# Transforming private higher education institutions through digitilisation to become competitive: A case of Open Learning Group, Johannesburg

**By**

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**DECLARATION**

I, Sekai Patricia Mutsungi, declare that this MSc research report is my effort and is a true reflection of research executed by me. This research in full or part thereof has not been submitted for examination for any degree at any other university/institution.



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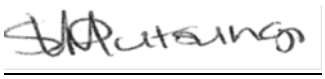

Signature

13 JANUARY 2023

Date

**DEDICATION**

To my dad, Mr Wensisilous Chikovo, my late mom, Ms Angela Feza, and my late parents-in-law, Mr Herbert Mutsungi and Mrs Ailet Mutsungi.

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The author of this dissertation wants to thank several individuals for the support and input given to this dissertation. Firstly, I offer my profound gratitude to my supervisor, for the guidance, valuable insights, and dedication from day one until the end of this journey. Hats off to my classmates for their moral support, feedback, positive attitudes, and fun. Special mention goes to Tafadzwa, Chamu, Heather, Jessie, Noster, Jaison, Talisman and Mashie. I also appreciate the case institution, especially Dr Hennie Scheepers and all the participants for their time, knowledge contribution and commitment towards helping me move forward in this process. My deepest thanks also go to my work colleagues for all the kindness and support during this journey, such an amazing team to work with.

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**ABSTRACT**

Higher education institutions (HEIs) especially in the private education space are existing in an environment where they are competing for clients and therefore need to acquire a competitive advantage. Higher education management is faced with the need to take action by implementing strategies that can create a competitive advantage and digital transformation- has become a strategic factor to succeed in this effort. The purpose of the study was to explore ways of transforming private higher education institutions (PHEIs) to become competitive, in the case of OLG. Porter's value chain analysis model guided the study. This study followed an interpretivism philosophy and adopted a qualitative research paradigm. The study also adopted an exploratory research design of a single case study of a PHEI. Primary data from the institution's employees, suppliers and students was collected through semi-structured interviews, organised, and analysed using thematic analysis. The results revealed benefits that are related to value chain reconfiguration in a digital transformation context such as enhanced student experience and flexibility. These benefits drive an institution to create a competitive advantage not only in its value chain but also in the value chains of its supply chain partners. The study concluded that an institution seeking to successfully create a competitive advantage must observe and reconfigure value-generating activities individually in the value chain. The research contributes to the body of knowledge by developing a context that illustrates the path towards creating a competitive advantage through transforming the value chain digitally.

**Keywords**: digital transformation; value chain reconfiguration; competitive advantage; private higher education institutions; value chain; higher education

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| | |
|---|---|
| HE | Higher Education |
| PHE | Private Higher Education |
| PHEI(s) | Private Higher Education Institution (s) |
| VCR | Value Chain Reconfiguration |
| DT | Digital Transformation |

# CHAPTER 1: INTRODUCTION

## 1.1. Background to the Study

Competitiveness has pervaded the higher education (HE) sector, globally and locally (Azzi,2018). The worldwide increase in the demand for higher education has been due to globalisation and the rise of a knowledge economy. African countries have been deemed to have the strongest opportunities for growth in higher education (Nganga, 2021). The availability of investment opportunities and fewer barriers to entry has led to the growth in the demand for private higher education (PHE).

Nganga (2021) asserts that the upsurge of the PHE sector has received much attention since the end of the 20$^{th}$ century. In an investigation carried out by Mahdi, Nassar, and Almsafir (2018), it was also revealed that PHE has become the most rapidly growing part of higher education worldwide, with one-third of the current world's tertiary enrolments being in the private sector. Asia and South America have experienced significant growth in PHEIs (Shah, Vu, & Stanford, 2019). Nukunah, Bezuidenhout and Furtak (2019) also stated that, from the mid-1990s, there was a proliferation of South African PHEI providers.

According to Levy (2018), as the number of PHEIs keeps rising, competition for market survival is also deepening. Levy (2018) further asserts that the driving force for existence in any sector, be it globally, nationally, or locally, has been the need to compete for survival and ultimately succeed. Competition has become complex due to technological advancements, whereby most organisations in different sectors are now focussing on minimising costs and maximising profits (Azzi, 2018; Kotler & Armstrong, 2022).

The number of private student enrolments has been growing steadily globally. In 2015, private enrolments made up 30% of all global student enrolments. In the Caribbean and Latin America, they contributed 49% of total enrolments. In countries such as Peru, El Salvador, Costa Rica, and Honduras, over 60% of student enrolments are within private institutions. In Asia, private enrolments made up 36% of the total student enrolments in the continent (Marginson, 2016,p.10)

Africa has seen a growth in private tertiary education over the recent past and the numbers are continuing to grow. The rapid growth of PHEIs in Africa has been attributed to the lack of resources to establish more public institutions and the policies that promoted privatisation during the 1980s. (Nganga, 2021). According to Vuong, Vinh and Trung (2021, as of July 2020, Nigeria had over forty federal universities, sixty-eight private universities, and forty-four

state universities. Similarly, Kenya had seventeen (17) private institutions, accounting for about 20% of the country's total enrolments. UNESCO (2020) also reported that the number of HEIs has been on the rise since the year 2000. For example, in Ethiopia, there are over thirty-six public and almost a hundred private universities. According to an OECD (2021) report, the average annual growth rate of private university enrolment in Cote d'Ivoire has increased significantly over the years.

South Africa is one country that has been experiencing a proliferation of PHEIs since post-independence (Levy, 2018). The DHET released statistics in 2020 showing a total of 343 registered institutions. The total number of 343 was made up of 132 PHEIs, 26 public HEIs, 50 Technical and Vocational Education and Training (TVET) colleges, 126 private colleges and 9 Community Education and Training (CET) colleges (DHET, 2020).The increased number of PHEIs competing for the same students is pushing South African PHEIs to be better equipped to respond to the everchanging market demands. The PHEIs are faced with the desire to constantly improve their administrative and academic performance and efficiency. (Mogaji, Maringe, & Hinson, 2021).

It is apparent from the above overview that PHEIs are presently operating in a turbulent market and are confronted with strong competition within the sector. To that end, this study aims to explore how these PHEIs can transform their value chains to gain a competitive advantage which can lead to their long-term survival.

## 1.2. Statement of the Problem

Since 2019, OLG has suffered an existential challenge as enrolment statistics indicated a sharp downward trend, with student enrolment numbers nearly 20% less for the year 2019 in comparison to 2018. The decline of 31% in January 2020 was even steeper than the previous decrease and this had a negative effect on the financial health of the institution which had spent 2019 hanging on a balance (OLG,2020). The continuous decline in enrolments led OLG to a precarious condition where sales and revenue went down, affecting the profits negatively. The effects of the Covid 19 pandemic added on to the already existing challenge that OLG was facing as more students dropped out. Burdened by significant financial losses, OLG had to cut faculty and staff positions by 32% and it had to move its facility to a cheaper place to reduce costs (OLG,2021). OLG 's credibility of qualifications, levels of service delivery and survival has since been questioned by its clients, shareholders, and other stakeholders.

The research intends to explore ways in which OLG can reconfigure its value chain as a way of regaining and increasing its market share through digital transformation. Unless OLG understands and gravitate towards technology as an enabler and a creator of cost advantages, enhanced efficiencies and formalisation of marketing and sales services, it may continue being handicapped in surviving in the highly competitive environment it operates in. More retrenchments or closure of the business might be on the cards and hence the need to revitalise its value chain digitally.

## 1.3. Research Objectives

The overarching research objective is stated thus:

- To explore the transformation of a private higher education institution to become competitive through digitilisation.

The sub-objectives are:

- To ascertain the link between competitiveness and digital transformations.
- To identify the benefits derived from digitalisation in a transforming private higher education institution.
- To determine challenges faced by a private higher education institution transforming to become competitive through digitilisation.
- To find solutions to the challenges faced by a private higher education institution transforming to become competitive through digitilisation.

## 1.4. Research Questions

The main research question that will guide the research is:

- How does a private higher education institution become competitive through digitalisation?

The sub-questions are:

- What is the nexus between competitiveness and digital transformations in a private higher education institution?
- What are the benefits derived from digitalisation in a transforming private higher education institution ?
- What are the challenges faced by a private institution of higher education as it digitally transforms to become competitive?

- What are the possible solutions to the challenges faced by a private institution of higher education as it digitally transforms?

## 1.5. Research Proposition

**Proposition:** An institution derives a competitive advantage from value chain reconfiguration through digital transformation.

## 1.6. Significance of the Study

Results from the research offer recommendations to the unnamed PHEI's management and shareholders about better ways of transforming to achieve a competitive position within the sector. The PHEI may use these recommendations to regain and increase its market share, generate more sales and/or student enrolments and have superior margins compared to its market rivals eventually.

The findings will provide some insights and information that can be used to generate recommendations necessary to assist PHEIs to create competitive advantage through value chain reconfiguration in a digital transformation context at an institutional level.

As the proponent of this study, the student gains self-fulfilment, knowledge, and skills. The study also contributes to the body of knowledge as it can be used as a reference to other researchers that might want to carry out similar or further research with the variables used and in a related field. The findings can contribute to a discussion on PHEIs' future by presenting a modernised picture of major trends that should be considered by decision-makers in the higher education sector for survival.

## 1.7. Delimitations of the Study

In this research study, the delimitations are set so that the researcher.

- Covers only OLG, located in Johannesburg, South Africa.
- Selects a sample population and interview participants limited to the OLG employees, suppliers, and students.
- Limits the study to OLG's value chain activities only.
- Cannot generalise the research findings beyond the organisation's borders.

## 1.8. The Research Report Organisation

The research paper is divided into five separate chapters as follows:

Chapter I introduces the research and outlines its focus. In addition, it discusses the setting of the study in which the creation of competitiveness in the private higher education sector business environment is reviewed.

Chapter 2 gives a review of the literature about value chain reconfiguration, digital transformation, and achieving competitive advantage in general and in the private higher education context. Literature about the value chain analysis model, its variations, and applications to suit the education sector is also reviewed.

Chapter 3 provides an outline of the research methodology with particular reference to the research design, sample size, composition, and target population. This section also discusses the method used in capturing, recording, transcribing, and analysing the collected data. Lastly, ethical considerations are clarified in this chapter as well.

Chapter 4 focuses on the presentation and discussion of the research findings based on the obtained and analysed data.

Chapter 5 showcases the research findings summary, conclusions derived from the findings, theory and practical implications of the study and calls for future research.

## 1.9. Chapter summary

This first chapter introduced the research on exploring how a PHEI can transform through value chain reconfiguration through digital transformation to become competitive. It included the background to the study, statement of the problem, research objectives, research questions, research proposition, significance, and delimitations of the study. The following chapter examines the literature guiding the study.

# CHAPTER 2: LITERATURE REVIEW

## 2.1. Introduction

Chapter 2 analyses the various concepts and objectives of the study. It also explores the relationship between the concepts that are part of this researchIt further reviews the various theories and empirical studies that have been conducted on the link between digital transformation and value chain reconfiguration in creating competitiveness. The chapter also discusses Porter's value chain model which is the theory that underpins this study together with the other theories that have been developed from Porter's value chain model.

## 2.2. Theoretical Framework

### 2.2.1 Porter's Value Chain Generic Model

The underpinning theory for this study is Porter's value chain framework which has proven to be the basis for various studies on the strategy of service providers in higher education and industries in general ( Anastasiu, 2019). Porter (1985) proposed the value chain model to help organisations identify their core competencies and develop strategies and procedures that allow them to pursue their competitive advantage. Blokdyk (2021) is of the view that Porter (1985) presented the value chain concept as a framework that captures the various activities of an organisation and identifies the interrelatedness of such activities. In his further research, Porter (2001) asserted that the model can also help organisations manage their various activities and improve their efficiency. Porter's value chain model classifies an organisation's activities as primary and secondary also referred to as supporting activities (Porter, 1985). Below is a diagrammatical representation of a generic value chain model (Figure 2.1).

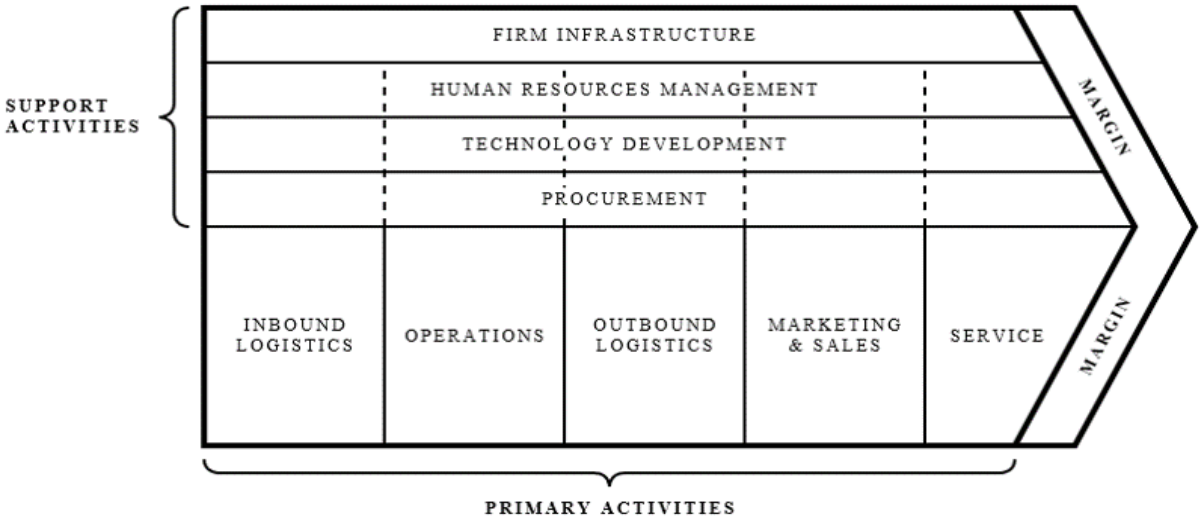


*Figure 2. 1: Porter's Value Chain (Source: De Bruin, (2018).*

According to Porter (1985), there are five primary value-creating activities in an organisation, and these include: inbound activities which are involved in the receipt, storage, and distribution of raw materials, supplies and components used in the production processes, operations which are procedures for converting raw materials into finished products, outbound logistics which involves the distribution of final products to the consumers, marketing and sales ensure that the final product reaches the correct customer such as advertising, promotions, sales-force organisation, distribution channels and pricing amongst others and lastly service which entails activities necessary to maintain how a product performs after production, which includes the installation, training, maintenance, repair, warranty, and after-sale services.

Porter (1985) also identified four secondary or supporting activities not linked to the creation of the product or service but that support the organisation's primary activities and these include activities involved in the acquisition of raw materials, supplies, components, selection of the right vendors and negotiating the best prices (procurement), activities used in the process of designing and developing manufacturing techniques and automation of processes (technology development), activities that entail recruitment and retention of employees, who will help in fulfilling an organisation's business strategy ( human resources management and lastly all organisation's support systems and functions like accounting, finance, legal, administration, and general management amongst others ( firm's infrastructure).

Jurevicius (2018) believes that although primary activities contribute to the actual production and distribution of the final product, a competitive advantage can be gained through various technological advancements geared towards the primary activities. He further emphasised that

these advancements include the establishment of new business models and the improvement of processes. Blokdyk, (2021) also claims that those supporting activities are also important factors that can help differentiate a company from its competitors. The extent to which an organisation integrates the technologies seamlessly into their value chain can bring about big cost advantages which may result in competitive advantage. The complexity of these activities can be unique to a specific company or unit. Competitive advantage can be gained through the way these activities are performed (Blokdyk, 2021).

### 2.2.2 The Value Chain Concept

Kotler and Armstrong (2022) believe that value is the core component of a winning corporate strategy and can only be created when a company achieves a competitive advantage. Pienaar et al. (2017) define a value chain as a set of transactions, or profitable activities, which extend from the point of origin (POO) where the product is manufactured to the point of consumption (POC) where a finished product is delivered. Dyer et al. (2018) also describe a value chain as visually represented steps required in the conversion of raw materials into finished goods and services. Krentzman (2020) further described the value chain as the key functions of the company connected to each stage spanning productive activities – thereby providing a valid argumentation source.

Fotiadis, Folinas, Vasileiou, and Konstantoglou (2022) view the value chain as Porter's technique for realising an organisation's capacity to add value through activities and internal and external linkages. The authors further claim that the value chain enables management to specify where value is being added to the system and where there is potential to create additional value by reconfiguring and improving the coordination of activities. However, Porter (1985) pioneered the use of the value chain analysis model when he depicted and evaluated all the activities a company performs as a way of creating and sustaining capacity to generate high profitability over time.

Anderson (2012) states that establishing an organisation’s configuration is more important when it comes to enhancing its competitive advantage than evaluating its operations. Porter (2011) described value chain configuration as a way of structuring value-adding activities which create comparative advantage and serve target customers using differentiation or cost strategies. Pienaar et al. (2017) agree with the viewpoint that value chain configuration is a strategy that can help an organisation to differentiate itself from its competitors and deliver better value to its customers. Rushton, Croucher and Baker (2022) also posit that the goal of

an organisation’s configuration is to create unique value for its customers by developing a cost-effective system that can deliver higher value. However, Porter (2011) stresses that the various activities that an organisation’s configuration includes must be well-defined to ensure that they can fit seamlessly with its overall strategy considering the cumulative impact on its costs and prices.

In his studies, Porter (2011) believed that sometimes, a change in the configuration of the value chain is required to achieve a better outcome. Porter (2011) further described value chain reconfiguration as a change in the various activities related to a product's range, logistics, and services that can be accomplished in different ways according to the situation at hand. Abdi et al. (2018) suggested that value chain reconfiguration can be carried out through the reassembling or reconstruction of the various activities involved in the process.

According to a study conducted by Magretta et al. (2020), companies can create new value by reducing their value chain's complexity. The research also revealed that in the 21st century, big companies have started adopting a value chain configuration that is shorter than what has been obtained traditionally. They are using new technological innovations to transform the way they design, manufacture, and distribute products. Porter et al. (2020) suggest that this strategy can enhance the efficiency of a company's operations by reducing the cost of doing business and capturing a new target market.

Hoffman (2022) revealed that implementing a value chain reconfiguration can be incredibly challenging for many companies due to the complexity of the process. This is because today's competitive environment is very demanding due to the continuous changes in the market and the lifestyle of its customers. This strategy can also be very risky and unstable due to the time constraints and capital requirements involved.

The value chain analysis concept helps in the identification of various cost behaviours that are associated with a company's operations which can be applied to developing effective strategies and improving competitive advantage.

Successful companies often use the value chain reconfiguration process to improve their competitive advantage. Value chain reconfiguration can be focused on the following during the process:

- Which activity or activities be done differently or perhaps even eliminated?
- How could linked value chain activities be restructured or rearranged?

- How is it possible that partnerships or alliances with other businesses may reduce or eliminate costs?

Efficacious reconfiguration approaches usually involve one or more of the following moves: an innovative production process, automation modifications, direct versus indirect sales strategy and an introduction of a new distribution channel amongst others.

### 2.2.3 An Analysis of the Higher Education Value Chain Activities

Given that HEIs' focus is on teaching and research, their value chain activities are shaped in a way which encourages consistent addition of value to the customers using synergy. The value chain analysis can help HEIs' management to develop long-term strategies that will allow them to capture the best results in an ever-changing competitive environment. The various activities will be evaluated according to their efficiency, effectiveness, number of students, mobility, faculty, funds, inventions, level of employability, and patents. The development of these core competencies is also due to the increasing attention that the business-based method has received in modern education.

Based upon Porter's value chain model, carrying out a higher education value chain analysis is particularly important for reasons such as:

- the need to determine the activities that the institution should implement to provide a competitive advantage and develop effective strategies.
- to identify the areas where the organisation can improve its efficiency and create value-added services.
- to assist HEIs to reveal the various processes that have contributed to the creation of value in their operations. This can help them identify areas where they can improve their efficiency and develop effective strategies.

The need for higher education institutions to create competitive advantages is forcing HEIs to adopt the concept of value chain analysis. On the other hand, the rapid emergence and evolution of new technologies are also driving the need for institutions of higher education to transform their operations and become more competitive (Azzi,2018). Levy (2018) adds to the argument by stating that HEIs are under tremendous pressure to create value for their stakeholders and customers. However, although Porter's concept of the value chain was initially focused on the

manufacturing industry, it has started to be applied to higher education likewise (Anastasiu, 2019).

Several studies have turned down the utilisation of Porter's value chain model when reconfiguring the higher education value chain. The debate around the applicability of Porter's value chain model in higher education stems from its design, which was primarily focused on manufacturing (Sison & Pablo, 2000; Pathak & Pathak, 2010; Khaled Abed Hutaibat, 2011). Some of the arguments have been centred on the various components of the value chain model which cannot be applied directly, like inbound and outbound logistics. However, on the other hand, research has also noted that the net value creation in the manufacturing sector is similar to any other sector including higher education as it depicts the positive difference between the costs and benefits of doing any business (Pathak & Pathak, 2010).

A lot of research has been done in proposing value chain models suitable for higher education and related fields using the traditional Porter's value chain model as the base Unfortunately, the design and analysis of a value chain of an HEI are difficult as there is no perfect model to support it. Each HEI has its own unique set of specialisations and profiles, which makes it difficult to develop a comprehensive value chain analysis that applies to all HEIs. Below is a discussion of proposed value chain analysis models for higher education.

### 2.2.4 The Reconfigured Higher Education Value Chain Model

In the study conducted by Pathak and Pathak in 2010, the researchers proposed a revamped value chain in higher education that is focused on the various factors that drive value creation. These factors include the rising importance of supporting services, the emergence of teaching and learning and technological innovations that drive the development of e-learning. The researchers suggested that the various activities identified in the value chain are capable of being outsourced, have a defined measurement, and can be established with a clear understanding of linkages amongst them. The study also revealed that HEIs can also identify the drivers of value by considering the different business models available to them. For instance, the PHEIs model is for profit and therefore their value drivers would be different from those of the public HEIs.

The research also emphasised that the margins that each institution can achieve are dependent on the various factors that affect value creation. Pathak and Pathak (2010) also identified some of the factors that universities should consider when it comes to creating a new culture such as the number of students, the quality of their research, the number of publications, and the

technological use. The research results also suggested that HEIs should consider the various aspects of their education, such as the establishment of research programs and the training of academics. Besides these, other factors such as the assessment of students and the establishment of a strong brand and reputation are additionally considered to create a conducive environment for learning which in turn brings the expected margin to the institution. The diagram below illustrates the proposed Reconfigured Higher Education Value Chain.

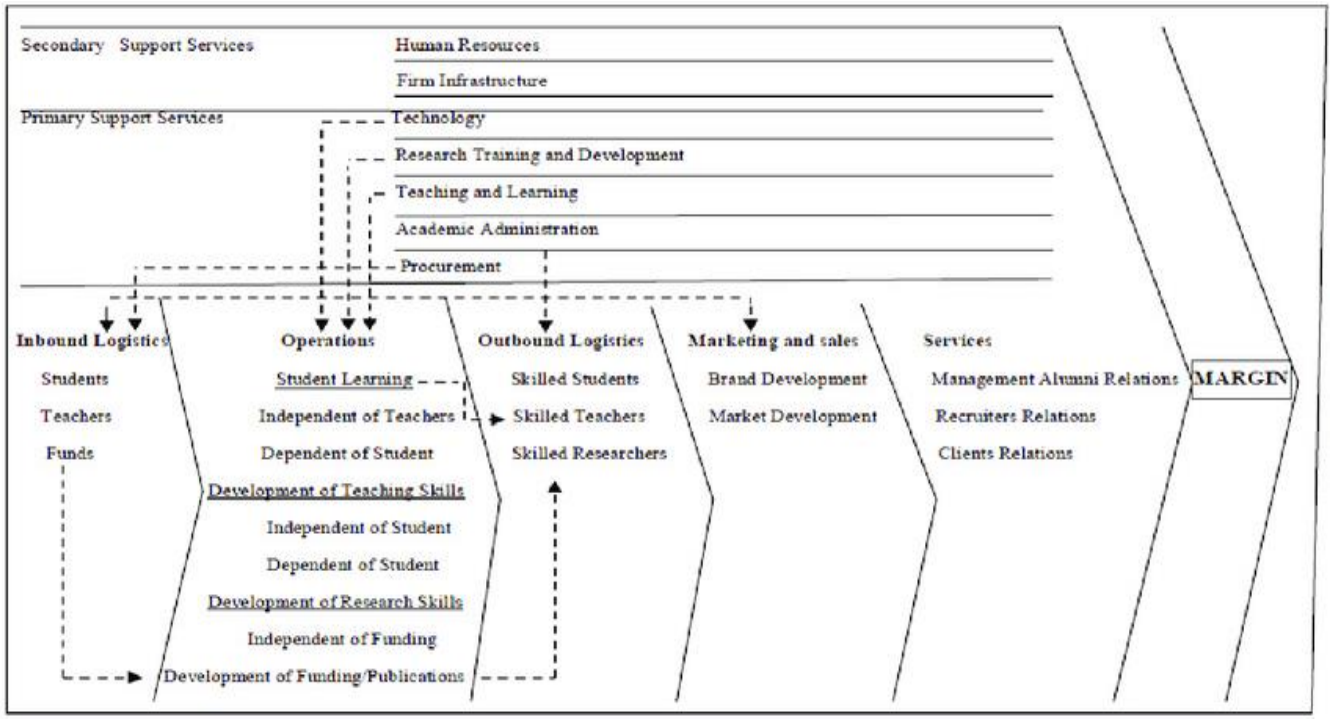


*Figure 2. 2: Reconfigured Higher Education Value Chain ( Source: Pathak & Pathak, 2010)*

### 2.2.5 The value chain for Higher Education

In his research, Hutaibat (2011) discovered that the primary activities within a higher education value chain are: academic and student recruitment which is in tandem with the inbound logistics in the manufacturing companies, which means acquiring academic staff and students. Secondly, there are operations activities which are viewed as production within the HEI, and they entail academic staff education, project development, education, and research. The last primary activities are related to the career management of the academic staff and students which is referred to as the outbound logistics in Porter's generic model. Adding to the primary activities, there are supporting activities found in HEIs which are all activities involved in providing all necessary inputs for processes, creating the institution's funding (procurement), activities involved in all kinds of technological infrastructure development (technological development), activities involved in the operation of all primary activities ( administration),

activities which allow the improvement of students, administrative and academic staff lives ( campus life and social activities), all activities that take care of all students transactions ( student services) and all activities that support academic staff development ( academic staff incentives)

The value chain model developed for higher education in light of the activities outlined above is in the below diagram.

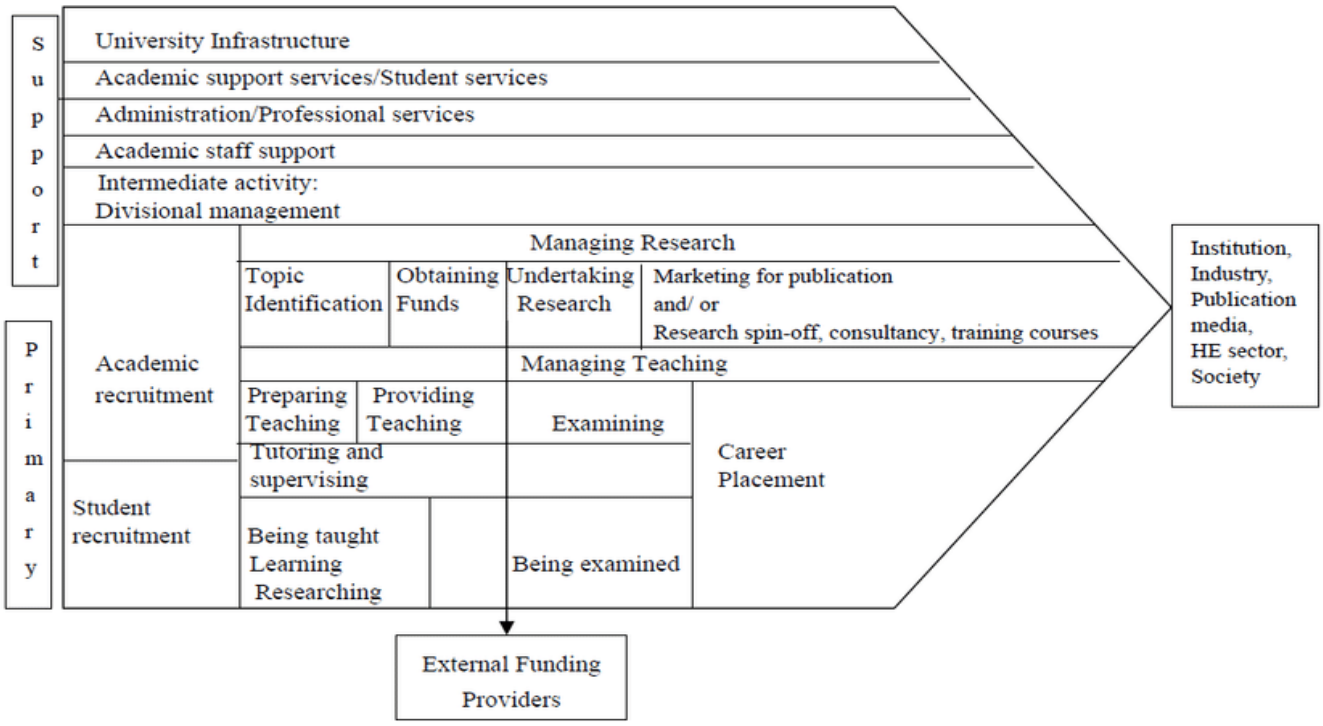


*Figure 2. 3: Value* chain for Higher Education: (Source: Hutaibat, 2011, p. 218)

Khaled Abed Hutaibat (2011) identified three different areas of concern for higher education institutions: perception of academic actuality, research and teaching, and the overall education context. The perception of academic reality is influenced by various factors such as tight financial resources, the tension between research and teaching, and the difficulties of retaining and attracting staff members and students. The main activities of HEIs are teaching and research which are both related to the development of strategic goals and the maintenance of academic reality. The goal of education is to provide the real-time that students spend in the classroom, but it also involves the development of a strategy that will allow them to solve their problems outside of the class.

### 2.2.6 Porter`s value chain for universities

Anastasiu (2019) proposed a value chain analysis that focuses on identifying the various activities that can help a higher education institution become a leader within its field. A suggested Porter's value chain model for HEIs as shown below (Figure 2.2).

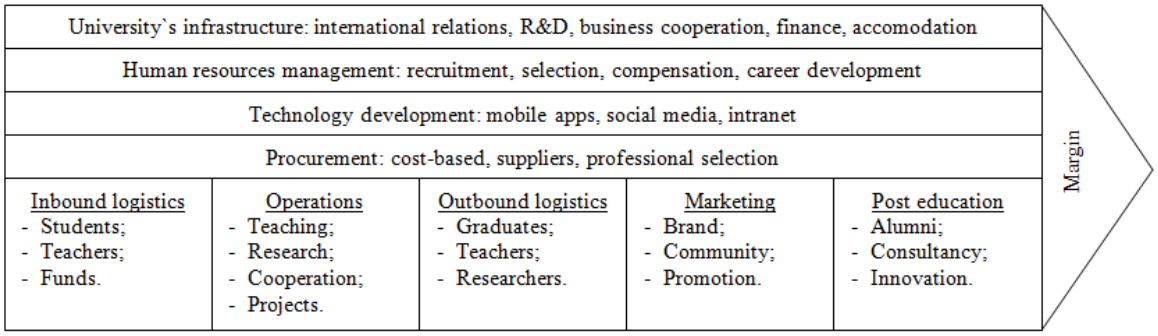


*Figure 2. 4: Porter`s value chain for universities (Source: Anastasiu, 2019).*

HEIs follow various activities related to the educational flow. They ensure that the lecturers and students are well-equipped for the workforce market and that they can attract the best possible students (Mateus, 2017). However, one of the biggest problems that most HEIs face is the lack of agility to adapt to the changes in the market (Anastasiu, 2019).

In higher education, inbound logistics is used to refer to student enrolment and recruitment of lecturers, research staff and other support staff from all the HEI departments. The recruitment process affects the success of an HEI. Students enrolled at HEIs are those individuals who are looking to develop their academic profiles and employees who want to improve their skills. The recruitment process for HEI's staff is also important because it allows for the identification and attraction of ideal candidates (Anastasiu, 2019).

Operations in service industries such as higher education are different from those in a manufacturing organisation. Transforming raw materials into finished goods may resemble the process of converting a student, a lecturer, or a researcher into an expert and skilled competent person (Anastasiu, 2019). In a manufacturing scenario, efficient production adds value and reduces cost, however, these typically do not apply to higher education, as their application to the service industry has been hindered by factors such as inseparability and intangibility (Porter, 2011).

According to Levy (2018), higher education institutions are currently using technology to improve the efficiency and effectiveness of academic processes by developing virtual content

and implementing software that is designed to make the academic process more transparent and consistent. Blended learning and e-learning are two of the methods that can deliver the message. Anastasiu (2019) further asserts that lecturers are becoming more involved in the development of new educational content as they are becoming a part of the customer's ecosystem. This change has resulted in the emergence of a more defined role wherein the value added by an individual can be measured enabling the evaluation of the output of the teaching staff to be now taken more systematically. This process involves clear definitions of the workload, performance measures, and continuous monitoring (Anastasiu, 2019).

Porter, ( 1985) alludes that in a manufacturing setup, the process of placing a finished product in the market forms a vital component of a value chain which involves the creation of value by ensuring that the product is placed in the most cost-effective manner possible. However, Anastasiu, (2019) indicates that in a higher education context, the ability to get the most out of the investment is related to the efficiency of the student's learning process and how effective the lecturer's skills are. This is because the institution and the students can get the most out of the time and money, they spend by delivering the best possible results. In addition, the institution researchers' potential to publish their works in the most prominent scholarly journals is also very important because it allows them to deliver the desired results and commercialisation. These elements are included in various measures used to assess the effectiveness of higher education. All of them are quantifiably and adequately represented in the rankings.

According to Porter (1985), sales and marketing are similar in all industries. They involve activities that help get a buyer to purchase a product or service (Jurevicius,2018). However, the activity was not a part of the academic institution's operations traditionally as mass advertising was rarely used to promote traditional education institutions. Instead, they developed their brand identities through their faculty and alumni, which are the main elements of the institution's identity which sometimes outweigh the overall brand value. The increasing importance of sales and marketing in the education industry has resulted in the implementation of new strategies and methods which promote the brands of educational institutions (Anastasiu, 2019).

For higher education, service is about post-education services. In as much as PHEIs provide knowledge, they still need to be visible in the business environment in which they exist to attract more employees and customers and increase revenue and profitability.

**Supporting activities**

These activities are performed by the HEI's staff from different departments to help in fulfilling the HEI's primary activities discussed above. The new emerging force in the higher education sector rests with supporting services.

In terms of infrastructure, an HEI is expected to provide facilities, libraries, up-to-date technologies and devices and cleaning services among other things (Anastasiu, 2019). Subarna & Mitsuru (2018) state that human resources management is a routine activity that does not add value directly but vitally supports the primary activities. The performance of human resources in an HEI has an impact on its image, brand, and profitability. People are the key asset of an organisation. Therefore, proper recruitment, training and reward of the teaching and administrative staff should be done (Anastasiu, 2019). Technology development entails the equipment and software systems that support, organise, coordinate, and perform all the HEI's departmental activities in a cost-effective, advanced, and flexible way.

Subarna & Mitsuru (2018) state that procurement helps in the acquiring and purchasing of all the necessary inputs from external suppliers. Anastasiu (2019) asserts that procurement should be done in line with the HEI's goals as the institution purchases from its suppliers. He further indicated that the main HEI goals are fulfilled through the procurement of contemporary teaching methods, research laboratories equipment and information systems that ensure efficient collaboration within the entire institution. A procurement process helps the HEI's **buying** department to make informed decisions and improve the customer experience.

## 2.3. Competitive Advantage

Competitiveness is viewed as a benchmark amongst organisations that form an industry, and it is closely associated with the presence of competitive advantage. The building block of any company's competitiveness is a competitive advantage. Ansoff (1965) was the first person to coin this concept, and he described the qualities of various products and markets that allow an organisation to have a strong competitive position. Uyterhoeven et al. (1973) also contributed to the body of knowledge by defining competitive advantage as an organisation's ability to use its resources and skills to achieve a greater return on its investment in a market. However, the competitive advantage concept became popular in the private sector through the works of Michael Porter in the 1980s. Although Porter did not define competitive advantage, he, however, linked it to the value concept. He described it as follows:

> Competitive advantage grows out of the value a firm can create for its buyers that exceed the firm's cost of creating it. Value is what buyers are willing to pay, and superior value stems from offering a lower price than competitors for equivalent benefits or providing unique benefits that more than offset a higher price (Porter, 1985, p. 3)

Porter (1985) claimed that competition is central to a business's success or failure. Earlier in 1980, Porter introduced the five forces concept which stated that the structure of an industry can set the level of competition in that specific industry. The forces are the threat of new actors, the bargaining power of suppliers, the emergence of substitutes, and the competition between the companies as well as the bargaining power of buyers. Porter (1980) claimed that the various forces that affect a company's profitability are collectively responsible for determining its ultimate profit potential. He further highlighted that competitive advantage includes achieving lower costs, differentiation, or a successful strategy over competitors, and is at the core of each organisation's performance in competitive markets. Porter (1985) maintained that how businesses implement their value chain activities can yield a competitive advantage.

Several other authors have supported Porter's view on competitive advantage. Yaroslavivna and Kozyk (2019) also described competitive advantage as the difference between the performance of a company relative to its competitors and the industry average. Ali and Anwar (2021) also point out that competitive advantage facilitates dealing better with the market and environmental forces than an organisation's competitors. Through the understanding, and promotion of such advantage, companies can earn a larger amount of the market share (Charan, 2021). Research by Barney and Hesterly (2018), noted that there is a possibility to declare that organisations in a market are expected to seek out a different or superior strategy that will allow them to stand out and be profitable, which is exceedingly difficult today.

Dess (2020) added to the argument by asserting that organisations must select a generic strategy and subsequently pursue it with "vigour" to be successful. Kotler and Armstrong (2022) also suggested that the optimal option would be to adopt a competitive strategy that aligns with the nature and extent of the business and precisely its target market customers. Typically, the preferred result would be a combination of differentiation and cost leadership. Having said that, for a company to achieve this outcome, it must comprehend the prospective sources of competitive advantage, namely superior skills, and resources (Blokdyk, 2021). Andrews, Roller and Migliore (2017) have expanded the competitive advantage concept and other related

theories and their application, from that of the product or service, quality of a specific product or service and profit generation to value creation to the overall performance of an organisation.

## 2.4. Competitive Advantage in the Higher Education Sector

In a bid to explain competitive advantage from a higher education perspective, Budiningsih (2019) defined higher education's competitive advantage as a generic positioning strategy that involves working hard to achieve the lowest possible cost of doing business. Additionally, Barney and Hesterly (2018) suggested that this strategy can help HEIs attract more students and increase their profitability. A generic positioning strategy for higher education involves pursuing the goal of being special in the field of education. It can be achieved through various factors such as the availability of academic pathways and study incentives (S & Budiningsih, 2019).

Andrews et al. (2017) noted that the popularisation of the competitive advantage notion in the education sector might be attributable to internal factors since the competitive nature of HEIs has always been acknowledged. However, Barney and Hesterly (2018) believe that the profit-seeking area in which PHEIs exist coupled with the proliferation of players in the sector has made competitive advantage theories popular in the private education sector leading to terms like “competitive advantage,” “competitive position,” “competitive strategy” featuring in most policy papers, HEIs’ websites, and promotional materials.

The HE sector has been the subject of numerous studies on how it has shifted from being steady and non-competitive to a turbulent and erratic one (Bartram, 2020; Barnett & Fulford, 2021). Considering these changes, the HE sector has started demanding a more entrepreneurial way of management in both public and private institutions. The need for competitiveness is forcing PHEIs to intricate with their innovative competitive strategies to capture, gain, and retain customers as a way of securing or expanding their involvement and survival in the market (Vaz, 2021). The utilisation of suitable and explicit competitive strategies is expected to assist PHEIs to become competitive in pursuit of profit (Azzi, 2018).

Numerous researchers have similarly observed that PHEIs managers displayed a lack of enough attention towards the need for innovation in building and sustaining a competitive advantage (Stander & Herman, 2017; Waqas, 2019; Dirkse van Schalkwyk & Steenkamp, 2020). If a PHEI is to project its strategic direction and develop and gain its competitive strategy it can survive and attain organisational effectiveness leading to success. Only when

PHEIs do well financially and exploit digital transformation opportunities within their value chain configurations, will they survive in an unpredictable competitive environment (Waqas, 2019).

## 2.5. Digital Transformation concept

Ifenthaler, Hofhues, Egloffstein, and Helbig (2021) state that despite the global interest in Digital Transformation (DT), there is no clear definition of what it is or how it can be defined. Existing explanations of DT cover a wide range of topics and business contexts. Pope (2017) defined DT as the emergence of new economic sectors and the actions taken to adapt to a digital world. Hoe (2022) describes DT as the combined effects of various digital innovations that change the structure, practices, values, and beliefs of organisations and ecosystems. Dinana (2022) reinforces the view that through the use of multiple digital technologies, organisations can achieve their goals and improve their competitive advantage. In addition to improving their operations, they can also affect the people and networks of their organisations (An, 2018; Hoe, 2022).

However, this study is adopting the view from Vaz (2021) that a digital transformation process utilises digital technology to build new or modify existing organisational processes, customer experience and culture to meet the changing businesses and needs of the market. Vaz (2021) further emphasises that DT is not only about technology but is also about transforming an organisation's operations and business models.

Vaz (2021) confirms that digital transformation drives an organisation to exploit new creations of information technologies which include the Internet of Things (IoT), Artificial Intelligence (AI) and Big Data. Hoe (2022) validates this claim by suggesting that DT is used to create a closed-loop system comprised of collecting, transferring, storing, processing data, and providing feedback within organisations. Neumeier et al. (2017) uphold the fact that DT breaks through the data impediments among different organisations or sectors to enhance the operational efficiency of an industry thereby establishing a digitized economy system (Vaz, 2021). Digital transformation has emerged as an indispensable process for companies, especially in manufacturing, to achieve competitive advantage (Neumeier et al., 2017). This is a result of the advancement and infiltration of digital technology, the growth of the competitive environment and the demands of personalised customer needs (Hoe, 2022).

According to Verhoef et al., (2021), the DT process is a complicated but significant procedure that involves multiple steps. The first two basic stages of the DT process are necessary to ensure the proper integration of various elements of the digital transformation (Parviainen et al., 2017; Qian).

Phase one of the digital transformation process is called digitisation. In this stage, analogue data is converted into digital data. This process helps organisations improve their efficiency and make informed decisions (Hoe, 2022). Some of the advantages of digitisation include improving the accuracy of information transmission and distribution, improving the efficiency of decision-making, and reducing the time it takes to allocate resources (Li, 2019; Neumeier et al., 2017). According to Vendrell-Herrero et al. (2017), although the initial stages of the digital transformation process focus on the digitisation of information systems, it does not eliminate the value creation activities.

Phase two of the digital transformation process is called digitalisation. This process is a strategic framework that aims to enhance competitiveness and improve the efficiency of operations (Hoe, 2022). It involves implementing business models and improving the flow of information. To save money and enhance customer experience, digitalisation eliminates the need to have information islands and uses predictive and data-based decisions (Verhoef et al., 2021; Ifenthaler et al., 2021)

Phase three of a digital transformation process is known as digital transformation. Research carried out by Warner and Wäger (2019) shows that this phase involves implementing new business models and improving the efficiency of operations. It also involves changing the scope of the business and increasing the number of value-creation processes (Ifenthaler et al., 2021).

## 2.6. Value Chain Reconfiguration through Digital Transformation

Pope (2017) has revealed that there are various reasons why organisations choose to undergo digital transformation. However, the main reason is the need to improve their competitive advantage through value chain reconfiguration with digital transformation as the propelling factor that can be used to respond to the changes brought about by the changing environment and the disruption of critical functions (Verhoef et al., 2021).

The rise of digital technologies has created enormous opportunities for organisations to grow. These innovations are designed to help an organisation transform its operations and give it the

required means and resources to succeed. For instance, in the years 2014 and 2021, Audi City blended technology with architecture. It employed multi-touch tables, power walls and tablet-user interfaces that make it possible for shoppers with configured vehicles to glimpse inside, open doors or watch their vehicles drive off. This transformation of its traditional retail areas and showrooms into contemporary digital experiences increased sales by around 60% in some locations (Audi, 2021).

According to Forbes (2018), organisations that have successfully implemented digital strategies are 26% more profitable than their counterparts. It also noted that these organisations can generate 9% more revenue from their physical assets. A study conducted by Kane, Palmer, Phillips, Kiron, and Buckley (2017) revealed that digital technologies could potentially be worth up to $1.3 trillion while global spending on cloud technology reached over $174 billion in 2015. Svahn et al. (2017) suggest that owing to the increasing number of organisations implementing digital strategies, it has become more important for management to consider the importance of digital transformation in gathering a competitive position. According to Forbes (2018), almost 90% of business leaders in the United Kingdom (UK) and the United States of America (USA), expect digital technology to have a significant impact on their organisations' operations in the next decade. HEIs should not be left behind as this shift takes root. It is also expected that HEIs should take advantage of the proliferation of new technologies to strengthen and streamline their operations. The HEIs are well placed to embrace new technologies because they are centres of innovation.

Limani et al. (2019), revealed that the growing number of service companies in industries such as healthcare, retail, residential real estate, and education has forced many companies to look towards transforming their operations through digital transformation. One example of successful digital transformation is Burberry, which has transformed its business by delivering a seamless customer experience. Burberry is a company that describes itself as an iconic fashion brand. During the financial crisis, Burberry was able to grow its sales by 30% due to its omnichannel strategy (Forbes, 2018). Benavides et al. (2020) also add to the argument by stating that due to the increasing number of products and services being integrated into the manufacturing industry, the demand for efficient and effective data management has become even more ubiquitous pushing many companies towards the digital transformation process.

According to research, the logistics sector has become more agile in its approach to re-designing the value chain due to the emergence of new technologies. It can participate in the disruption of the product differentiation process by allowing delayed differentiation (Chi et al., 2020). This allows it to meet the needs of the consumers and provide them with the flexibility and agility they need to meet their changing needs. Through the services offered by logistics, it can position itself on various segments of the value chain ( Borgi, Zoghlami, & Abed, 2017). For instance, it can deliver fast and small quantities of products to the consumer or the distributor, or it can provide integrated offers such as the delivery of non-perishable and fresh goods. It is also able to help its customers track their products in real-time (Borgi, Zoghlami, & Abed, 2017; Benavides et al., 2020).

Lorizio (2021) posits that the higher education sector is not excluded from digital transformations as a way of improving the educational system's practices and enhancing the learning experience. The pandemic underscored the need for higher education management and decision-makers to consider the effect of digital transformation on their operations (Verhoefet al., 2021). According to the CIO Agenda Survey conducted by Gartner in 2018, data was collected from 3,160 Chief Information Officers (CIOs) from ninety -eight (98) countries, all over major industries, including two hundred and forty–seven (247) higher education CIOs. The survey revealed that Higher Education CIOs regarded digital transformation as being the fifth highly important precedence for an organisation. However, regarding areas of technology that are most important to the institution's success, digital marketing and digital business are only eighth and ninth respectively (Gartner, 2018).

The Covid-19 crisis led to a substantial change in South Africa's attitude toward education technology. Relative to other countries, South Africa reported the biggest positive change. According to the CHE survey conducted in 2021 survey about the digital transformations of South African higher education, 55% of respondents cited the need for better student experiences as the reason for their desire to improve the quality of education. 51% said they were motivated by course quality, while 43% cited the need to increase student enrolment (CHE, 2021). The study also stressed the importance of putting the student experience at the centre of digital transformation initiatives as an agenda for higher education institutions. Over half of the respondents said that improving the quality of education is their top priority when it comes to their transformation projects (CHE, 2021).

In their study, Anh, Nguyen, and Linh (2019) emphasised that one of the main factors that organisations must consider when implementing digital transformation initiatives is the

replacement of transactional services with digital solutions. Research carried out by Limani, Hajrizi, Stapleton, and Retkoceri (2019), revealed that Wayne State University in Michigan was able to create a fully immersive experience for potential students. The university was responding to an ineffective student recruiting strategy challenge it was facing. Through a combination of Google Cardboard and an application, the university was able to hold virtual reality tours that allowed the university to attract more out-of-state students. In addition, the University of Alberta implemented process transformation in its maintenance and facilities departments. The school deployed thermal occupancy sensors which allowed the department to make informed decisions regarding where to deploy its cleaning staff and hence improved the efficiency of its human resources system and increase its capacity for upgrades.

It is evident that most HEIs in South Africa and Africa at large viewed the pandemic as unavoidable and that it catalysed the adoption of digital technologies. However, that does not spell out that there have been digital transformations in the higher education industry. The implementation of digital transformation into the education industry should be embedded in the culture of the institution and not be treated as the adoption of technologies only. This can be done through various elements, such as the establishment of strategic planning processes and daily operational practices (Kativhu, 2021).

## 2.7. Challenges of Value Chain Reconfiguration through Digital Transformation

According to Li (2019), one of the main challenges that modern firms face when it comes to adopting new digital technologies is the complexity of their business processes. This issue is not only related to the changes in technology but also affects all segments of a company. (Hess et al., 2017). Despite the various advantages that digitalisation can provide, it is still poorly understood by both practitioners and theorists (Parviainen et al., 2017; Loonan et al., 2018). According to (Fillios, 2020) the rapid emergence and evolution of digital technology have put tremendous pressure on organisations to rethink their operations and strategies leaving many organisations not fully capitalising on the opportunities that digital transformation provides (Fillios, 2020; Hess et al., 2017).

Li (2019) also identified the lack of proper implementation of digital transformations as another challenge, leaving many organisations unable to keep up with the changes brought about by the new digital reality. Some of the prominent examples include the bankruptcy of Blockbuster

in 2011 and the purchase of The Washington Post by Amazon founder Jeff Bezos. This implies that implementing digital transformation is not only important to beating competitors, but it is also crucial to surviving (Li, 2019).

According to studies, employees and management are sometimes not prepared for the digital transformation that is expected to happen in their organisations (Fitzgerald et al., 2018). literature also shows that many companies fail when it comes to implementing digital initiatives (Hess et al., 2017). Forbes reported in 2018 that only one in eight digital initiatives are successful and over 50% of these fail. Furthermore, cases of companies whose market values have stagnated despite investing in digital transformation strategies have been acknowledged (Davenport & Westerman, 2018).

UNESCO (2021) cited that sub-Saharan Africa has the highest rate of education exclusion. Digitalisation is particularly important to this region as it can help address the educational needs of its youth. The accessibility of digital technology can help improve the availability and cost of higher education in Africa (Ajigini, 2022). Hess et al. (2017) argue that although many governments are positive about the potential of digital technology in the education sector, they often ignore the fact that it can be expensive to implement. Kativhu (2021) confirms that the cost of implementing digital transformation in the higher education industry will depend on the various factors that affect its operations, such as the country's pre-existing infrastructure and digital maturity.

## 2.8. Solutions to the challenges of Value Chain Reconfiguration through Digital Transformation

Davenport and Westerman (2018) suggest that an organisation must have a clear comprehension of its business model and the different innovations that will be required to align with its transformation initiatives to effectively implement digital technologies (Fitzgerald et al., 2018). Fillios (2020) states that organisations need to ensure that the transformation project is viewed from a business perspective and not as a technology solution and from an operational view by understanding their customers' expectations and developing effective processes that will bring them in. Hess et al. (2017) state the importance of integrating the various digital systems into one another. This can be done through the use of technology to enable both internal and external systems to communicate.

Kansara (2017), in his study, deduced that First Republic Bank, an American bank noted that the focus of digital transformation is on bringing all of the information together in one place. This was the bank's response to the increasing complexity of the digital transformation process, and it started to adopt a business model that enabled it to reconfigure its value delivery models. In response to the increasing complexity of the digital transformation process, Tesco as highlighted by Rowles and Brown (2017), adopted a strategy that enables it to re-engineer its multichannel offerings by analysing how its customers interact with its various digital platforms (Satish & Kumar, 2017). These case studies support the view by Qian and He (2021) that through the use of technology, organisations can create a more holistic view of their customers and business models. The combination of products and services that were supported by technology allowed them to transform their operations and improve their competitive advantage (Kansara, 2017).

## 2.9. Conceptual Framework

The conceptual framework used in this study draws upon perspectives from theoretical concepts and historical viewpoints of digital transformation, competitive advantage, and value chain reconfiguration. Porter's value chain analysis theory has been used extensively in this study to explore value chain reconfiguration that allows a firm to be competitive.

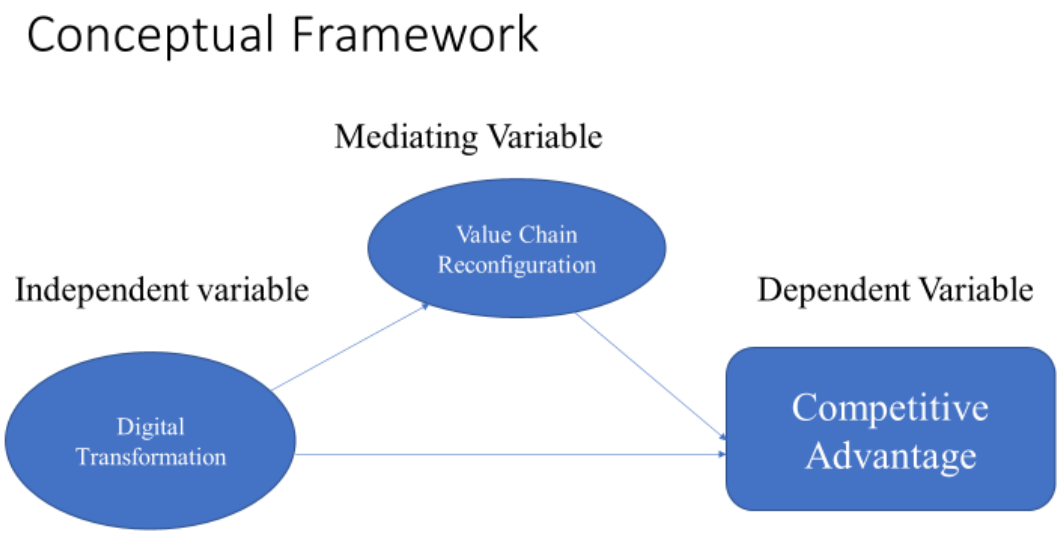


*Figure 2. 5: Conceptual Framework (Source: Author).*

Reconfiguring or eliminating activities of a value chain may serve as a basis for an organisation's competitive position. Profitability is considered a result of an organisation having a higher value than its overall costs of carrying out its operations. To be competitive, an organisation has to either provide a similar product or establish a unique value for its customers (Porter,2001). Digital transformation refers to the process of transforming an organisation's operations and culture to meet the evolving needs of its customers and market. According to Williams, Schallmo, and Boardman (2017), digital transformation enables value chain reconfiguration by identifying and implementing new technologies to improve a company's customer experience and business processes. A company's ability to carry out the required activities at a lower cost or generate customer value is considered a competitive advantage. Inevitably organisations must observe their value chain activities to acquire and support this advantage (Porter,1985).

## 2.10. Research Gap

There is a lack of knowledge in observing digital transformation as a propelling force on value chain reconfiguration to create competitive advantage for HEIs especially PHEI whose drive is to make a profit. Therefore, PHEI managers must pursue more strategic approaches in the highly competitive market that could lead to long-term survival. This study, therefore, seeks to fill this clear gap by exploring ways to transform a PHEI value chain to build competitiveness.

## 2.11. Chapter Summary

This chapter explored competitive advantage, value chain reconfiguration and digital transformation concepts in a private higher education context. It also discussed the value chain analysis model by Porter, as the guiding theory for research as well as other models that have evolved from Porter's value chain to cater for the higher education set-up. The chapter also highlighted the barriers to achieving competitive advantage through value chain reconfiguration and the possible solutions to the barriers were also highlighted. A conceptual framework for the research was drawn and the chapter concluded by emphasizing the research gap supporting the study. The subsequent chapter provides an outline of the research methodology.

# CHAPTER 3: RESEARCH METHODOLOGY

## 3.1 Introduction

Chapter 3 outlines the study's methodology. It reviews the research philosophy, paradigm, and design applicable to this study. It also gives information on the target population, the selection of the sample, the sources of data, and the trustworthiness of the data. The chapter also discusses ethical considerations that were taken into account to protect the participants and ensure that the study was conducted according to acceptable ethical standards.

## 3.2 Research Philosophy

This research followed the interpretivism philosophy of qualitative research (Hays & Singh, 2022). This was particularly important given the relevance of understanding the phenomenon of value chain reconfiguration in a digital transformation context. The approach in this research was immersed in the interpretivist philosophy on the basis that reality is susceptible and subject to contextual influences (Brinkmann, 2017). This study sought to explore the connection which exists between value chain reconfiguration in a digital transformation and creating competitive advantage by holding dialogue with participants in that environment. Therefore, the researcher considered the experiences of individuals within the private higher education institution as major factors contributing to creating reality and meaning.

## 3.3 Research Paradigm

This study is based on a qualitative research method, which is described by Saunders (2022) as studying a phenomenon in its context to generate a greater understanding of it. Additionally, the qualitative research approach is regarded as appropriate when conducting interviews with a small group of people and subsequently analysing the gathered material (Khaldi, 2017; Hays & Singh, 2022). Therefore, a qualitative approach was deemed suitable for the study to fulfil its purpose to explore ways of transforming private higher education institutions through value chain reconfiguration to gain a competitive advantage.

The use of a qualitative approach was necessary to uncover the nexus between digital transformation and value chain reconfiguration as it is manifested in the participants' lives (Pabel, Pryce, & Anderson, 2021). Saunders (2022) noted that a qualitative approach is appropriate for a research study to understand individual accounts of participants' experiences. Personal accounts are capable of revealing concealed concerns and fears (Khaldi, 2017). The

collected data was meant to be detailed enough to give a strong analytical foundation and therefore the researcher believes that the research objectives could not have been met if the data were gathered quantitatively (Pabel, Pryce, & Anderson, 2021; Saunders 2020).

## 3.4 Research Design

The researcher used an exploratory research design because it was consistent with the research ideology (interpretivism) and research technique (inductive) (Burkholder & Thompson, 2020). The choice of a case study was due to the lack of enough previous empirical studies within the private higher education industry in terms of value chain reconfiguration in a digital transformation context. Therefore, this study sought to fill the current gaps in knowledge and literature. Case studies are widely regarded as suitable for the exploratory nature of a specific setting (Yin, 2017; Hays & Singh, 2022).

The single-case research design aided the researcher in exploring value chain reconfiguration caused by digital transformation influences within an institution, evaluating the ensuing impact on the participants' insights and the organisation's competitive advantage. The researcher was able to gather various perspectives inside the same context, extract knowledge from different kinds of data, and develop an empirical account of the main phenomenon more comprehensively (Tight, 2017; Levitt et al. 2018; Hays & Singh, 2022).

## 3.5 Target Population

This study explored the value chain reconfiguration in a digital transformation context for a private higher education institution (PHEI), seeking to create a competitive advantage in the education sector. The population of this research consists of OLG employees, suppliers, and students (customers). In this study, OLG employees, are the full and part-time workers who amount to twenty-eight (28) in total. As individuals responsible for the value chain activities in the organisation, these employees are familiar with the processes in the PHEI's value chain. OLG supply chain partners are the two textbook suppliers and two information technology (IT) service providers. These suppliers what are responsible for ensuring that PHEI delivers value to its shareholders and customers. In the study, OLG students are all the individuals enrolled to study with the institution towards acquiring, higher certificates, diplomas, and degree qualifications amounting to 474 in total enrolled for the 2022 academic year. The students are the customers and are best placed to judge service delivery at the institution.

## 3.6 Sample size

The small sample size is typical of qualitative research, and it made the research easier to conduct. Using a larger sample size would have undermined the research's manageability for a single researcher but on the other hand, a smaller sample size reduced the generalisability of the research's findings (Dwivedi, Mallawaarachchi, & Alvarado,2017). However, this study was not conducted to be generalisable, as its main focus was on providing a comprehensive understanding of a phenomenon. (Yerke, 2021). The study intended to use OLG's 16 employees, 4 supply chain partners' employees and 10 students. However, due to availability issues and time constraints, a total of 24 interviewees participated. The sample size was conveniently determined as shown in Table 3.1 below:

**Table 3. 1: The sample size structure**

| **Population Group** | **Number of Intended Participants** |
|---|---|
| OLG Employees | 16 |
| OLG Suppliers | 4 |
| OLG Students ( class of 2022) | 10 |
| **Total** | **30** |

## 3.7 Sampling Method

A non-probability sampling method was utilised which suits the qualitative research. The researcher also had limited time, resources, and participants. In addition, the research did not aim to generate results that were going to be used to create generalisations about the entire population, hence the use of convenience sampling. The participants were chosen because they were readily available in the researcher's vicinity and were willing and prepared to participate in the study (Shaheen, & Pradhan, 2019) which was convenient for the researcher.

## 3.8 Research instrument

The research instrument was a semi-structured interview guide. An interview guide is described as a list of open-ended questions, and topics that the researcher covered in the interview to cover the research objectives and theoretical framework (Billups, 2020). The interview guide allowed the interviewer and participants to engage in a formal interview whilst deliberating the topic of interest in more detail. The researcher followed the interview guide but had the

independence to stray from it and discuss other topics whenever it was appropriate (Shaheen, & Pradhan, 2019). This enabled the study to get a deep exploration of the participants' experiences, beliefs, and thoughts about the research topic (Billups, 2020). Having an interview guide also helped the researcher in reducing the time taken in conducting this qualitative research.

The interview guide had a list of twelve (12) questions (see Appendix 1), which assisted the researcher to transition from one question to the next, while still seeming like a normal conversation. The interview guide kept the interview within parameters, giving attention to the purpose of the study based on the research objectives and theoretical framework (Shaheen, & Pradhan, 2019).

## 3.9 Data Collection Procedures

In this study, the researcher utilised qualitative interviews as the source of data through the use of semi-structured interviews. The choice was based on the objective to gain a deeper knowledge about how the value chain reconfiguration in a digital transformation context can create a competitive advantage. The aim was also to get the employees, suppliers, and customers' points of view on the topic under study.

The interview structure was set and consisted of set questions. However, some questions were modified for each participant to focus on their specific subgroup. During the interviews, the researcher was able to explore new ideas and points of view in an attempt to find surprising results (Agarwal, 2020). All of these interviews were held with the permission of the subjects.

The interview process started by sending an e-mail to the participants, which explained the study's objectives and details of the study. All of the interviews with the participants were conducted either at OLG's premises or through Microsoft Teams and Zoom communication platforms but participants were able to choose their preferred time for the interview. With the permission of the participants, the interviews carried out on Microsoft Teams and Zoom were recorded with the screen recording software and face-to-face interviews were recorded on a mobile phone. All these interviews were carried out in English as the preferred language of the interviewer and interviewees.

## 3.10 Data Analysis and Presentation Methods

The researcher used the widely accepted framework for carrying out thematic analysis by Kiger and Vapio (2020). Thematic analysis is a qualitative data analysis method that helps the researcher in discovering themes in the data relating to the participants' perspectives (O'Kane, Smith, & Lerman, 2019; Harding, 2018).

Despite the massive undertaking and time constraints during the research, the researcher managed to start the analysis with the transcription of the interviews. The researcher categorised the interview materials into several themes (Kiger & Varpio, 2020). These included knowledge about value chain reconfiguration and digital transformation, engagement in digital transformation initiatives, benefits derived from value chain reconfiguration, challenges faced when digitally transforming, possible solutions to the challenges and lessons learnt from the process.

## 3.11 Credibility of findings

The researcher considered credibility, transferability, dependability, and confirmability also known as the trustworthiness of the findings (O'Kane, Smith, & Lerman, 2019; Harding, 2018). The researcher used a well-designed interview guide to improve the credibility of the single-case study. (Korstjens & Moser, 2017). The data collected was used to identify themes or patterns, which also helped to improve the study's credibility (O'Kane, Smith, & Lerman, 2019). The researcher included thick descriptions in the study's findings allowing informed judgments regarding the transferability to be made by the readers. To improve transferability to other settings or situations, the researcher minimised errors and biases by extensively and carefully documenting the study's procedures and findings (Yin, 2017; Harding, 2018). The dependability of this study was also improved by the researcher having orderly gathered all data collected in the study, including interview transcripts and audio-recorded interviews. The researcher also included theoretical insights from various pieces of literature about value chain reconfiguration, data transformation and competitive advantage to improve the credibility of the data analytical processes(Thomas, 2016; Harding, 2018; O'Kane, Smith, & Lerman 2019).

## 3.12 Ethical considerations

Permission was sought from the Chinhoyi University of Technology and the PHEI (name withheld) to ensure that the study was done ethically and that it contributed to the best practices

in the field. Data collection only commenced after all the permissions had been provided in writing. Participants were formally invited to take part in the research and their participation was done voluntarily. Before the participants were allowed to participate, there was a requirement to complete and sign an informed consent form (Appendix 2). The researcher made it clear that participation was voluntary and can be anonymous.

In addition, the researcher respected the privacy of the respondents during the collection process and did not share participants' personal information with the outside world. The information collected was not linked to the source of the study, and the names of the participants were not used in the report, therefore, confidentiality was fulfilled. This study did not use materials that could harm the participants, or the company involved, and only approved information was used in the study. The researcher made sure that all of the participants were treated fairly and with dignity and that no perceptions, personal beliefs or assumptions, and personal beliefs impacted the research (Corbie-Smith et al., 2017).

## 3.13 Chapter Summary

This chapter covered the various aspects of a research project, such as the research philosophy, research paradigm and research design, population, and methodology. It also provides details about the target population, sample selection process, the sources of the data and how the research was conducted. The chapter concludes by explaining how the study addressed the issue of data trustworthiness. In addition, it explains how ethical considerations were implemented to protect the participants. The subsequent chapter is focusing on the presentation and interpretation and discussion of the research findings.

# CHAPTER 4: RESULTS AND DISCUSSIONS

## 4.1 Introduction

Chapter 4 presents the results and findings. Data was analysed to interpret results and give meanings to the major findings. The review and analysis of data gathered in this research continued until no new themes emerged. Discussion of themes was done based on interview responses and literature. The purpose of this study is to explore ways of transforming a private higher education institution through value chain reconfiguration to become competitive.

## 4.2 Revisiting the research objectives

Before starting the analysis and findings phase, the research objectives should be revisited so that they can set the scene. The study was guided by the following objectives:

- To explore the transformation of a private higher education institution to become competitive through digitilisation.
- To ascertain the link between competitiveness and digital transformations.
- To identify the benefits derived from digitalisation in a transforming private higher education institution.
- To determine challenges faced by a private higher education institution transforming to become competitive through digitilisation.
- To find solutions to the challenges faced by a private higher education institution transforming to become competitive through digitilisation.

## 4.3 Participants Response Rate

The findings relating to the response rate for this study are shown in the table below:

**Table 4. 1: Response Rate**

| **Interviewees** | **Sample size** | **Response rate** | | **Non-Response rate** | |
|---|---|---|---|---|---|
| Employees | 16 | 14 | 88% | 2 | 12% |
| Suppliers | 4 | 3 | 75% | 1 | 25% |
| Students | 10 | 7 | 70% | 3 | 30% |
| **Total** | **30** | **24** | **80%** | **6** | **20%** |

Out of the thirty (30) interview requests sent the researcher managed to conduct twenty-four (24) interviews giving a response rate of 80%. The main reason for such a good response was that the researcher had easy accessibility to all the participants. The next section presents the profile of all who participated in the study.

## 4.4 Profile of the Participants

Fourteen (14) of the participants were the institution's employees, which includes lecturers, management, academic coordinators, and sales consultants. Three (3) were the institution's suppliers, two (2) were the IT supplier's employees and one (1) textbook supplier's employee who is in direct contact with the institution. Seven (7) were the institution's students who are the customers. Participants were assigned codes as follows E1 to E14 for the employees, SP1 to SP4 for the service providers and ST1 to ST7 for the students and were referenced as such in all documentation throughout the research.

## 4.5 Results and Discussion

This section includes the presentation of collected data and interpretations of the interview results. The results are discussed under the following themes which were arrived at after the coding process:

### 4.5.1 Theme 1: Value chain reconfiguration and digital transformation

The views of participants on value chain reconfiguration and digital transformation concepts in the PHE context are presented and discussed below. When the results were analysed, the above-mentioned theme was formed. In this regard, some participants made the following remarks:

**E12**: *I believe DT is when you use technology to move away from manual activities and the institution must understand how it intends to change its value chain and it should be internalised. Not sure about VCR though.*

**E8**: *As an academic head, my take on value chain reconfiguration in today's world requires building effective new service delivery models which include blended and online formats. There is a need to adapt to proven technology such as the Lockdown Respondus we are currently using in a bid to create smoother operations and greater experiences to increase student satisfaction during assessments.*

**E4***: The business environment is changing a lot; I mean there is too much competition and institutions like any other businesses need to change their old ways of doing things. I am sure that is what value chain reconfiguration is all about….my thinking though*

**E9***: The academic team is the one that knows how to do this DT, they deal with the students most of the time. I say so because look at that time of Covid they needed technology to get the students around.*

**E13***: I can give you an example of what the company has done to explain my understanding of what you have just asked me about digital transformation. Previously we used to have a long and time-consuming admission and registration process but due to technological changes, the process has now been shortened. For me, that is DT and VCR all in one.*

**SP3**: *Digital transformations at higher education institutions are not only technical innovations, but they are also an all-rounder as they look at changing, let me use your term reconfiguration, in the academic, curriculum development, structural ad organisational aspects. The future of the business lies with DT, nothing else.*

**SP2**: *The technological change that has occurred in the past few years at this institution has created new learning environments, affecting the existing physical learning settings, if I may use the example that we are now supplying E-Books and not hard copies anymore. So, DT is very good for the business.*

**ST3**: *I cannot explain DT and VCR but what I can say is that The institution must understand our characteristics of us as a generation that is changing.*

**ST6***: I think DT is about changing to technology and VCR is changing the business activities.*

The results revealed that digital transformation is confused with other information technology applications such as digitisation and digitalisation. The researcher was careful to repeatedly clarify the meaning of the concept. Provide the context for digital transformation to ensure that respondents were harmonious in their responses. Literature concurs with this finding as it shows that digital transformation is more complex than digitisation and digitalisation. Digitisation is all about changing from physical to digital information (Qian & He, 2021), while digitalisation is about using information technologies to transform the institution's operations (Vaz, 2021). However digital transformation encompasses deep shifts within an institution's value chain with a serious focus on the culture, technology, and workforce to transform the strategic directions, value propositions and business model of an institution (Hoe (2022).

The respondents showed that they know what transpires within a value chain reconfiguration process as they were able to point out several ways in which the institution's value chain has been re-engineered. The respondents cited how the distribution of learning material, delivery of lessons, applications, admissions, registration, assessments, and other administrative processes have changed to meet the business strategy and competitive position. Most of the respondents also mentioned that digital transformation was more important than it is today due to the COVID-19 pandemic. A third stated that it was as vital as it was a few years ago. Despite this, sixty per cent of the respondents said that digital transformation will continue to be important in the future.

When asked about how well digital transformation is understood and supported by the PHEI's institutional groups. The results showed that the respondents felt that not everyone does. The results show that the IT supplier, very few students and about sixty per cent of PHEI's employees understand and support the digital transformation initiatives. The Academic and IT departments understand and support digital transformation initiatives more compared to other groups. The larger group of current students are largely unaware, with a few who are aware but lacking an understanding of digital transformation. However, students seem to be the most resistant to digital transformation, especially those who are in the final year of their study, because they started studying with the institution before any of the digital transformation changes were in place. The academic and IT departments were identified as the most understanding and supporting because they are the ones who are actively engaged with the processes or value chain activities related to digital transformations.

Therefore, the results show that knowledge about value chain reconfiguration and digital transformation exists. Participants agreed that academic institutions must digitise key aspects of their recruitment, admissions, lesson delivery, assessments and all the administrative processes to stay relevant in the business environment. Literature supports this notion by stating that PHEIs ought to implement various reforms in their higher education service delivery to improve efficiency and attain a more performance-driven status (Schwittay,2021).

### 4.5.2 Theme 2: Engagement in Digital Transformation Initiatives

When the results were analysed, the above theme was set out in line with the views of the participants on the efforts made to reconfigure the value chain of the PHEI through digital transformations are shown. In this regard, some participants made the following remarks:

**E12**: *Systems are now seamless, and this has reduced the number of students who have to physically visit the offices.*

**E8**: *The institution is still comparing itself with other players in the education sector and sometimes with no clear solutions in place for comprehensive transformation.*

**E2**: *Pedagogy should be the starting point, not the technology*.

**E4**: *Some aspects have been fully digitalised. We no longer give students hard-copy textbooks. Textbook supplier (name withheld) supplies the students with soft copies of the prescribed textbooks.*

**E11:** *In the past, we would order physical textbooks and have them delivered to our offices. There were people employed to courier the study material to the students. The employees were retrenched and now all study materials are accessed digitally.*

**E13:** *I am happy that I do not have to come to the office on a Saturday to support the lecturers since contact sessions are now, what's the term (interviewer: You mean to say virtually)? Yes, yes, they are now virtual. Also, books and study guides are now being accessed electronically. That makes me happy.*

**E1**: *The aim is to make sure the student's life is more bearable and pain-free. Learning should be enjoyable, relatable, and fun. We want students to choose us because we do things differently.*

**ST1:** *I started studying with (name withheld) this year (2022) and it has been OK, I guess. When I registered, I was told about (name of LMS withheld) and how I will access study guides and the yearly calendar. I immediately received an SMS with codes and links to access textbooks. It was quite simple.*

**ST4**: *I am happy that our books are now being delivered electronically though I would prefer that we write examinations in our normal venues instead of being electronic*

**ST6:** *I see some changes from when I started to today. We used to get our textbooks delivered and would have to choose a centre at which to write exams. But now we should write exams online. I don't like online invigilation.*

**SP1**: *There is now a seamless connection with the bank system and suppliers making the registration process, supply, and delivery of study materials quicker.*

**SP2***: Weekly training schedule about the upgraded LMS but the employees seem not interested.*

When the participants were asked about what efforts the PHEI has made to reconfigure the value chain through digital transformations, the answer that they gave was that there have been significant changes in the way that they interact with students and suppliers alike. To that end, the respondents acknowledged that the PHEI is currently engaged in some transformation as evidenced by several adjustments that have been made to the business model, strategic directions, and value proposition. However, about three-quarters of the respondents felt that the institution still needs to have a clear digital transformation strategy in place.

Most of the things that would require telephoning or in-person meetings are now being done digitally. For example, the institution used to hold contact sessions with students. During these sessions, the students had the option to attend in person, but now the sessions are virtual, and the lecturer does not even need to come to the office to conduct the class. The sessions are now being conducted via Microsoft Teams. In the same vein, the institution is no longer giving students hard-copy textbooks and other study materials. Instead, the institution has a contract with a supplier. The systems of the supplier are linked to the systems of the institution and once a student is confirmed as registered the supplier system automatically generates a code that gives a student access to the relevant e-copy textbooks.

The majority of the employees (78%) also described their approach as one that is digitising certain components of the current model, while simultaneously developing new digital models. When asked to elaborate more on their efforts to reconfigure their value chain through digital transformation initiatives, the institution leaders (E8 and E5) identified student experience, student support, new programme accreditation, course development, applications, enrolments, and other administrative activities as core to how they operate.

In the same vein, the students agreed with the assertions of the employees. The students pointed out that they receive their study guides electronically. The consensus is that this has made everything more convenient although some stated that they are comfortable reading the hard-copy textbooks and study guides and wondered if the institution would give the students the option to receive hard-copy materials. Three of the seven students who took part in the interviews started studying with the institution in 2020 and pointed out that they found it easy to pass their examinations in 2020 because although the examinations were online, they were not proctored meaning that they could *"google for answers".* **ST2** pointed out that with proctoring now one has to be very prepared for the examinations as the system locks you out

of the examination for suspicious activities like looking away from the web camera. Students also mentioned that some lecturers created their resources to supplement the readymade resources, which they made available to all of them.

A service provider **(SP1**) who works for one of the companies that provide IT services said that they have made some significant changes starting with updating the website to make it easier to navigate and to make sure that it is more intuitive**.** The institution has also started a voice-over-internet protocol telephone system that employees can access via cell phones making it possible to implement work from home system. The adoption of Microsoft 365 has simplified communication and the holding of meetings. The observations by the IT service provider tallies with what one of the senior managers at the institution **(E8)** said about the whole digitalisation process. The manager said that the study materials are being redeveloped and digitised so that the students can better interact with the content. The process has already started and there will be videos, activities, quizzes, and other multimedia embedded into the content so that students can better understand and interact with the content. The manager also emphasised the fact that this is being done with the student in mind.

The responses by the interviewees show that the institution has digitalised some of its operations and the process is still ongoing. This tallies with the findings of Pathak and Pathak (2010) who posited that there is a need for a revamped value chain in higher education that is focused on the various factors that drive value creation. These include the increasing importance of support services, the emergence of teaching and learning, and the technological innovations that are driving the development of e-learning. The researchers suggest that the various activities identified in the value chain are capable of being outsourced, have a defined measurement, and can be established with a clear understanding of linkages amongst them. The institution under study outsourced textbook provision and all IT-related issues. This allows the institution to focus on its core business which is education provision.

If the changes that the institution has initiated are seen by the students who are the customers in a positive light, the institution might get a competitive advantage. In a bid to explain competitive advantage from a higher education perspective, Budiningsih (2019) defined higher education's competitive advantage as a generic positioning strategy that involves working hard to achieve the lowest possible cost of doing business. Additionally, Barney and Hesterly (2018) suggested that this strategy can help HEI attract more students and increase its profitability. A generic positioning strategy for higher education involves pursuing the goal of being special in

the field of education. It can be achieved through various factors such as the availability of academic pathways and study incentives (S & Budiningsih, 2019). By digitalising the value chain, the institution has reduced costs which include but are not limited to storage, delivery, and handling costs, especially for the learning materials. Also, by leveraging technology the students now have increased access to staff at the institution who can now attend to student concerns when working remotely. As an institution that has gone through a lean period where enrolments have been declining, it is possible that with digitalisation and value chain reconfiguration the students will begin to see the value.

### 4.5.3 Theme 3: Benefits derived from digital transformation initiatives

The above theme was set out in line with the views of the participants on the benefits derived from value chain reconfiguration in a digital transformation context. In this regard, some participants made the following remarks:

**ST4:** *I can connect with the lecturer and other students at his own convenience time.*

**ST7***: It was my first time to experience the whiteboard feature when I joined this institution this year 2022, oh man (sic), that was amazing, and I felt pushed in the right way to participate in the activities.*

**E13***: The admission process is being carried out effectively with the new technology available.*

**E2:** *The uploading of applications and enrolment has never been this easy…I am now enjoying my job man. I am so excited*

**E8**: *Students are now having access to the best academic resources at the click of a button from wherever they are. In this current digital climate, technology is taking the front seat, and the education industry is in no way behind*

**E10***: As a lecturer, it is now easy to track students' performance at different intervals leading to a better understanding of who is improving and who requires more attention.*

E5*: Speaking from a financial perspective, digitalisation is a big-time cost saver. I am responsible for the finances of the company, and I feel good when a saving takes place…. eBooks have saved us quite a lot.*

S3*: Ever since the institution moved to E-books, our lead time as the service provider has been reduced. The institution and students now access textbooks at the click of a button.*

The results of the study revealed the participants acknowledged the importance of the PHEI's transformation by citing benefits that are related to value chain reconfiguration in a digital transformation context. The major benefits that were identified by the respondents were student focused and linked with student success. The majority mentioned that improving the student experience was what drives value chain reconfiguration through digital transformation. Other cited benefits include improved teaching and learning, decreased student dropout rates, improved retention, flexibility, and improved performance. Other perceived major benefits identified are those that correlate to the improvement of the institution's brand and reputation, having a competitive position amongst other industry players, and improving the PHEI's financial position.

According to 94% of the research participants, digital transformation is a key outcome that may improve the student experience as a benefit for efficiency objectives. E2 and 13 who are business development consultants in the institution, cited admissions as one of the top digital transformation priorities as a way of increasing enrolment growth. Responses from the majority of the students interviewed echoed the business consultants' sentiments as they felt the need for the institutions to at least start by improving their basic experience. The academic coordinators also mentioned that one of the most time-consuming activity is the registration as a lot of paperwork have to be submitted and reviewed manually. However, the introduction of the online application fillable PDF form has increased their department's efficiency.

Ninety per cent (90%) of the students pinpointed that the digitisation of administrative processes and user experiences have benefitted them. Literature is in agreement with the placement of the student experience at the centre of the digital transformation agenda of higher education institutions. Over half of the respondents from a survey carried out by the Council of Higher Education South Africa revealed that the majority of higher education institutions view the improvement of the quality of education as their top priority when it comes to their transformation projects (CHE, 2021)

Some of the employees noted that they were able to enhance their student experience by learning new e-tools, which they then use to improve the service delivery of their company. Most of the students also said that they were able to acquire new knowledge and skills by using various tools. According to some students, online learning enabled them to enhance their intellectual skills and practice problem-solving techniques. Students also mentioned that the virtual learning environment helped them to be more independent and self-directed and can

implement oral presentations with reduced anxiety, and stress levels as compared to when they are in class physically. However, some lecturers believe that it increases the students' dependency on them.

Most of the lecturers and students in the study stressed the point that through their LMS ( name withheld), they can interact and engage with each other in a highly flexible manner. All students appreciated the importance of the LMS as they believe that they benefitted during the COVID-19 pandemic crisis. Students mentioned that their efforts were saved during the pandemic crisis by having the flexibility to access online learning through accessing recorded sessions. The Covid-19 pandemic resulted in a significant change in South Africa's attitude toward education technology. Compared to other countries, South Africa reported the biggest positive change (CHE,2021). However, a report on misuse of flexibility was made by a few students as they indicated that some lecturers would schedule online sessions, especially during times they perceive as family time for both students and lecturers.

### 4.5.4 Theme 4: Institutional Challenges to Transformation

After the analysis of the results, the above theme was set out in line with the perceptions of the participants on the challenges faced by the PHEI from value chain reconfiguration in a digital transformation context. In this regard, some participants made the following remarks:

**E8:** *For years, the organisation has been working on various ad-hoc automation initiatives that have led to the identification of numerous redundant processes and systems.*

**E1***: The biggest challenge is meeting what the student expects as a customer and ensuring that education is delivered in the broader sense of the word but also meeting the employer's goals.*

**E10**: *The lack of proper management and monitoring of the digital transformation process is a joint responsibility of the various administrators.*

**E11**: *One of the challenges is the lack of hardware that allows for interactivity, we don't have touch screens and interactive pen displays – it is obvious that the institution hasn't invested enough.*

**E12**: *Many institutions mistakenly believe that online learning only focuses on lectures.*

**E14:** *"it takes a lot of effort to train employees, and we don't always have the necessary time and resources to do so"*

**E4**: *Also, electricity and internet outages are an issue.*

**E2**: *I think the primary challenge in managing this digital transformation project is the people involved not the technology itself. Normally, people do not like to change*

**E7***: The most difficult part is to align the transformation with all the different stakeholders*

E6*: I have been working here for a very long time now and I feel there is nothing wrong with the way we are currently doing things. Whys should we change, we are comfortable and good as we have done this before.*

**E11**: *Students are smart and are capable of bypassing the screen locks from the Lockdown Respondus.*

**ST1***: Loadshedding is affecting our attendance but especially when writing exams*

**ST3**: *One time I had to take an online exam, but the internet was slow. ... Also, not all of us students have personal laptops with a camera…."*

**ST5**: *"I am one student who stays in the rural areas of KZN, and internet connectivity is an issue sometimes I have to put my phone on the window to get network and internet to attend contact sessions online".*

**S1**: *All the people involved see things differently and therefore their perceptions and priorities are also different.*

**SP2***: As I said before, the employees are not interested in acquiring new digital skills. They see it as a waste of time.*

**ST7**: *Some of us are not yet ready to accept the changes in technology, for example, this online exam writing we are now doing.*

The major challenges faced by the PHEI are connected to strategic inconsistency, cultural change, resistance to change, customer experience gap and poor adoption of new technologies.

The study revealed that the most critical challenge faced by a private higher education institution when trying to reconfigure its value chain is the lack of a comprehensive digital transformation vision and goals. In other words, the institution's digital transformation initiatives are solutions to current problems and as a result, there is no holistic vision and goals set to guide them. This concurs with Hoffman (2022) when he revealed that implementing a value chain reconfiguration can be incredibly challenging for many companies due to the

complexity of the process. He further mentioned that digital transformation can also be very risky and unstable due to the time constraints and capital requirements involved.

Another common challenge as revealed by the results of the study is the lack of coordination and planning. There was also a strong feeling amongst the employees and suppliers that they were not sure who was responsible for the implementation of digital transformation. The academic administrators and IT service providers also said they did not believe that they were responsible for the whole process. The management of the institution expected the administrators to identify and prioritise the digital transformation process. On the other hand, academic administrators believe that the digital transformation process should be driven by IT suppliers.

Resistance to changing the value chain activities through the adoption of digital transformation is viewed as a major obstacle that was revealed from the study. The participants mentioned problems with dealing with changes from their usual routines. Changing learning platforms, administrative processes, and the use of unfriendly assessment systems were cited as challenges. literature asserts that many managers and stakeholders are not prepared for the digital transformation that is expected to happen in their organisations (Fitzgerald et al., 2018).

There were negative attitudes which were revealed during the study from the lecturer's side, as they felt that online teaching is inappropriate for those students whose academic level is poor. From the students' side negative attitudes were directed towards the procedures that the institution took to reduce cheating in online assessments. Students are averse to having everything done online. The institution tried to minimise cheating by introducing the proctoring system called the Lockdown Respondus. All of the participants agreed that online assessment is unreliable and unfair to evaluate the student's learning. This is because cheaters tend to take advantage of the system and get away with it.

The cost of implementing digital technologies and the lack of affordability are some of the key factors that prevent organisations from successfully implementing the changes that digital transformation requires. A majority of the study respondents also noted that the PHEI is not yet at the point where it can sufficiently complete the milestones of digitisation. Kativhu (2021) confirms that the cost of implementing digital transformation in the higher education industry will depend on the various factors that affect its operations, such as the company's pre-existing infrastructure and digital maturity.

The results also revealed the adoption of new technologies as a challenge faced by the PHEI. According to the employees, many of the systems they have were not used, while the annual license was regularly paid such as the Turnitin which is being underutilised. The interviews also showed a lack of time and resources to train employees as one of the biggest challenges that face the digital transformation process.

Most of the lecturers and students noted having poor facilitating conditions during classes affects teaching as well as students learning, creating a huge customer experience gap. The study revealed that students lack the equipment like computers and tablets needed to support online learning sessions. It was also noted that the lack of reliable internet connectivity and electricity cut-off were also major issues for online learning.

Poor digital pedagogy displayed by some lecturers also added to the huge customer experience gap. Most students reported that some lecturers lacked pedagogical skills suitable for online lesson delivery like introducing discussions online, conducting collaborative presentations, and asking questions that had negative effects on their participation and engagement. The participants further detailed that they become distracted, and sleepy and end up withdrawing from the classes as an effect of such un-interactive online lectures.

Few students voiced their discontent with other employees with particular reference to some lecturers and academic coordinators lacking the fundamentals of technology use and tools regardless of having in-depth knowledge in their areas of specialisation. Li (2019) supports this notion by indicating that institutions can face customer experience gaps due to a lack of proper implementation of digital transformations, leaving many organisations unable to keep up with the changes brought about by the new digital reality.

### 4.5.5 Theme 5: Solutions to Institutional Challenges to Transformation

After the analysis of the results, the above theme was set out in line with the perceptions of the participants on possible ways of dealing with the challenges identified. In this regard, some participants made the following remarks:

**ST1**: *new technologies are coming as surprises to us…. Such as the online exam writing software…they should ask us as well before they put it to use.*

**E8***: The key word for management is to create a digital transformation vision and share it with all relevant stakeholders.*

**E4***: Maintain consistent cooperation and support amongst everyone involved*

**E6***: I suggest that the institution come up with policies that support professional development. For example, carrying out upskilling workshops to train us whenever something changes.*

**E9***: I know students are complaining about our proctoring system, but to maintain our academic integrity, we need to use it to control how our students take their exams. We need to protect the brand.*

**E2***: We need to continuously adapt to changes or come up with improved processes before challenges arise. The Covid 19 was a wakeup call for businesses…*

**S1:** *The institution should have a formalised IT structure and not just look for solutions when there is a problem*

**E7***: In all transformations, let's not forget where our bread is buttered…students, our customers should be happy.*

**E10***: Information technology should support organisational objectives.*

Results indicate that the participants understand and appreciate that value chain reconfiguration through digital transformations has the potential to improve the student's learning experience. In addition, collaboration among the institution, suppliers and students using e-tools and applications becomes efficient. The institution can have an environment where employees share their expertise and skills to support the implementation of the transformation initiatives. The employees proposed the setting up of a clear policy and creating a holistic vision of digital transformations. This is supported by literature which recommends that PHEIs should create a cultural atmosphere where a consensus on values should be met within the whole institution.

Students also urged the institution to have an integrated digital approach where they are also involving them in making technology decisions. Makkar, Gabriel and Tripathi (2008) support this view through their value co-creation model which states that both the users and providers should be involved in value creation.

Most participants agreed about the effectiveness of the digital transformations but highlighted the importance of considering the nature of modules or qualifications, whether they are theoretical or practical, lecturers' pedagogical skills, technical skills of all the institution's departments and students' characteristics. Participants suggested that online delivery of education provides better flexibility to both the lecturers and students and therefore, recommended that the institution start with piloting modules from one higher certificate

qualification and then evaluate the experience before spreading to other modules and extending it to all the qualification offerings. Students and lecturers recommended the institution avoid allocating huge portions of module grades to online exams but focus on practical skills in online assessments. They also suggested using project-based assessment methods as the better way to carry out assessments. This tallies with literature which suggests that organisations need to have a clear understanding of their business model and the various innovations that are required to align with their transformation initiatives to effectively implement digital technologies (Schwertner, 2017).

There was also a consensus that value chain reconfigurations and digital transformations take time and effort but are vital for the creation of competitive advantage. From the viewpoint of professional development, some employees cited the significance of improving both pedagogical and technical skills particularly, the designing of online components, delivery of online learning and administrative processes. This can be achieved through the continuous provision of training and capacity-building workshops for employee upskilling. While employees are open-minded about digital transformations, there is an obvious need for support for the use of information technology. On the other hand, students also mentioned the need for training at the beginning of a semester on unfamiliar educational technologies or online resources. Literature unanimously agrees with the research participants' sentiments. Fillios (2020) supports this argument by stating that organisations need to ensure that the transformation project is viewed from a business perspective and not as a technology solution and from an operational view by understanding their customers' expectations and developing effective processes that will bring them in. Hess et al. (2017) also emphasized the importance of integrating the various digital systems into one another. This can be done through the use of technology to enable both internal and external systems to communicate. Anastasiu, (2019) also indicated that in a higher education context, the ability to get the most out of the investment is related to the efficiency of the student's learning process and how effective the lecturer's skills are.

### 4.6 Research Proposition

The presented results of the study provide evidence to support the proposition that an institution derives a competitive advantage from value chain reconfiguration through digital transformation. An institution may claim to have a competitive advantage gained from its

value chain only when its customers see the value provided by the firm as superior to that offered by its competitors.

Digital transformation of higher education service delivery not only requires the application of digital technologies, but also advocates for the improvement in strategic direction, operations, and values of an institution and reconfiguring a value chain which is adaptive to the digital age. Once the value chain is digitally reconfigured, the traditional service delivery is revolutionised in such a way that the institution can become competitive (Warner & Wäger, 2019). When an institution transforms its business processes through utilising digital technologies that connect people, systems, and products, the result will be customer satisfaction. This in turn will make the students choose the institution over its competitors. Therefore, an institution can become competitive if it embraces digital transformation as it has an impact on its ways of delivering value(Svahn et al., 2017).

## 4.7 Chapter Summary

This chapter presented the results and discussed the research findings. Data analysis was guided by the research objectives and questions. Thematic analysis was used to derive themes which assisted in interpreting data and providing meanings to the key findings. The first theme acknowledges that there is knowledge about value chain reconfiguration and digital transformation within the HEI industry, however, digital transformation is confused with other information technology applications such as digitisation and digitalisation. The second theme is based on the PHEI's engagement in digital transformation initiatives and the findings are that if the changes that the institution has initiated are seen by the students who are the customers in a positive light, then the institution can become competitive. The third theme addressed the benefits derived from value chain reconfiguration in a digital transformation context. acknowledged the importance of the PHEI's transformation by citing benefits that are related to value chain reconfiguration in a digital transformation context. The major benefits that were identified by the respondents were student focused and linked to student success. The fourth theme touched on the institutional challenges to Transformation that the PHEI possibly faced. The major challenges faced by the PHEI are connected to strategic inconsistency, cost, cultural change, resistance to change, customer experience gap and poor adoption of new technologies. The last theme provided solutions to the challenges and gave recommendations for the successful creation of competitive advantage through digital transformation and value

chain reconfiguration. The next chapter focuses on the summary, conclusions, and recommendations.

# CHAPTER 5: SUMMARY, CONCLUSIONS, AND IMPLICATIONS

## 5.1 Introduction

This chapter summarises the research findings presented in Chapter 4, based on the research objectives. It also provides conclusions derived from the findings. It also discusses the implications informed by the conclusions based on theory and practice. It also discusses the research limitations and opportunities for further research. Lastly, the chapter gives a conclusion of the whole research project.

## 5.2 Summary of Findings

The findings from the study show that the PHEI under study is currently undergoing some digital transformations which in turn are bringing some significant changes to the institution's value chain configuration. Participants were able to describe the connection between value chain reconfiguration and digital transformation in the PHEI context. In addition, the study found that the importance of digital transformation has been on the rise in recent years and there is a foreseeable potential that it will continue to rise in the future. Therefore, digital transformations cannot be ignored in this era. This is in line with the research objective that sought to ascertain the link between value chain reconfiguration and digital transformation.

The study also revealed the benefits associated with the journey of value chain reconfiguration through digital transformations. The benefits can be summed up by stating that an organisational culture with effective digital transformation offers exciting possibilities and opportunities for an institution to improve its value chain activities and the ability to effectively compete in the business environments in which they exist. This finding is in tandem with the research objective which sought to identify the benefits of value chain reconfiguration through digital transformations in a private higher education institution PHEI.

The study also found that a digital transformation is a student-centric approach which views the student as the source of competitive advantage for an institution and therefore the focus is placed on creating an enhanced student experience and efforts towards student success. Other benefits that were discovered from the study included brand reputation, improved financial position and a basis for competition. This is in tandem with the research objective which sought to explore ways of transforming a private higher education institution through value chain reconfiguration to gain a competitive advantage.

The study also found the challenges faced by the PHEI as it strives to digitally transform and these include, strategy inconsistency, culture change, limited resources, customer experience gaps, resistance to change and poor adoption of technologies. This finding is in synchrony with the research objective which sought to identify challenges that are faced when an institution reconfigures its value chain in a digital transformation context.

However, the study also found possible solutions to the challenges, such as communicating with all the relevant key stakeholders about the changes to be made in the value chain, what digital transformations entail, the proposed digital transformation initiatives and what it means for the PHEI's institution. It is important to have a digital transformation strategy in place. Additionally, the study found that there is optimism about the PHEI's potential. Respondents believe that the PHEI under study can make significant progress toward full digital transformation and value chain reconfiguration soon. Results revealed that those that are or work closer to value chain activities that involve technology and digital innovations are most likely to be the ones who easily understand and support the PHEI's digital transformations and the value chain reconfiguration. However, the awareness and acceptance of the transformations are likely to increase especially with those who are still sceptical engaging and supporting those who have already adopted the changes thereby giving birth to a digital maturity culture in the PHEI. This finding is in line with the research objective which sought to find solutions to the challenges that are faced when an institution reconfigures its value chain in a digital transformation context.

## 5.3 Research Implications and Conclusions

This study has implications for theory and practice as follows:

**Theoretical Implications**

The results show that higher education institutions are faced with a long process towards achieving competitive advantage through successful value chain reconfiguration and implementation of digital transformation. The goal of this study was to expand the scope of the value chain reconfiguration, digital transformation, and competitive advantage theories by exploring the path followed by a PHEI.

Firstly, the study adds knowledge to the modern digital transformations, value chain reconfiguration and competitive advantage literature. Firstly, it builds an empirical-based context that illustrates the creation of competitive advantage through a digitally transformed value chain configuration. Although many scholars have already extensively expanded the concepts before (Li, 2019; Verhoef et al., 2021; Brocke, Mendling,& Rosemann, 2022), it is still important to maintain an active definition of their significance and to continuously improve their application, especially to the service industry. This study aimed to provide a comprehensive analysis of how PHEIs can reconfigure their value chain in a digital transformation context to achieve a competitive advantage and the benefits and challenges associated with it. It also focuses on the possible solutions to the challenges and lessons drawn from PHEI's value chain reconfiguration as a way of creating a competitive advantage.

Secondly, previous studies have shown how digital transformation can create a competitive advantage (Li,2019; Verhoef et al., 2021; Pope, 2017), but have provided fewer insights into how this disruption of business models and value creation capabilities shape the focal creation and achievement of competitive advantage. The current study has expanded this literature by exploring how digital transformation reshapes the creation and delivery of value. The study, therefore, concluded that an institution seeking to successfully create a competitive advantage must observe value-generating activities individually along the value chain. This will assist management to make strategic decisions towards digital transformation initiatives that reconfigure their existing value chain configurations into competitiveness. Competitive advantage stems from an institution's capability to execute the desired activities, either efficiently, or in ways that generate value for the whole supply chain.

Thirdly, when focusing on digital transformations and value chain reconfiguration, the focus should also be on the need for a synergistic role of organisations, suppliers, and customers in creating value to achieve a competitive advantage for the focal organisation (Payne et al., 2020). This proved crucial in explaining how organisations transform their value chains during digital transformations. The findings of this study concluded that digital value chain reconfigurations bring benefits that bring customer satisfaction assisting an organisation to achieve a competitive edge over its competitors. However, the study also concluded that a value chain reconfiguration is not just adopted or rejected by the organisation itself, its suppliers or its customers but should be progressively introduced, experienced, negotiated, and crafted through the organisation's business model.

Fourthly, the study concluded that based on the theory of value chain reconfiguration, the transformation of an institution and creation of competitive advantage involves a robust change in how the operations, management practices and working behaviours are conducted. Therefore, digital transformation sets the pace for an institution's competitiveness, however, it triggers the reconfiguration of that institution's value chain This is supported by the conceptual framework which was adopted by this study as shown in Figure 5.1.below:

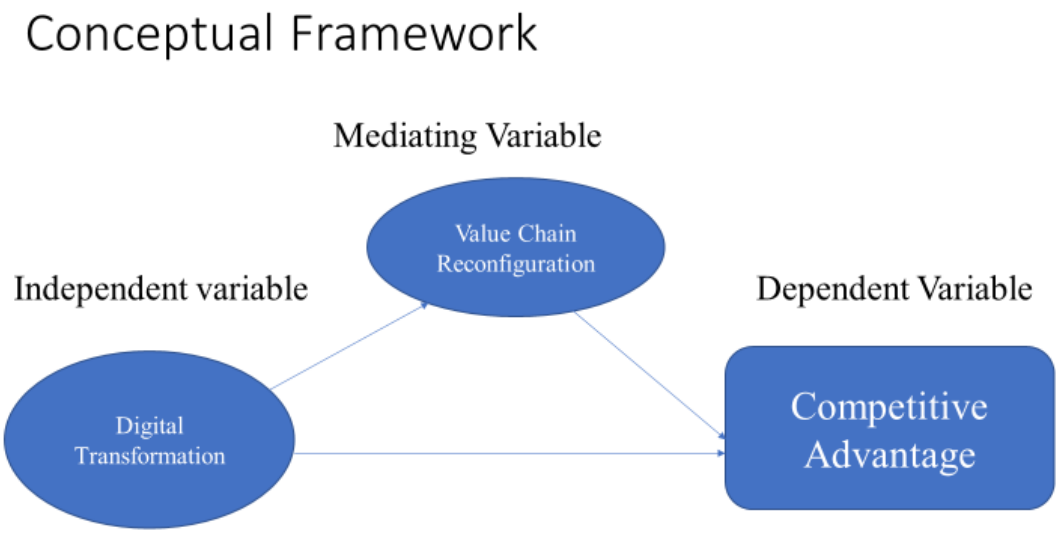


*Figure 5. 1: Conceptual Framework (Source: Author).*

The conceptual framework adopted by this study indicates that digital transformation as the independent variable can lead to competitive advantage, which is the dependent variable, however, this triggers value chain reconfiguration which becomes the mediating variable. This also supports the research proposition of this study which states that " An institution derives competitive advantage from value chain reconfiguration through digital transformation."

Lastly, the study also concluded that there are major shortcomings in the way a PHEI can approach digital transformation in their path towards achieving competitive advantage. As digital transformation is complicated and is associated with risk just like in any other value stream, it is normal that employees and customers resist the transformation. Another conclusion is that transformation should be viewed from business, strategic, operational, and technological perspectives. This can be done by transforming processes that create competitive advantage, understanding customer needs and expectations and applying relevant information technology to both internal and external systems. An integrated approach to digital

transformations allows an institution to reconfigure its business model by gaining a holistic view of the organisation, suppliers, and respective customers, hence creating a competitive advantage.

**Practical Implications**

For practitioners and management of the PHEI, this study provides four key recommendations. The research findings can be used by practitioners as a starting point for developing a competitive strategy and implementing digital transformation initiatives to support the strategy.

Firstly, the study underscores the importance of a deep understanding of PHEI's business model and business environment. To this end, it is useful for the PHEI to carry out a value chain analysis by disaggregating the whole institution into a series of separate but interlinked activities. Porter's value chain model is deemed a useful and versatile framework suitable for this purpose. This is a recommended, insightful tool that the PHEI can use to understand the sources of competitive advantage within the HEI sector, assess the PHEI's competitive position, and suggest opportunities to enhance the PHEI's competitive edge.

Secondly, the value chain analysis in higher education depicts that the most added value from customers is derived from the process of recruiting both students and lecturers(inbound logistics), how knowledge is created and utilised connected with the results produced (operations) and how there is a continuous interaction and connection with the outside environment (post education or service). PHEI managers should support these primary activities by focusing on implementing modern technologies that allow students and the academic and administrative staff to access and filter the data professionally. To that end, analysing the higher education value chain is recommended to enable strategists to identify areas which need reconfigurations to allow the PHEI to get a competitive edge over its competitors.

Thirdly, management and practitioners are recommended to note that digital transformations are not about choosing whether to have analogue or digital value elements in the value chain. However, it entails a continual reconfiguration of already existing value elements or completely developing new ones. The findings show that value chain reconfiguration can either be carried out by having new or discarding fundamental value chain activities while others can either be reinforced or have reduced subtle value chain elements. This helps management in figuring out

the extent of modifications or alterations made to their current value chain by digital transformations to achieve a competitive advantage.

Fourthly, the research findings indicate that a value chain reconfiguration is not just having the same activities in new packaging but mean that there have been some vital changes made to how the value is offered and anticipated by customers. This is a demonstration that digital transformations on a value chain configuration call for new ways of value that should be delivered and a clear evaluation of capabilities within the organisation. The findings also indicate that when an organisation introduces a new digitally reconfigured value chain, it is imperative to be able to actively observe and control the employees, suppliers and customers' perceptions and preconceptions. Organisations' employees and customers might not be easily persuaded to take in new methods of providing a service, particularly if the value of the transformations is not instantly clear-cut. Therefore, management is recommended to make sure that their employees and clients have access to opportunities and grounds to try new value-chain elements. In the same vein, the suppliers can also monitor the service consumption and user experiences and share the information with the organisation to improve customer satisfaction.

## 5.4 Research Limitations and Recommendations for Future Research

Some limitations were detected from the study because it was exploratory and centred on a single case study and this calls for future research.

Firstly, the study was limited to one organisation within one specific industry. The researcher chose the higher education industry for it is amongst industries that are undergoing significant digital transformations and situated the case study in the PHEI sector since it is after this trend to survive in the competitive environment.

Secondly, the research is qualitative which has the limitation of having been self-reported by the participants. Therefore, the results are not generalisable and cannot apply outside the unnamed PHEI's boundaries to other PHEIs in South Africa or beyond borders. Given this context-specific limitation, the results of this study must be interpreted cautiously by allowing the findings to be examined in other cases. For instance, it will be quite valuable to use various case studies within the private higher education sector or to have a comparison between institutions that are at different digital transformation levels to identify key success influences, barriers, and opportunities available within their value chain configurations.

Notwithstanding data triangulation, this study relied mainly on the primary qualitative interview data gathered through semi-structured interviews. Further research can be done using a broader range of data collection methods. This will support a more in-depth analysis of data and provide a more comprehensive analysis of the mechanisms of value chain reconfiguration and digital transformation in the private higher education sector. A mixed method approach is also recommended for future empirical studies to give clear validation of the reported results and new themes that would have surfaced are highly recommended.

## 5.5 Conclusion

The research sought to explore ways of transforming private higher education institutions through value chain reconfiguration to gain a competitive advantage. The study focused on the background knowledge about value chain reconfiguration, competitive advantage, and digital transformation and applied it to the value chain of a PHEI located in South Africa.

The researcher made use of semi-structured interviews to gather data from the institution's employees, suppliers, and students. The thematic analysis method was then used to analyse the collected data. Results show that institutions can transform their value chains with the support of digital transformation initiatives. The results of the study also revealed benefits related to value chain reconfiguration in a digital transformation context such as enhanced student experience and flexibility. These benefits drive an institution to become competitive not as an individual company but to all the supply chain partners including suppliers and customers. The study also highlighted the challenges that can be faced during the value chain reconfiguration process and solutions that can be implemented to improve the process.

The research process was long and arduous but extremely rewarding. It took longer than expected because of the need to get permission from the organisation under study. However, the interview process was helped by the fact that the interviewees were very much willing to participate and easy to access.

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## APPENDICES

## APPENDIX 1: INTERVIEW GUIDE

My name is Sekai Patricia Mutsungi (C033775H), a student at the Chinhoyi University of Technology studying towards a Master of Science Degree in Supply Chain Management. As a part of the relevant requirements, it is expected of me to conduct research. Therefore, I am gathering data related to my topic reads: **Transforming private higher education institutions to become competitive through digitalisation: A case of Open Learning Group (OLG), Johannesburg**

If you may, I desire to ask you several questions and it will take 25 -30 minutes of your time. The data that you will give me will be used solely for academic purposes. Even though the interviews will be recorded and transcribed, there is a guarantee that your anonymity and confidentiality will be upheld. To identify respondents in the final report, the researcher will use codes. No person except me will access the interview recordings and the interview recordings will be destroyed after use. I have asked for and have been granted permission by both the PHEI and the Chinhoyi University of Technology.

**Preliminary questions**

Name: (optional)

Role at the OLG:

Length of time you have worked or interacted with the OLG:

**Main Interview Questions**

1. What do you understand by the terms digital transformation and value chain reconfiguration?
2. Evaluate the retrospective and potential importance of digital transformation for the success of the OLG in creating a competitive advantage.
3. Has any of the OLG's value chain activities been changed? Give details.
4. In what ways does digital transformation impact the OLG's value chain?
5. Give your view on how the OLG can create a competitive advantage through digital transformation and value chain reconfiguration in general.
6. Are you aware of the efforts to reconfigure the OLG's value chain through digital transformation?

7. To what extent are/will these efforts help to deliver value for the OLG's customers and supply chain partners?
8. What is your view on the institution's current and planned future levels of value chain reconfiguration through digital transformations?
9. In your view how well is digital transformation understood and supported by the OLG's institutional groups?
10. What challenges does/did the OLG face when embarking on the value chain reconfiguration through digital transformation?
11. What can the OLG do to reduce/eliminate the barriers to value chain reconfiguration through digital transformation?
12. What can be learned from the journey taken by the OLG in its value chain reconfiguration?

**Thank you for participating.**

**APPENDIX 2: CONSENT FORM**

My name is Sekai Patricia Mutsungi (C033775H), a student at the Chinhoyi University of Technology studying towards a Master of Science Degree in Supply Chain Management. As a part of the relevant requirements, it is expected of me to conduct research. Therefore, I am gathering data related to my topic reads: **Transforming private higher education institutions to become competitive through digitalisation: A case of Open Learning Group (OLG), Johannesburg**

If you may, I desire to ask you some questions and it will take 25 -30 minutes of your time. The data that you will give me will be used solely for academic purposes. Even though the interviews will be recorded and transcribed, there is a guarantee that your anonymity and confidentiality will be upheld. To identify respondents in the final report, the researcher will use codes. No person except me will access the interview recordings and the interview recordings will be destroyed after use. I have asked for and have been granted permission by both OLG and the Chinhoyi University of Technology.

You are reminded that you have the right to not answer any question and that you can withdraw from the interview process at any time.

By appending your signature below, you consent to take part in the interview. You also agree that the purpose of the interview and the research has been explained to you and that your rights and obligations have been explained to you.

Name: _____ Signature: _____

Date: _____

## APPENDIX 3: PERMISSION LETTER FROM CUT

**CHINHOYI UNIVERSITY OF TECHNOLOGY**

PERMISSION LETTER

Student Name: Sekai Patricia Mutsungi

Student number: C033775H

Programme: Master of Science in Supply Chain Management

Approved research topic:

**TRANSFORMING PRIVATE HIGHER EDUCATION INSTITUTIONS TO BECOME COMPETITIVE: A CASE OF VALUE CHAIN RECONFIGURATION THROUGH DIGITAL TRANSFORMATIONS AT OLG, JOHANNESBURG.**

TO WHOM IT MAY CONCERN

I hereby confirm that the above-mentioned student is registered at Chinhoyi University of Technology for the programme indicated. The proposed study met all the requirements as stipulated in Chinhoyi University of Technology policies and guidelines and has been approved by the Graduate Business School.

The proposal adheres to ethical principles as outlined by the Research Ethics Committee of the University. Permission is hereby granted to carry out the research as described in the approved proposal. May you please assist the student in any way possible.

The main objective of the study is to :

**Explore ways of transforming private higher education institutions through value chain reconfiguration to gain competitive advantage.**

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Coordinator, Graduate Business School

Tel: +263 267 2129447

CHINHOYI UNIVERSITY OF TECHNOLOGY
GRADUATE BUSINESS SCHOOL
DIRECTOR'S OFFICE
04 NOV 2022
PRIVATE BAG 7724
CHINHOYI