapter aims to present a concise overview of the previous chapters. Subsequently, a concise overview of the research outcomes, as delineated in Chapter Four, is presented, bolstered by the relevant data acquired from the literature review. The study's primary objective was to analyse the socio-economic effects of COVID-19 within a faculty at a HEI. Furthermore, this section includes recommendations derived from the study's results, suggestions for further research, and an examination of the study's limitations.

The recommendations presented in this study are derived from the empirical investigation of the following research questions:

- What are the economic effects of COVID-19 on university students?
- What are the social effects of COVID-19 on university students?
- What are the effects of COVID-19 on the academe of university students?

5.2 SUMMARY OF RESULTS

The socio-economic effects of COVID-19 on students enrolled in a faculty of a HEI were examined in this study. The following section was the presentation of the results by responding to each of the research questions.

5.2.1 What are the Economic Effects of COVID-19 on Students?

This section aimed to examine the economic repercussions of the COVID-19 pandemic that have specifically affected students. The questionnaire revealed that the household income was impacted by the occurrence of job losses, which resulted from the closure of some of the country's economic activities. 66% of the respondents indicated that their bursaries were impacted, and only 38% did not agree with this statement. The loss of bursaries is a result of companies that were not doing well during the pandemic. In addition, the student internships were affected, resulting in income loss and a delay in research practicals. 48% of the respondents indicated that they did not manage to apply for internships for the following year. These findings are supported by the literature suggesting that the pandemic-driven economic downturn caused university students to encounter financial difficulties due to revenue reduction or loss of income (Gewalt *et al.*, 2022:16).

5.2.2 What are the Social Effects of COVID-19 on Students?

This section aimed to analyse the impact of COVID-19 on the social well-being of students. The students had to leave their hostels and go back home during lockdown. From the results, the respondents indicated that the travel restrictions affected their research goals as they could not attend research conferences and meet with their research collaborators. Only 11% of the respondents strongly agreed with the statement of not being able to study in their crowded homes, and 68% disagreed with this statement. A portion of the student population resided in areas characterised by a lack of 3G network coverage and a notably inadequate Internet connection. The study also revealed that some students did not have access to basic needs such as water and electricity at home. According to research, the COVID-19 lockdown has significantly impacted students' academic success and achievement. This can be attributed to several factors, including a loss of interest and motivation, limited access to high-cost internet services, unavailability of necessary learning gadgets, lack of access to online learning resources, less interaction and feelings of isolation (Tamrat, 2021:59).

5.2.3 What are the Effects of COVID-19 on the Academe of Students?

This section aimed to highlight the impact of COVID-19 on teaching and learning. The transition to online teaching and learning has not only resulted in digital disparities but has also had significant social and psychological implications. The study results revealed that the students were not prepared for the online exams, not having access to the library impacted them, and the academic conferences they were planning to attend were affected by the travel restrictions. This is supported by earlier research conducted by Khaliq *et al.* (2020:35), which revealed that insufficient resources hindered students' learning and caused them to encounter various obstacles in teaching and learning activities throughout the COVID-19 pandemic, resulting in ineffective learning. In addition, the findings revealed that poor classroom socialisation and difficulties with internet connectivity in online learning had a negative impact on academic performance compared to face-to-face learning (Rafiq *et al.*, 2021:8).

5.3 RECOMMENDATIONS OF THE STUDY

Based on the results and conclusions of the study, it is possible to make the following general recommendations:

- Given the profound disruptions caused by the COVID-19 pandemic, the adoption of digital technology is regarded as an appropriate response. Digital technology encompasses a range of technological advancements, including but not limited to software, computer devices, and social media platforms. Digital technologies can potentially enhance universities' performance and productivity in effectively managing crises, such as subsequent waves of the pandemic, to ensure the uninterrupted continuation of their operations.
- Universities should implement a resilient recovery model that aims to enhance individuals' capacity to respond and adapt effectively to the challenges and risks presented by the COVID-19 pandemic. By facilitating interactions with individuals, families, and the environment, elucidating the underlying stressful experiences of

stakeholders such as students, faculty, and researchers, and providing assistance to HEIs in the process of system reconstruction amidst the COVID-19 pandemic. People with high resilience are capable of overcoming their depressive state amidst the pandemic, adjusting to adverse emotions, and inspiring themselves to accomplish their goals.

- The organisation should implement blended learning for students and invest in resources for such a method. During the pandemic, teaching was done online, and therefore, after COVID, the university should not go back completely to the traditional face-to-face classes but implement the blended method.
- A healthy student life should be maintained. University students are a fragile population group in terms of mental health.
- Priority should be given by the organisation to the preparation of highly skilled graduates to address skills shortages exacerbated by COVID-19. In addition to specific expertise and competencies, employers are increasingly interested in soft skills, resilience, problem-solving abilities, and stress tolerance.

5.4 AREAS FOR FUTURE RESEARCH

The study's results may have limited generalisation because the respondents were exclusively enrolled in a single faculty within the broader HEI. Hence, the researcher should incorporate data from various faculties within the university in forthcoming studies. This enhances the generalisability of the results to the entire institution and provides data for comparative analysis.

Furthermore, this research can be conducted at other HEIs to determine the socio-economic effects of COVID-19 on students throughout the HE sector and that more students should engage in studies of this nature. The widening of this research could lead to a better understanding of the impact of COVID-19 on students.

5.5 LIMITATIONS OF THE STUDY

The researcher noted that the achievement of a research project depends on diverse resources, such as the availability of respondents and an adequate amount of time. The researcher was unable to include all students within the academic department of the HEI due to limitations in time and the availability of respondents. Consequently, the study's results cannot be generalised, necessitating further analysis of their relevance across diverse contexts. The study utilised a quantitative methodology as its strategy. The use of a mixed-method approach, incorporating both quantitative and qualitative data, could have enhanced the validity of the results in this study.

5.6 CONTRIBUTION OF THE STUDY

This research contributes significantly to the identification of optimal solutions that can efficiently support students. The researcher was of the view that universities could gain significant insights from examining the impact of the COVID-19 pandemic on students, both during and in the aftermath of the crisis. This study makes a scholarly and policy-oriented contribution by assessing the extent to which the worldwide pandemic has impacted the academic, social, and economic difficulties faced by students in HIEs.

5.7 CHAPTER SUMMARY

This chapter provided a comprehensive overview of the preceding chapters. The findings of the study were examined and supported by pertinent academic sources. Conclusions and recommendations for the socio-economic effects of COVID-19 on students were presented based on the study's results. The empirical investigation yielded recommendations for universities and suggestions for future research,

emphasising the necessity of doing comprehensive research on the identical subject matter utilising a more extensive sample size. The limitations of the study and suggestions for further research were also addressed.

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ANNEXURE A: SAMPLE QUESTIONNAIRE

SECTION A: DEMOGRAPHIC INFORMATION

1. Gender

Male	Female
1	2

2. Age group

18-20	1
21-25	2
26-older	3

3. Level of Study (during the COVID-19 pandemic, tick the relevant one)

1 st year	
2 nd year	
3 rd year	

SECTION B: EFFECTS OF COVID-19 ON STUDENTS

Instructions: Using the response scale below, indicate your agreement or disagreement with each item. Make a cross in the appropriate box. Please answer all the questions honestly and accurately by making a cross in the appropriate box. If you make a mistake, just draw a line through the cross and make a new cross in the selected box.

PART B

No.	Statements	Strongly disagree	Moderately disagree	Slightly disagree	Slightly agree	Moderately agree	Strongly agree
Social Effects of COVID-19							
1	The noise in your residence prevented you from studying during the pandemic.	1	2	3	4	5	6
2	You can access the lecture materials without experiencing any technological difficulties at home caused by an unstable Internet connection.	1	2	3	4	5	6
3	You don't have enough room to study in your overcrowded home.	1	2	3	4	5	6
4	At home, you have access to needs like electricity and water.	1	2	3	4	5	6
5	Travel restrictions have disrupted your research goals or yearly plans.	1	2	3	4	5	6

PART C

STATEMENTS		Not at all	To a small extent	To a moderate extent	To a great extent	To a very great extent
Economic effects						
To what extent did the following components affect your studies:						
1	The income level of your parents	1	2	3	4	5
2	I was able to apply for internships for the following year	1	2	3	4	5
3	The issuing of data to students was applied consistently by the university	1	2	3	4	5
4	The pandemic had an impact on the bursaries I am receiving	1	2	3	4	5
5	My student debt increased during the pandemic	1	2	3	4	5
6	My income was affected by the termination of student temp contracts	1	2	3	4	5

PART D

No.	Statements	Strongly disagree	Moderately disagree	Slightly disagree	Slightly agree	Moderately agree	Strongly agree
How academe was affected							
1	I was well prepared to take part in the online exams.	1	2	3	4	5	6
2	The conferences that I was planning to attend were disrupted by the pandemic.	1	2	3	4	5	6
3	Having access to the library contributes positively to my academics	1	2	3	4	5	6
4	Hard copies of textbooks are preferred over electronic versions.	1	2	3	4	5	6

ANNEXURE B: INFORMED CONSENT



Dear Respondent

PARTICIPATION INFORMATION AND CONSENT FORM

I hereby wish to request your consent to participate in this research voluntarily, which involves answering a few questions about the socio-economic effects of COVID-19 on students. The questionnaire can be completed at a time convenient to you via a Google form link and will not take you more than an hour. Before giving consent, please review the information below.

The details of the research are as follows:

TITLE OF THE RESEARCH PROJECT

Analysing the socio-economic effects of COVID-19 on students in a South African university.

WHAT IS THIS RESEARCH ABOUT?

Aim

The study's primary aim is to determine whether COVID-19 has a socio-economic effect on university students.

Objectives

- To analyse the social effects of COVID-19 on university students.
- To analyse the economic effects of COVID-19 on university students.
- To establish the possible effects of COVID-19 on the academe of varsity students.

Respondents

Students studying within the Faculty of Economic and Management Sciences under the School of Economics at NWU.

Risks involved for respondents

There are no risks associated with participating in this study. You reserve the right to withdraw at any point of the research process without any consequence, and there are no anticipated repercussions of declining or withdrawing from the study.

Anonymity

High attention will be placed on protecting the identities of all respondents, and the confidentiality of respondent information and anonymity will always be maintained.

POPI ACT

Please note that the researcher will adhere to all rules contained in the POPI ACT, Act No.4 of 2013.

Thank you for your time. If you have any questions or queries, feel free to contact me at 0726852166.

Yours sincerely,

Tume Molete

DECLARATION BY RESPONDENT:

By signing below, the respondent agrees to participate in the following research study:

Analysing the socio-economic effects of COVID-19 on students in a South African university.

I declare that:

- I have read this information and consent form and understand what is expected of me in this research.
- I am aware that the procedure to be followed is the quantitative design, which entails a questionnaire. Standard background data will be requested, e.g., your age, gender, and level of education.
- I understand that participating in this study is optional, and I have not been pressured to participate.
- I may choose to withdraw from the study at any time, and will not be handled in a negative way if I do so.
- I have had a chance to ask the researcher questions, and all my questions have been adequately answered.
- I understand that the data will be utilised for research purposes, e.g., publishing.
- I am aware that the study will be conducted anonymously, and my identity will not be disclosed.

Signed _____ at _____ on
date ____ / ____ 2023

Signature

ANNEXURE C: PERMISSION LETTER

APPLICATION TO CONDUCT STUDY FOR MBA MINI-DISSERTATION AT SCHOOL OF ECONOMICS (FEMS)

Permission is hereby granted for Mrs Tume Molete (student number 20124171) to conduct research at the School of Economics (NWU), a requirement for the partial fulfilment of her Masters of Business Administration (MBA) degree at the North-West Business School. The title of the mini-dissertation reads as follows: "Analysing the socio-economic effects of COVID-19 on students in a South African university".

No confidential information will be solicited from respondents. Questionnaires will be sent to students to determine the impact that COVID-19 had on university students. The respondents could also, at any time, withdraw their responses and participation if they wish to do so.

Approved by:



.....

Prof Wynand Grobler

Director

School of Economics

ANNEXURE D: ETHICS CLEARANCE

Private Bag X1290,
Potchefstroom South Africa
2520

Tel: 018 299-1111/2222
Fax: 018 299-4910
Web: <http://www.nwu.ac.za>

Senate Committee for Research Ethics
Tel: 018 299-484
Feziwe.Mseleni@nwu.ac.za

28 November 2022



ETHICS APPROVAL LETTER OF STUDY

Based on approval by the **Economic and Management Sciences Research Ethics Committee (EMS-REC)** on 28/11/2022, the Economic and Management Sciences Research Ethics Committee hereby **approves** your study as indicated below. This implies that the North-West University Senate Committee for Research Ethics (NWU-REC) grants its permission that, provided the special conditions specified below are met and pending any other authorisation that may be necessary, the study may be initiated using the ethics number below.

N	W	U	-	0	1	9	0	5	-	2	2	-	A	4
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

Special in process conditions of the research for approval (if applicable):

Study title: Analysing the socio-economic effects of COVID-19 on students in a South African

university

Institutio Study Yea Statu
Status: S = Submission; R = Re-Submission; P = Provisional
Authorisation; A

= Authorisation

Low

Application Type:

General conditions:

While this ethics approval is subject to all declarations, undertakings and agreements incorporated and signed in the application form, the following general terms and conditions will apply:

- The study leader/supervisor (principle investigator)/researcher must report in the prescribed format to the EMS-REC:
 - annually (or as otherwise requested) on the monitoring of the study, whereby a letter of continuation will be provided, and upon completion of the study; and
 - without any delay in case of any adverse event or incident (or any matter that interrupts sound ethical principles) during the course of the study.
- The approval applies strictly to the proposal as stipulated in the application form. Should any amendments to the proposal be deemed necessary during the course of the study, the study leader/researcher must apply for approval of these amendments at the EMS-REC, prior to implementation. Should there be any deviations from the study proposal without the necessary approval of such amendments, the ethics approval is immediately and automatically forfeited.
- Annually a number of studies may be randomly selected for an external audit.
- The date of approval indicates the first date that the study may be started.

In the interest of ethical responsibility, the NWU-SCRE and EMS-REC reserves the right to:

- request access to any information or data at any time during the course or after completion of the study;
- to ask further questions, seek additional information, require further modification or monitor the conduct of your research or the informed consent process;
- withdraw or postpone approval if:
 - any unethical principles or practices of the study are revealed or suspected;
 - it becomes apparent that any relevant information was withheld from the EMS-REC or that information has been false or misrepresented;
 - submission of the annual (or otherwise stipulated) monitoring report, the required amendments, or reporting of adverse events or incidents was not done in a timely manner and accurately; and / or
 - new institutional rules, national legislation or international conventions deem it necessary.

The EMS-REC would like to remain at your service as scientist and researcher, and wishes you well with your study. Please do not hesitate to contact the EMS-REC or the NWU-SCRE for any further enquiries or requests for assistance.

Yours sincerely,

**Mark
Rathbone**

Digitally signed by Mark Rathbone
DN: cn=Mark Rathbone, o=North-
West University, ou=Business
management,
email=mark.rathbone@nwu.ac.za,
c=ZA
Date: 2022.11.30 11:38:45 +02'00'

Prof Mark Rathbone
Chairperson: NWU Economic and Management Sciences Research Ethics Committee

ANNEXURE E: RESEARCH DATA GATEKEEPER COMMITTEE PERMISSION LETTER



Private Bag X6001, Potchefstroom
South Africa 2520

Tel: +2718 299-1111/2222

Web: <http://www.nwu.ac.za>

Research Data Gatekeeper Committee

NWU RDGC PERMISSION GRANTED LETTER

Based on the documentation provided by the researcher specified below, on **16-March-2023** the North-West University (NWU) Research Data Gatekeeper Committee (NWU-RDGC) hereby **grants permission** for the specific project (as indicated below) to be conducted at the NWU:

Project title: Analysing the socio-economic effects of COVID-19 on students in a South African university

Project leader: Prof Nelda Mouton

Researcher/Project Team: Tume Moleté

Ethics reference no: NWU-01905-22-A4

NWU RDGC reference no: NWU-GK-23-111

Approval date: 16-March-2023

Expiry date: 16-March-2024

General Conditions of Approval:

- The NWU-RDGC will not take the responsibility to recruit research participants or to gather data on behalf of the researcher. This committee can therefore not guarantee the participation of our relevant stakeholders.
- Any changes to the research protocol within the permission period (for a maximum of 1 year) must be communicated to the NWU-RDGC. Failure to do so will lead to withdrawal of the permission.
- The NWU-RDGC should be provided with a report or document in which the results of said project are disseminated.
- Due to the COVID-19 pandemics the Committee would like to advise the researcher to practice the necessary caution and adhere to the National Covid-19 Guidelines when conducting research with participants.

Please note that under no circumstances will any personal information of possible research subjects be provided to the researcher by the NWU RDGC. The NWU complies with the Promotion of Access to Information Act 2 of 2000 (PAIA) as well as the Protection of Personal Information Act 4 of 2013 (POPI). For an application to access such information please contact Ms Annamarie De Kock (018 285 2771) for the relevant enquiry form or more information on how the NWU complies with PAIA and POPI.

The NWU RDGC would like to remain at your service as scientist and researcher and wishes you well with your project. Please do not hesitate to contact the NWU RDGC for any further enquiries or requests for assistance.

Prof Jeffrey Mphahlele



Chairperson NWU Research Data Gatekeeper Committee

Original details: (22351930) C:\Users\22351930\Desktop\test 2.docm
13 November 2018

Current details: (22351930) M:\DSS1\8533\Monitoring and Reporting Cluster\Ethics\Applications RDGC\Updated RDGC Permission Letter.docm
15 November 2018

File reference: 1.1.4.3

ANNEXURE F: TURNITIN SUMMARY

ORIGINALITY REPORT

23%

SIMILARITY INDEX

21%

INTERNET SOURCES

8%

PUBLICATIONS

8%

STUDENT PAPERS

ANNEXURE G: LANGUAGE EDITING CERTIFICATE

Research Advisory Institute of South Africa



LANGUAGE EDITING CERTIFICATE

This document certifies that the manuscript listed below has been edited for proper English language, grammar, punctuation, spelling and overall presentation by one or more editors of Research Advisory Institute of South Africa (RAISA) Language Editing Services.

Manuscript Title:

Analysing the socio-economic effects of COVID-19 on students in a South African university

Author(s):

TS Molete

Date Issued:

08 Nov 2023

Certificate Verification Key:

Nov2023-Tume-C19NWU

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