



**PERCEPTIONS OF PROFESSIONAL SERVICE STAFF ON THE
EFFECTS OF OUTSOURCING OF COURIER SERVICES:
UNIVERSITY OF KWAZULU-NATAL**

by

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DECLARATION

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This work is dedicated to my sweetheart, **TIMOTHY I. OJINI**. You are my firm rock. You stood by me through thick and thin, always encouraging me when I was stressed. You loved me and still do without reservation. I owe you this achievement because without you, my efforts would not be fulfilled. I will love you always.

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To the Lord, to whom I owe my being, you are indescribable, awesome and undefeatable. To you be all glory, adoration, power, majesty and honor in Jesus name. Amen.

ABSTRACT

The dynamics of clock speed, the turbulence of business environment and the challenges of globalisation have influenced firms like University of KwaZulu-Natal in making the strategic decision to outsource some of its business activities. The university uses courier services to transport examination papers to and from external examiners but this schedule became problematic, affecting operational processes at the university thereby exerting considerable pressure on the professional service staff members. The main aim of this study is to evaluate the effects of outsourcing of courier service activities at University of KwaZulu-Natal. This study further aims to achieve the following objectives: firstly, to assess professional service staff's perceptions of the effects of outsourcing couriers services at the University of KwaZulu-Natal. Secondly, to examine the effects of the dynamics of examination process scheduling on the capabilities of the courier service. Thirdly, to establish the extent of outside value-creation service sourcing to which resource based view decisions enhance efficient operations at the university. Fourthly, to evaluate the extent of outside value-creation service sourcing to which transaction cost economics' decisions are strategically derived. Finally, to assess the relationship between the perceived courier service performance requirements and the university's decision process on resource capacity maximization and transaction cost containment. An exploratory research design was used to evaluate the relationship between the courier company's service performance and decisions relating to cost containment within the limited resources. Statistical techniques such as descriptive statistics, logistics regression, factor analysis and multiple regression were used to analyze the data collected from 124 professional staff members at University of KwaZulu-Natal (all five campuses). The main findings reveal that the most important factors to consider when outsourcing, especially during the examination period were a flexible schedule, service excellence, innovative technology, an integrated logistics system, administrative work, courier value added service and increased efficiency. The managerial implication involves some remarks and recommendations that will assist management in deciding on the factors already adopted to enhance the university's operations as well as adopt those that are lacking thereof. The adoption of these factors will confirm the decision to outsource as a good strategy for the university.

Keywords: *Outsourcing, cost containment, service performance, increased efficiency, innovative technology, professional service, restructure.*

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ABBREVIATIONS

ANOVA	Analysis of Variance
ASP	Application Service Provider
BPO	Business process outsourcing
BPR	Business Process Reengineering
HR	Human Resources
IT	Information Technology
LSQ	Logistics Service Quality
RBV	Resource Based View
SPSS	Statistical Package for the Social Sciences
SWOT	Strengths, Weaknesses, Opportunities and Threats
TCE	Transaction Cost Economics
UCU	University and College Union
UDW	University of Durban-Westville
UKZN	University of KwaZulu-Natal
VIF	Variance Inflation Factor

CHAPTER ONE

INTRODUCTION

1.1 Introduction

This chapter introduces the research topic, and sets out the study background, the research problem, the study's objectives and the research questions. It also outlines the theoretical framework employed for this study that embraces the concept of outsourcing, the resource based view and transaction cost economics. The chapter briefly describes the research methodology (the study site, sample size, data collection method, target population, and data analysis) employed in the study. A discussion on the ethical considerations taken into account and the study's limitations concludes this chapter.

Survival is a primary concern of all businesses, regardless of their location and size. Outsourcing refers to the assignment of activities formerly executed in house, to an outside provider. Kocel (2011:11) defines outsourcing as "the transferring of some part or whole of an organisation's activities that are non-core competencies to suppliers or service providers that are experts in the field". Several factors such as clock speed, environmental turmoil and globalisation motivate firms' strategic decision to outsource (Bhalla and Terjesen, 2012:167). However, it is important for a firm to analyse its value chain before outsourcing (Yeboah, 2013:1). According to McIvor (2009:45) outsourcing is viewed as a powerful tool to improve performance and reduce costs.

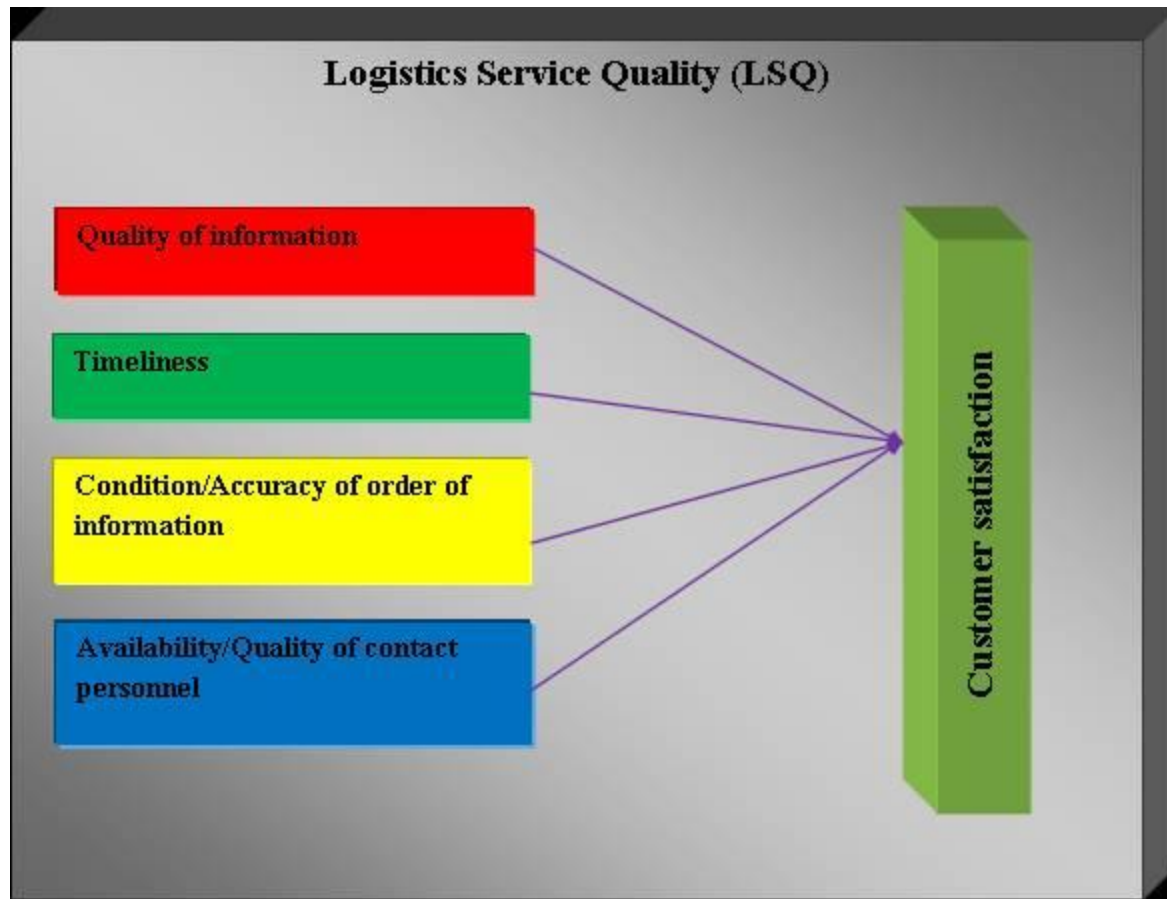
1.2 Background to the Study

According to Zigiari (2000:7) the business process reengineering (BPR) strategy is based on radical change which includes rethinking, realignment and redesign. It also includes operational functions and the reconfiguring of processes that requires considerable change and clock speed in order to create a common systems platform. The notion of reconfiguration has introduced new concepts such as a lean system, outsourcing of non-core functions, and transformation in terms of structure, processes, people and technology in universities and changes to virtually every aspect of employees' work lives. Institutions such as the University of KwaZulu-Natal (UKZN) have expanded on this notion by using external entities that provides services, including food services, computer services, print services, bookstores and courier services (Quigley, Behnaz, Pereira and Lizelle, 2014:1).

The university uses courier services such as Globe Flight to transport examination papers to and from external examiners during the examination period, although it still handles its own internal mail deliveries (Quigley *et al.*, 2014:3). The courier business is involved in parcel pickup and delivery within a specified time selected by the customer. The distance between pickup and delivery locations, the parcel weight and volume, and the type of service demanded by the customer all determine the rate offered by courier companies (Moussaid, Azouazi and Omri, 2009:1756). To remain competitive yet still make a profit, courier companies must offer excellent services in the form of adhering to pick-up and delivery schedules while simultaneously containing costs. Hence, the focus is on optimization of the delivery and pick-up process (Moussaid *et al.*, 2009:1756). To schedule, means to prepare or arrange an activity in an organised way so as achieve a certain objective in a timely and speedy manner. Nonetheless, professional staff at UKZN confronts considerable pressure in dealing with delays in courier deliveries during the examination period. The professional service staff are known at UKZN as the teaching administrators of the university that handles examination scripts, courier and relates directly with the service provider.

Delays in delivering and receiving scripts to and from the external examiners affect operational processes across the university. Since the courier service is outsourced and is no longer part of their job description, employees receive no feedback and have no control of any operational problems that may occur (Quigley *et al.*, 2014:1). According to the (University and College Union (UCU), 2013:14), a current scholarly work on outsourcing notes that there are increasing indications that outsourcing can “compromise the quality of service and lead to a competitive race to the bottom for both terms and conditions of the employees and commitment of these staff to providing a high quality service”. Courier service delivery include a time responsive transportation that poses a huge problem to providing an on-time and fast response customer service. Thus, this study aimed to access professional staff members’ perceptions of the effects of the outsourcing of courier activity at UKZN in order to ensure that the institution’s key performance indicators are not undermined. The study examined the logistics service quality (LSQ, of the courier service company “using variables that include: accuracy/condition of order, quality of information, timeliness and availability/quality of personnel” (Ho, Teik, Tiffany, Kok and Teh, 2012: 257) (see figure 1 below) to determine whether or not the courier service utilises this dimension in order to satisfy its customers (UKZN). The logistics service quality is aligned to the third objective.

Figure 1.1 Research Framework



Source: Ho, J.S.Y. Teik, D.O.L. Tiffany, F. Kok, L.F and Teh, T.Y. (2012). The moderating effect of local vs Foreign Courier Service providers on Logistic Service Quality (LSQ). *International Journal of Trade, Economics and Finance*, 3(4).

1.3 Statement of the Problem

The University of KwaZulu-Natal does not have sufficient operating resources and relies on subsidies and sponsorship to stay afloat as the cost of running the institution is increasing. Hence, a decision was taken to restructure the university and the outsourcing of courier services was part of this process. The examinations period is a very busy time for university employees, especially the professional services division that handles the transfer of marked examination scripts between lecturers and external examiners, and captures marks promptly so as to allow students to access their results. It is expected that all marked scripts should be promptly transferred to external examiners and vice versa, within a stipulated time of ten (10) days.

A key problem exists, however, in the handling of the courier service, especially during periods of high demand such as the examination period. All staff is expected to ensure students' results are updated within the specific period, thereby allowing time to prepare for supplementary examinations. Extending the time allocated to these examinations has cost implications. There have been instances where documents have been lost in transit, raising questions about the control of these service providers and their compliance with institutional requirements. The pilot study conducted revealed instances that the professional staff encountered laxity from the service providers.

1.4 Research Questions

- I. What are professional service staff's perceptions of the effects of outsourcing courier services at the University of KwaZulu-Natal?
- II. What effects do the dynamics of examination process scheduling have on the capabilities of the courier service?
- III. What is the extent of outside value-creation service sourcing to which resource based view decisions enhance efficient operations at the university?
- IV. What is the extent of outside value-creation service sourcing to which transaction cost economics' decisions are strategically derived?
- V. What is the relationship between the perceived courier service performance requirements and the university's decision process on resource capacity maximization and transaction cost containment?

1.5 Research Objectives

- I. To assess professional service staff's perceptions of the effects of outsourcing courier services at the University of KwaZulu-Natal.
- II. To examine the effects of the dynamics of examination process scheduling on the capabilities of the courier service.
- III. To establish the extent of outside value-creation service sourcing to which resource based view decisions enhance efficient operations at the university.
- IV. To evaluate the extent of outside value-creation service sourcing to which transaction cost economics' decisions are strategically derived.

- V. To assess the relationship between the perceived courier service performance requirements and the university's decision process on resource capacity maximization and transaction cost containment.

1.6 Theoretical Framework

1.6.1 Resource Based View

The resource based view was developed by Birger Wernerfelt in 1984. It explains a firm's ability to remain sustainable through competitive advantage. Brewer, Ashenbaum and Ogden (2013:177) note that the resource based view is more internally-focused, suggesting that competitive advantage can be achieved through using valuable, non-substitutable, rare resources. The criteria for a resource to achieve a competitive advantage are:

- A. Value: For a resource to be valuable, it must enable an organisation to exploit opportunities and respond to threats in the trade environment (McIvor, 2009:47). This should result in increased earnings and cost reduction (Ding, Akoorie, Pavlovich, 2009:49).
- B. Non-substitutable: This is usually the way that competitors replicate a rare resource that an organisation owns. Hence, every firm must find the means to sustain its resources in order to gain competitive advantage (McIvor, 2009:47).
- C. Rare: Where many competitors of any organisation possess a valuable resource, it cannot be considered a source of competitive advantage (McIvor, 2009:47).
- D. Imitable: A firm's resources cannot be replicated by its competitors. Firms are therefore, expected to engage with joint subsidiaries to access diverse knowledge and reduce the costs associated with their daily transactions, which will add value to the firm's financial standing.

1.6.2 Transaction Cost Economics

Transaction cost economics was introduced by Coase in 1937. The theory states that any activity that is provided internally has its own cost, known as the production cost and when an activity is purchased, it is known as a transaction cost (Kamyabi and Devi, 2011:88; Dibbern and Heinzl, 2009:101, and Coase, 1937). According to Brewer *et al.*, (2013:92) transaction cost economics is concerned with firm borders and explains whether an activity or a particular transaction is carried out within the hierarchy of firm governance, or outsourced. An activity possesses both transactional and behavioural attributes.

As noted by Brewer, Wallin and Ashenbaum (2014:2) transactional attributes include frequency, uncertainty and asset specificity which are important in procurement decisions.

Characteristics of Transactional Attributes

- A. Asset specificity: This is the degree of customization that relates to the transaction. It also represents costs that have little value besides the transaction. This cost can take the form of site specificity, physical asset specificity and human asset specificity. High asset specificity leads to hierarchical governance. According to Chandler, McKelvie and Davidsson (2009:375) if firms gain profits from sales, the organisation is strengthened by increasing the number of employees, using technologies that require fewer employees or subcontracting.
- B. Uncertainty: This is concerned with the cost of the search for market information which may represent a significant portion of the total transaction cost since collecting complete information can be impossible at times.
- C. Frequency: according to Thouin, Hoffman and Ford (2009:264) any transaction with high occurrence frequency is bound to have low transaction costs. These three (3) factors determine the extent of transaction costs which provides the foundation to assess outsourcing (Javalgi, Dixit and Scherer, 2009:159).

1.7 Significance of the Study

This study is aimed to determine professional service staff perceptions of the outsourcing of courier services, and the effects this has on performance management indicators at UKZN. It further sought to establish whether service performance has declined or improved, or remains the same as it was prior to outsourcing. The study's findings will assist management to appreciate the importance of monitoring service providers so as to rectify shortfalls and add value to the organisation. They will also provide UKZN management with an overview of the university's performance in terms of sourcing activities from outside firms. The theoretical contribution of this study to the existing body of knowledge on outsourcing includes exploring outsourcing theories that have been studied so as to understand its paradigm in relation to services especially courier service which can allow for a collaborative relationship between the service providers and UKZN hence transforming UKZN as an organisation.

1.8 Justification for the Study

The literature on perceptions of outsourcing within the professional service division of a university with regard to courier service delivery during the examination period is thin and this topic essentially remains unexplored. An in-depth analysis of professional service staff members' perceptions of the handling of post by courier service providers during the examination period will provide a new perspective on heterogeneity in the performance of service providers. This study will contribute to the decisions that are made by university management to achieve operational effectiveness through scrutinising the contracts with service providers and advising them on alternative means of delivery during a period of high demand.

1.9 Research Methodology

1.9.1 Research Approach

Quantitative research focuses on generalising data across populations and collecting numerical data (UKaid, 2013:4). The independence of the investigator is one of the advantages of the quantitative approach. A quantitative research approach was employed. This design evaluates objective data and relies on statistical and numerical data, without opinions and feelings (Sibanda, 2009:2). Furthermore, Creswell (2014:4) describes quantitative research as a means to test theories through examining the relationship among variables. The variables are then measured on instruments so as to analyse the numbered data using statistical procedures and packages.

The purpose of quantitative research is to test hypotheses, examine cause and effect and make predictions. Sibanda (2009:2) suggests that the variables be isolated and the magnitude and frequency of the relationships should be determined in order to establish which variables to investigate

1.9.2 Research Strategy/ Purpose

The research strategy that will be employed in this study includes literature review analysis and pilot study. According to Saunders et al., (2012) research strategy are helpful to collect valid data that can assist to achieve the research aims and objectives. This study employed an exploratory research purpose design. Though according to Strydom (2013: 154) an explanatory study mostly identify causes so as to establish connection between factors and predict the effects of the phenomenon and its changes in relation to other variables. An explanatory study is also known to

be quantitative in nature. It uses statistical analysis to interpret data (Strydom, 2013:154). But according to Sekaran and Bougie (2011:103) an exploratory study is conducted when little information is available on the problem at hand. It is also necessary when some details are known but additional information is required to create a theoretical framework (Sekaran and Bougie, 2011:104). Pierson and Thomas (2010:440) argues that exploratory research design mostly apply to new concerns and also allows for one to acquaint oneself to the topic by gaining primary understanding of the topic. According to Dane (2011:7) an exploratory design can be used in qualitative, quantitative and mixed methods research. Hence, the reason for choosing an exploratory study was because little has been written on professional service members' perceptions of courier service providers at UKZN, although much research has been conducted on outsourcing as a concept..

1.9.3 Study Site

According to Simons (2009) the study site is the actual place where the study and the desired data will be collected. This study site included all five (5) UKZN campuses: Westville, Howard College, Edgewood, Pietermaritzburg and the Medical School.

1.9.4 Target Population

The set of elements from which one would like to draw conclusions is called a population (Blair, Czaja and Blair, 2014:18). A population is the total number of variables that has a common characteristic with the issue investigated (Sekaran and Bougie, 2011:262). The target population for this study was the School professional service staff members in different Colleges at UKZN on five campuses.

1.9.5 Sample

According to Sekaran and Bougie (2011:263) a subset of the population is called the sample and members are selected from it. The sample for this study consisted of the administrators of different departments at the University.

1.9.6 Sampling Technique

Sampling saves costs by creating sets of cases (Olsen, 2012:24). The method by which observations are selected is called sampling (Babbie, 2014:197). A sampling frame is described as the group of target materials from which a sample is chosen. Since this study used a quantitative research methodology, probability sampling was employed to select the respondents to be included in the sample. Professional service staff from each School at UKZN was used as the sample frame which the sample was drawn. Stratified sampling was used. Blair *et al.* (2014:140) state that stratified sampling divides the population into subgroups called 'strata'. A simple random selection is then made from each subgroup to obtain a sample (Blair *et al.*, 2014:140).

However, it should be noted that splitting the samples is complex and creates additional work and costs (Olsen, 2012:27). Stratified sampling was an efficient sampling technique as different types of information were required regarding the university Colleges in the population (Sekaran and Bougie, 2011:282). Stratified sampling is the most efficient of the probability designs. Its advantage lies in the fact that all the groups are sufficiently sampled and it is possible to compare them. However, it should be noted that stratification must be meaningful and that it is more time consuming than systematic sampling or random sampling. The sampling frame for each stratum is vital.

1.9.7 Sample Size

According to Sekeran and Bougie, (2011:293) the sample size is determined by the desired level of confidence and precision. It is important to resolve the generalisability of the sample. Since the population size was 184, in line with Sekeran and Bougie,'s (2011:295) dictum, an illustration of the sample size for a given population size was adopted; hence, the sample size was 124.

1.9.8 Data Collection Method

Research data can be collected using various methods. This study used a questionnaire to gather data. According to Spark, Pharm and Willis (2013:469) questionnaires are a cost and time effective method of collecting information from respondents. The respondents are communicated with via this form of written communication. Bird (2009:1307) notes that, questionnaires are widely used to gather information. According to Bless, Higson-Smith and Sithole (2013:117) self-administered

questionnaires are completed by the respondent without the interviewer's assistance. The university was informed of the nature of the study so as to gain access to volunteer respondents. Approval of the study allowed for the distribution of the questionnaires.

1.9.9 Data Analysis

The questionnaires were handed to the respondents to enable them to give their opinions and different perceptions of the services rendered by service providers in relation to the university's performance indicators. After the data was collected, it was examined, sifted and edited to correct errors. Tables and figures were used to present the findings. Univariate analysis such as central tendency measure and measure of dispersion was employed for mean, mode, median, standard deviation and variance to examine each variable at a time (Simons, 2009). Bivariate analysis was also used, where hypotheses about two related means were tested and Chi Square was employed to determine the relationship among two or more variables (Sekaran and Bougie, 2011:320). The Statistical Package for the Social Sciences (SPSS), an advanced statistical analysis tool, was used to analyse the data. Relationships between multiple variables were established where possible and multiple regressions were used to analyse the data.

1.9.10 Pilot Study

A pilot study was conducted to investigate the practicability of the approaches and processes that would be used in this research study (Thabane, Ma, Chu, Cheng, Ismaila, Rios, Robson, Thabane, Giangregorio and Goldsmith, 2010:1). The pilot study was conducted with ten (10) professional service staff members to identify any challenges faced with the services rendered by the courier company.

1.10 Ethical Considerations

Approval for this research study was obtained from UKZN's Ethics Committee. A Gatekeeper's letter was obtained from the university Registrar. Once ethical clearance was obtained, the questionnaires were distributed to the respondents. This study was fair and impartial. Respondents' privacy and anonymity were protected and they were also informed of their right to withdraw from the research process. This ensured that the integrity of the research study was maintained.

1.11 Limitations

Challenges were anticipated regarding the readiness and accessibility of the university's professional service staff to respond to questionnaires as many staff is reluctant to be part of a research study. The study aimed to gain in-depth understanding of professional service staff's perceptions of outsourcing and its effect on service performance at UKZN. Its result might not be generalisable as it was restricted to UKZN which, as public institution, does not represent all universities in South Africa.

1.12 Delimitations of Research

The study was restricted to UKZN's five (5) campuses. It was anticipated that prospective respondents might not be available to answer the questionnaire and some might be indifferent about participating. It would also be important to determine how other institutions outsource non-core functions.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

Worldwide, businesses are seeking to provide superior, meaningful services to their customers in order to gain a competitive edge. Today's customers are well-informed and know exactly what they expect from an organisation. The time has passed when customers had to visit firms to access goods and services; these days, firms seek out customers and offer various services to their doorstep. It is against this background that outsourcing emerged as a strategy for businesses to achieve and sustain their objectives and goals. Hence, the need to be competitive motivated UKZN to embark on a process of restructuring. This led to the decision to outsource services that are not directly part of the institution's core activities. This chapter defines outsourcing and presents the conceptual and theoretical framework adopted for this study. It examines the nature of outsourcing, the driving forces behind this phenomenon, the challenges relating to outsourcing, and the decision making processes involved in outsourcing. It describes service operations decisions, service design, the logistics service, and the service experience. Finally, it discusses key performance indicators, a brief history of UKZN, university activities that are linked to courier services, examination scheduling and the time frame.

2.2 Defining Outsourcing

Globalisation has come to stay and some buzzwords such as competitiveness and competitive advantage are part of this phenomenon. The corporate world is constantly seeking ways to create profit and maintain a competitive edge and thereby remain in the game of business. Rajkumar, Dahiya and Dalal (2013:39) note an increase in the number of higher education providers, particularly in the private sector. It was highlighted that universities will remain the principal social organisations for knowledge acquisition and professional training. To this end, outsourcing is a type of privatization in which a university contracts an outside provider to handle a campus activity. It also involves reassigning some of the recurring internal functions of a university to outside suppliers (Rajkumar *et al.*, 2013:39).

Grossman and Helpman (2003:136) define outsourcing as "a means of identifying a partner and developing a sound relationship specifically for investment purposes whereby the partner would be able to produce goods or services that fit a firm's requirements". The service provider controls

the business through managing the process as well as certain resources that are used to provide the service. According to Gomez, Parra, Gonzalez, Crespo and Leon (2009:829) outsourcing can be defined as “the total or partial delegation of business activities to another company with some administrative and operational control parts”. The similarities in this definitions can be seen as a binding contractual relationship exists between the service provider and its clients. These definitions also differs in terms of reassigning functions, varied investment aims that organisations have and delating business activities to service providers. This implies that organisations takes decisions to outsource based on the activities that are its core competence. From the Human Resources (HR) point of view, outsourcing has developed into an economic approach in response to current changes in the business world such as acquisitions, mergers and layoffs. Outsourcing creates an avenue for a business to keep an eye on its core activities, resulting in a lean business structure, bottom line improvement and excellent performance (Kinange and Murugaiah, 2011).

2.2.1 The Nature of Outsourcing

In recent times, the complexity of organisations, including the use of specialized resources, has increased significantly. The business world has become more challenging, prompting management to reconfigure the organisational structure and accommodate changing dynamics in the business environment. Outsourcing has become a concept that all businesses should consider in order to remain competitive. Organisations have realised that greater competitive edge can be gained through engaging service providers outside their boundaries for performance improvement such as dependability, responsiveness, flexibility and quality (Gunasekaran, Irani, Choy, Filippi and Papadopoulos, 2015:154). Outsourcing some of an organisation’s non-core activities does not necessarily mean that such activities cannot be performed in-house or that they are of lesser importance to the organisation. Instead, this strategy is adopted to enable the organisation to focus on its core activity. Outsourcing has now moved from an organisational perspective to an economic and social one. Therefore, operations and strategies must be aligned with the decision to outsource. Outsourcing has offered organisations opportunity to exploit their strengths as suggested in a SWOT analysis in their core competencies, reduce capital costs and consequently satisfy customers’ needs (Bustinza-Sanchez, Arias-Aranda and Gutierrez-Gutierrez, 2010:277).

The global world of business has realised that outsourcing, an operations tactic, affects the performance of a supply chain by fulfilling the needs of its domestic and international markets (Jiang and Tian, 2009:7). This happens when service providers are able to engage and provide transformational and competitive services to any organisation. Supply Chain Management is becoming a vital part of a business strategy that protects and enhances core innovations. This is achieved by means of interactive relationships with suppliers whereby key business processes are inter-woven with the firm's objectives and long term strategic plans (Garfamy, 2012:140). Hence, through outsourcing, the usual vertically integrated network is replaced by networks of collaborating firms which is commendable in any business strategy. This allows information, ideologies, knowledge and expertise to be shared along a supply chain continuum, creating support for the overall structure of the business. Other sectors such as IT have enabled organisations to outsource certain technical processes such as payroll and email subscriptions (Kathawala *et al.*, 2005:187). This enables organisations to keep abreast of the latest technology and also achieve healthy profits. The following section discusses certain terminology associated with outsourcing.

2.2.2 Conceptual Description of Outsourcing

Outsourcing is described as procuring some service or products which firms used to provide internally from external suppliers. It describes a strategic management model where business processes are transferred to another company that can perform it better. The primary aim of outsourcing is to make an organisation more competitive through focusing on its core competencies. Its functions are provided on an on-going basis as compared to subcontracting, which is provided for a specific project. Other concepts or terminologies that describe outsourcing and are closely linked to this study include the application service provider (ASP), business process outsourcing (BPO) and co-sourcing. Jaruzelski, Ribeiro, Lake, Booz.Allen and Hamilton (2000) described an ASP as “an organisation that provides a contractual service to deploy, host and manage remote applications for customers from a centralised location”. Ownership of or the licenses for the application belong to the ASP and not the customer, but they sell access to it through a contract. Outsourcing is also a form contractual agreement with a service provider. The courier company and UKZN have a contractual agreement whereby all parcels are collated at a centralised hub and distributed to different locations through logistics means. Likewise, in ASPs, all applications are delivered via private networks and the internet to customers through a centrally

managed hosting facility called data centre. ASPs focus on providing predictable, fast and cost effective functions (Johnston, Abader, Brey and Stander, 2009:39). As noted earlier, UKZN required a competitive platform to offer cost effective and quick functions that suits diverse customers (students); hence the decision to outsource. Bayrak (2013) identifies some of the attributes required by successful ASPs including assurance, empathy, security, system quality, information quality, availability and features. These are service quality dimensions that are essential in the provision of courier services. Chou, Techatassanasoontorn and Hung (2015:30) define BPO “as the allocation of one or more information technology (IT)-enabled business activities to an outside supplier that takes up responsibility of managing the activity to attain its client firm’s measurable and defined set of performance objectives”. This involves outsourcing front and back office functions performed by clerical workers such as accounting, HR, medical coding and transcription. It offers diverse benefits such as innovation, better quality service provision, cost advantages and access to specialised resources. Gewald and Dibbern (2009) explain that BPO involves delegating a complete business process to a supplier with its support services.

This concept is linked to the resource based view theory that is discussed in the following sections. The resource based view advocates for the use of limited resources to achieve cost advantage, high quality and other benefits. This theory created the basis for UKZN to take the decision to outsource courier services to a service provider due to limited access to resources. Accumulation of these resources by UKZN is largely dependent on shareholders, individual contributions and donations from voluntary organisations; hence the need to manage it effectively. Finally, co-sourcing is described as the means by which a firm’s internal audit is piloted through a partnership between the internal audit department of both the firm (in-house) and the service provider (Desai, Gerard and Tripathy, 2008:5). This is an efficient means of internal quality audit services provision with advantages such as access to professional skills, knowledge, and expertise.

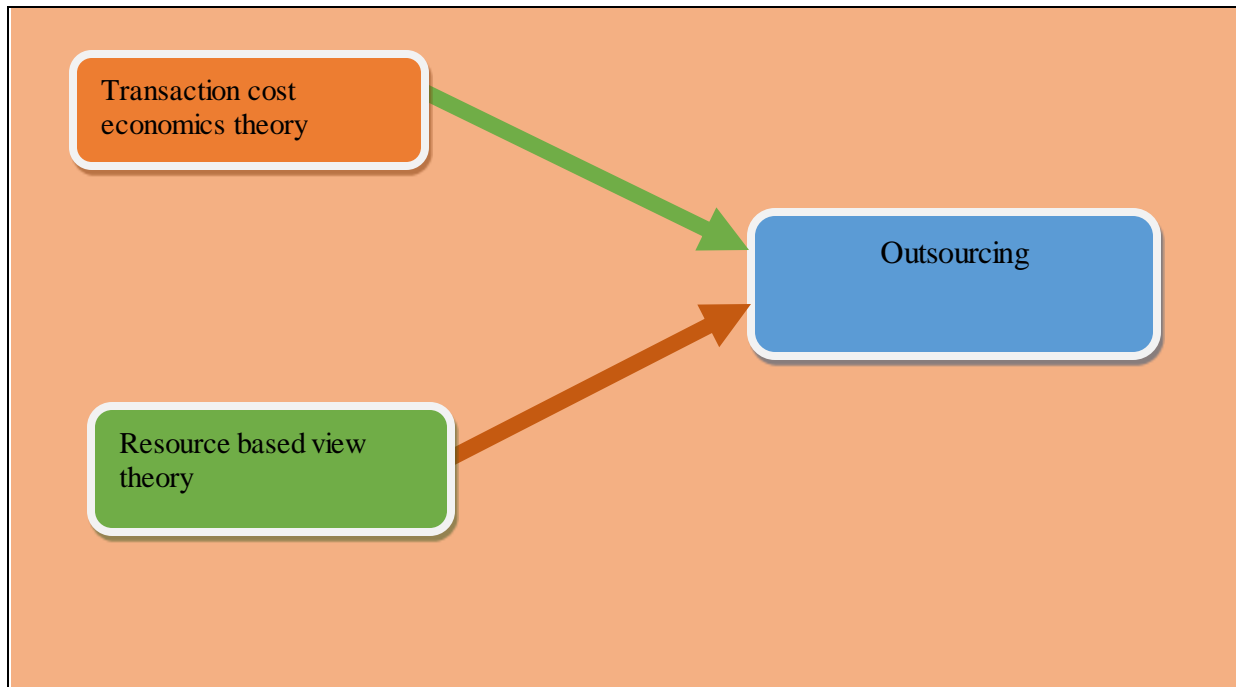
Co-sourcing is a business activity that is carried out by internal staff and external means, such as consultants or outsourcing vendors, with specialised knowledge of the business activity (Johnston *et al.*, 2009:39). UKZN created an office that handles and dispatches internal parcels throughout its five (5) campuses and immediate neighbourhood.

2.3 Theoretical Framework

Borgatti, (2011) describes a theoretical framework as a collection of concepts which are related to one another. The theoretical framework guides a study by determining what to measure and the statistical relationships to search for. It is critical in an exploratory study such as this, since not much is known about the topic. The theoretical framework supported this investigation and also provided the justification for this research. Succinctly put, UKZN does not have sufficient operating resources and relies on sponsorships to stay afloat. Rajkumar *et al.*, (2013:39) suggested that for a higher education institution to prosper, research, teaching and learning (UKZN's core competence) must remain the major focus. At the same time, while the cost of running the institution is continually increasing, the university's offerings to its diverse clients cannot be of a substandard nature or quality. Rather, clients' (students) expectations of service efficiency must be met or better still, achieved above the anticipated level.

Given the competitive environment in which it operates and the availability of cutting edge technology, the university decided to adopt outsourcing as a strategy to improve its performance, reduce costs and focus on its core competencies. While outsourcing has been around for some decades, more recently, organisations have adopted this strategy to promote efficiency and reduce costs and for strategic reasons (Jacobs and Chase, 2011:417). One of the activities outsourced by UKZN is the courier service which was previously handled internally. The primary aim of this study was thus to determine the professional service staff's perceptions of courier handling especially during examination periods. The research problem is linked to these two outsourcing theories: transaction-cost economics (TCE) and resource-based view (RBV), both of which are discussed in the next section. Figure 2.1 presents a diagram that represents these two theories of outsourcing. This is followed by an explanation of how these theories relate to this study and how they are grounded in outsourcing concept.

Figure 2.1 Theories of Outsourcing Framework



Source: Designed by researcher from outsourcing theories of transaction cost economics (TCE) and resource based view (RBV)

2.3.1 Transaction Cost Economics (TCE)

TCE was introduced by Nobel Prize Laureate, Ronald Coase, in 1937, who stated that commercial firms exist due to transaction costs. The theory was further developed by Williamson in 1975. The principal concern of TCE is with the firm boundaries, described as “whether a certain activity or transaction is carried out within the pyramid of firm governance, or is outsourced to the market” (Coase, 1937; Brewer *et al.*, 2014:2). Transaction cost involves the cost of purchasing an activity which includes the indirect and direct cost of negotiating, supervising and enforcing contracts among firms and service providers. The factors that affect transaction attributes are asset specificity, uncertainty, frequency, bounded rationality and opportunism. Asset specificity refers to the usefulness of an asset after a transaction is concluded. An unexpected change in circumstances that surround a transaction is known as uncertainty while frequency is the number of times a transaction is completed via a governance arrangement (Alaghehband, F.K., Rivard, S., Wu, S. and Goyette, S. (2011:127). Opportunism denotes the possibility that one of the transaction parties will take advantage of the other. Bounded rationality assumes that human behaviour which

is intended to be rational is usually restricted by knowledge, language and behaviour. Combining asset specificity and opportunism assists firms to decide whether transactions should be outsourced or performed in-house (Brewer *et al.*, 2014:3). The downside of TCE is that it ignores control measures such as collaboration and trust (Ghosal and Moran, 1996:22). It is also criticized for focusing on cost minimization instead of value growth (Brewer *et al.*, 2014:3). In another study, Holcner, Sedlacik, Michalek and Odehnal (2014:217-232) examined changes in costs and other factors of economic rationality in the sharing of international armaments plans. Centred on present transaction cost theory, a definition of individual and collective transaction costs of a weapon systems club was proposed. The survey found that cumulative project costs decreased while transaction costs were moderately reduced or remained unchanged. The core aim of value chain is the integration of partners which can lead to efficiency and value creation to any organisation. Hence a functional and mutual relationship should exist between UKZN and its varied service providers based on strategic decisions (Muhic and Johansson, 2014: 8). This will have a bearing on the competitiveness of the organisation and as well can be used to measure sustainable competitive advantage.

Globalisation and the dynamic influx of new businesses have prompted institutions such as UKZN to maintain their competitive edge by reengineering their business structure. UKZN's decision to outsource activities such as courier handling services was motivated by cost containment, a university-wide strategy. This is the basis of the TCE theory which was formulated in order to reduce costs across all facets of the university to provide better and quality services provision. Managing cost can be difficult and allowing a service provider to offer some non-core functions means sharing the cost effects and risks involved. The TCE theory supports the strategy chosen by UKZN to outsource non-core functions due to cost concerns. This is literally correlated to TCE's suggestion, that an organisations will select the business alternative that yields the lowest total cost of running its operations (Holcner *et al.*, 2014: 219).

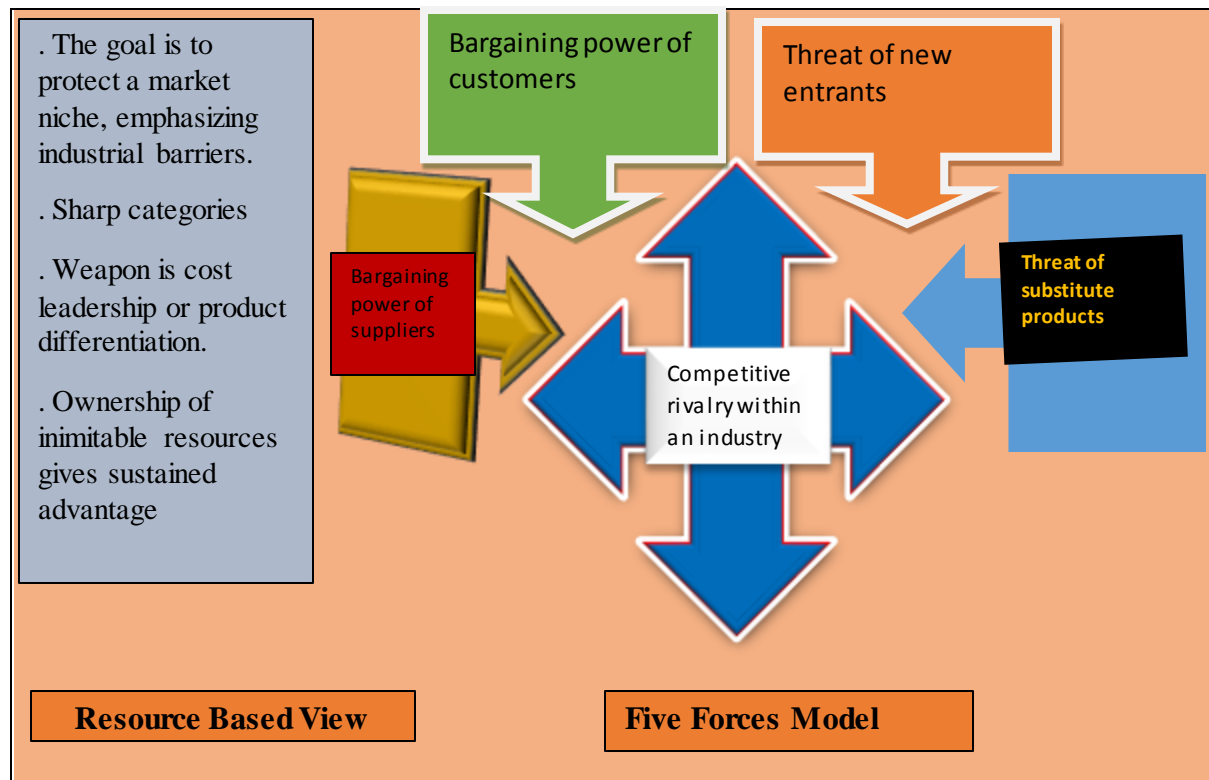
2.3.2 Resource Based View (RBV)

This theory was developed by Penrose in 1959 and refined by Wernerfelt in 1984; and is used when outsourcing decisions are made. Penrose (1959) identified the central importance of resources in a firm achieving a competitive position. There has been an increase in the research literature on the RBV theory since the 1990s (Kellermanns, Walter, Crook, Kemmerer, and Narayana, 2014:3). Most studies have tested the link between resources and capabilities and organisational performance (Cao, Berkeley, and Finlay, 2014:89). In 1991, Barney argued that the two assumptions of the RBV, capability and resources, are heterogeneously distributed among firms (Barney, 1991). According to the RBV, analysing a firm's competitive advantage begins with the identification of its internal strengths. Therefore, businesses should not only try to establish a strong position in their industry, but should draw on the strength of their resources. Superior performance and competitive advantage are enabled through harmonizing resources in the supply chain (Tokman, Richey, Deltz and Adams, 2012 and Zacharia, Sanders and Nix, 2011). Broadly speaking, a comparison can be made between the RBV and the Porter's model that takes into consideration the competitiveness and attractiveness of diverse industries in a target market.

In RBV, the qualities of the resource such as being rare, imitable and valuable, allow any firm to sustain its superiority because of the unique control and patent it holds on a resource. In Porter's five forces model, the bargaining power of suppliers allows for control of the rare resource in the supplier's possession. If a resource such as a critical skill/ unique cannot be imitated, there is no threat of a substitute product in the market. Universities such as UKZN do not have sufficient operating resources to accommodate their varied needs and hence rely on subsidies and sponsorship to stay afloat. Outsourcing is an opportunity to identify profitable and cost effective ways for UKZN to utilise the limited resources it has for good purpose. While some business processes that were put in place such as the reengineering of UKZN's structure affected some employees due to retrenchment, there have been with positive outcomes. The RBV proposes capability in order to gain competitive edge; thus UKZN decided to focus on its core competencies (teaching and research) to achieve competitive advantage. Broadly speaking, financial constraints are a university's key challenge since funding is mostly from donors, yet there is an expectation that quality education must not be compromised and has to be rendered to clients (students) whose number have swelled (Rajkumar *et al.*, 2013:39).

Outsourcing was considered as part of UKZN's quest to reduce costs, optimise the use of its limited resources, improve efficiency and meet demands for improved higher accountability.

Figure 2.2 Porter's Five Forces and the Resource Based View



Source: Dalken, F. (2014). Are porter's five competitive forces still applicable? a critical examination concerning the relevance for today's business, 3rd IBA Bachelor thesis conference, July 2014, Enschede, The Netherlands, University of Twente, faculty of Management and Governance. 1-8.

Cecchini, Leith and Strobe (2013:35) state that, RBV focuses on maximising value by means of the effective use of resources thereby rendering it a strategic approach to value chain management. The RBV strategy focuses on the internal aspects of an organisation through the use of the skills and resources to achieve competitive advantage (Rehme, Nordigarden, Brege and Chicksand, 2013:229). For a resource to achieve competitive advantage, the following factors must be present

- A. It must be difficult to imitate
- B. It must not be substitutable
- C. It must be rare and

D. It must be valuable.

Firstly, inimitable resources are uncommon and are controlled by a firm in the market (Barney, 1991). A sustainable grip on such a resource is advantageous as long as competitors are unable to replicate it either through an alternative or a look alike. An example is a highly skilled employee in a specialised field. Secondly, a resource must be non-substitutable. If competitors are able to provide a suitable substitute for the resource, the price will be driven down, thereby losing the competitive advantage created by the resource. Tacit knowledge is an example of this resource attribute. Thirdly, for a resource to be valuable, it must be rare. It must allow firms to use a value-creating strategy which cannot be concurrently implemented by other firms, thereby, achieving competitive advantage (Barney, 1991). The more abundant a resource is, the less it will contribute to competitive advantage. As long as the number of firms who retain this resource is sufficiently small to deter perfect dynamic competition, the resource is rare enough to sustain competitive advantage (Paton, Clegg, Hsuan and Pilkington, 2011:41). Finally, a resource must be valuable.

Kroes and Ghosh (2010:126) note that RBV emphasises distinctive resource trait such as capabilities, processes and capital assets. This allows a firm to implement strategies that can lead to effectiveness, enhancement and efficiency. Grant (2001:114) identifies the relationship between an organisation's accessible resources, and its success and skills. Some resources are critical in order for some strategies to be implemented successfully. Grant (2001:114) argues that a revised resource-based perspective should include five elements: the firm's resource base breakdown, its capability appraisal, the profit earning potential of the firm's capabilities and resources, effective strategy selection and upgrading and the extension of the firm's actual resources and capabilities. Agha, Alrubaiee and Jamhour (2012:194) argues that functional resources and capabilities include ability of people to use the analytical concepts and procedural techniques to achieve competitive advantage. When properly used, these resources and capabilities serve as strengths for any organisation to carry out value-added activities and support strategic decisions. Clearly, it can be seen how the RBV criteria can be used through a focus on core competence and capability to create value that may lead to superior performance and competitive advantage that is sustainable. Hence, it is suggested that UKZN management need to think about how and to what extent the organisation's resource and strategic capabilities can be managed through outsourcing some functions and focusing on their core competencies to sustain and achieve competitive advantage.

2.4 Driving Forces of Outsourcing

Numerous studies have examined the goals, objectives and motivation for a firm's outsourcing effort which relates to its supply chain processes. These are known as the firm's outsourcing drivers. The core drivers of outsourcing seem to have shifted from cost issues to issues of strategy such as core competence and flexibility in delivering services (Niskanen, 2013:35). Outsourcing drivers are the direct outcome of the realisation of a firm's competitive priorities and identified plans (Kroes *et al.*, 2010:126). They include flexibility, quality, innovativeness, time, cost, maintaining a competitive position and customer demand. Firstly, cost savings are identified as the leading driver of outsourcing. Cost competitiveness improves because firms can eliminate activities that are unproductive and redeploy their assets towards cost reduction. Outsourcing drivers that are related to cost include the legal costs of carrying out an activity and selecting a supplier that offers lower total, regulatory and logistics cost (Kroes *et al.*, 2010:126). Firms sometimes over or under-estimate the transaction costs involved in outsourcing, with no idea of whether the expected profit can be realised (Dekkers 2011; Hatonen and Eriksson, 2009; Kramer and Kramer, 2010 and Niskanen, 2013). Secondly, organisations that focus on flexibility are expected to respond effectively to dynamic customer needs and requirements.

These ever-changing needs may take the form of demand for changes in product characteristics, fluctuations in demand or reverse logistics. According to Patil and Patil (2014:407) firms aim to achieve flexibility in resource positioning. Resource flexibility is crucial since firms are becoming more responsive in their service offering. Thirdly, innovativeness mainly focuses on supplying products that have novel and technological features. Service providers must keep abreast of technology so as to provide their clients with up-to-date expertise that is not available in-house. Quality involves the performance and conformance value of a product that exceeds customer expectations. The ideal is the best service and the best quality goods. Timeliness relates to a fast response in terms of providing goods and services so as to obtain better on-time performance. Firms therefore select suppliers that carry out their functions with less lead time, faster process capability and reduced cycle time (Kroes *et al.*, 2010:127). Globalisation is a driver of outsourcing where trade barriers have been relaxed and national markets have merged into a global one. This has allowed businesses to achieve economies of scale and share knowledge and expertise through outsourcing (McIvor, 2005:11).

The dynamism of the business world has affected customer demands. Customers are becoming more knowledgeable about what 21st century business entails. Increasing demands from customers in terms of customization of products, environmental sustainability and other issues have resulted in organisations changing their operations and adjusting their structure through outsourcing. Another driver of outsourcing that will be considered is maintenance of a firm's competitive position. Regardless of the type of business and cost savings strategy, a firm needs to secure its talent base in order to stay on top of the game. To sustain their competitive position, firms adopt a number of strategies, ranging from optimising resource use, to acquiring new skills, investment in innovation, the introduction of new products and cost reduction (Patil *et al.*, 2014:408). Other drivers of outsourcing include a lack of capacity, especially when the internal capacity of a firm is constrained by an increase in market demand. Finally, risks and returns are shared when partnering with an outside service provider. These risks may include instability in project provision, delays, vendor exploitation, and a lack of innovation. Nevertheless, outsourcing is here to stay and is a partnership model that offers firms an opportunity to reduce their level of risk. This involves a joint relationship where the risks and returns are shared between the clients and the supplier (Vitasek and Manrodt, 2012). Various other reasons drive organisations to outsource; these are described below.

Strategic Reasons

Some organisations have made a strategic decision to focus all or most of their available resources on core functions by transferring operational functions to an external provider (Heywood, 2001:103). In contrast to Kroes *et al.*, 2010, Kramer and Kramer (2010) suggested that there are three main categories of outsourcing motivations: cost, strategy and politics. Firstly, in terms of cost, it was suggested that outsourcing may occur when suppliers' cost are low. Thus, adding overhead, profit and transaction costs allows suppliers to deliver quality service and achieve economies of scale and specialisation. Outsourcing results in significant cost savings. Kremic, Tukul and Rom (2006:469) notes that factors such as flexibility and core competence support outsourcing to improve business performance. A strategic purpose enables an organisation to focus solely on its core competence thereby forcing the firm to reassess its scarce resources due to severe competition. Other strategic issues that favour outsourcing are restructuring, innovative

technology and the desire to manage demand swings. Control of an organisational operation may be lost to service providers when outsourcing for strategic purposes.

Competitive Strategies

While the above drivers of outsourcing are important, it should be remembered that some strategies offer opportunities to achieve competitive advantage (Heizer and Render, 2011:67). In order to offer excellent service, firms need to formulate a plan that can create value for their customers as well as increase their profit base in an efficient and sustainable manner. (Heizer and Render, 2011:67) examine competitive advantage via differentiation, low cost, and response. Firstly, competing through differentiation is concerned with the uniqueness created in the activities that a firm offers. Opportunities for creating uniqueness in a service product are usually restricted by a lack of imagination. Therefore, service firms should consider all the attributes of their products that affect customer values and adopt these in their product offering. Customers must be active participants in product manufacture using their five senses (Heizer and Render, 2011:68). Secondly, by means of cost leadership, firms achieve competitive advantage by successfully pricing their products lower than those of their competitors. Cost leadership occurs through experience, product facility investment and monitoring total operating cost (Valipour, Birjandi and Honarbakhsh, 2012:14).

Accordingly, Baroto, Abdullah and Wan (2012:122) describe a cost leadership strategy as “an incorporated action taken on product and services that has varied description of customer requisitions with lower cost in contrast to its competitors”. The main reason for adopting a cost leadership strategy is to achieve efficiency in all operational areas and to gain rigid cost control. This strategy usually aims to provide high volume products at most competitive price. Thirdly, competing by means of response is a flexible, reliable and quick strategy. Heizer and Render, (2011:69) define a flexible response as the ability to be dynamic in a changing marketplace where substantial volume and design innovations fluctuate. A reliable response that sticks to the schedule enhances a customer’s trust in the firm. Quick response refers to how fast a service or product is offered. In terms of these factors, firms are expected to select the best strategy that suit their operations and that will promote success and competitive growth.

Motivations for Outsourcing

Scholars have identified different motivations for the decision to outsource. Lonsdale and Cox (1998) identified five reasons why outsourcing is viable: to convert fixed costs to variable costs, to reduce costs, technological innovation, time to market improvement and benefits from suppliers in terms of expertise and superior knowledge. According to Lacity, Hircheim and Willcocks (1994) four categories of factors encourage firms to outsource: financial, technical, business and political. Quelin and Duhamel (2003:649) suggested that the most significant principles of the outsourcing decision include: operational cost reduction, gain flexibility and an emphasis on activities that are core to the firm. According to Van Weele (2010:164-165) the motivation for outsourcing may vary from tactical to strategic factors. Tactical reasons include a reduction in control and operational costs, making some internal resources available, receiving a cash infusion, performance improvement and activity control. Strategic reasons might be to enhance focus, acquisition of world-class capabilities, acquire available internal resources, hasten reengineering, promote customer fulfilment, increase flexibility and share hazards. The desire to outsource can be capacity or knowledge related. When a firm has low capacity to execute a service it might decide to outsource.

When the knowledge to execute the activity at the desired level or at an adequate cost level no longer exist, the firm may also opt to outsource. Outsourcing decisions are motivated by various reasons ranging from meeting customer demand, to the need for specialized suppliers, and the need to facilitate market penetration, focus on core competencies, reduce operational costs, eliminate problem functions, gain flexibility and improve quality and the service offering. The motivation for outsourcing is discussed in different studies of (Dabhikar and Bengtsson, 2008; and Kakabadse and Kakabadse, 2002) that are consistent with the work of (Canez, Platts and Probert, 2000) who argue that triggers from the external environment, for example, price competition, which an organisation cannot control motivates outsourcing decision. For instance, price competition. The five motives are cutting costs, increasing quality, improved responsiveness, a sharper focus and increasing innovation proficiency.

2.5 Challenges of Outsourcing

A number of potential challenges of outsourcing have been identified that can affect acceptable rendition of services by an outside provider to its clients. These range from a loss of internal know-how to a loss of control of the organisation's intellectual property (Jiang, Klein, Tesch and Chen: 2003). This study focuses on courier handling of examination scripts. This may mean that UKZN may confront challenges that hamper its operations and its desire to achieve efficiency. The identified challenges from the pilot study are, firstly, the negative attitudes of courier staff. This could take the form of calls to the courier company to assist UKZN to no avail. The second factor is a lack of knowledge and capability on the part of the courier company's staff that may not be properly trained to deal with customers and may also not be skilled in relating to customers such as UKZN. Thirdly, when courier company staff is not committed to their work, this poses a huge problem to both the company and their client. Fourthly, the courier company's account may not have been fully paid, violating the contractual agreement between the parties. Other challenges include service delays which can affect lead time, inability to interpret information, a lack of transparency in functions, reduced learning on the part of UKZN employees and the university's poor monitoring and evaluation of courier companies. If not addressed, such problems can distort and damage the relationship between UKZN and the courier company as service provider. According to Demaria (2012:24) other challenges may include understanding the hidden risks, achieving end-user satisfaction and achieving the promised cost savings

2.6 Logistics

According to Kunaka, Mustra and Saez (2013:2) logistics services are defined as "an essential determinant of any country's connectivity to the global markets and their competitiveness". Logistics quality can impact firms' decisions on where (which country) to locate their business, their suppliers and which consumer markets to enter, thereby making logistics an essential tool for development. Logistics involves the movement of goods from one place to another within a supply chain. In the context of logistics, parcel service delivery is usually referred to as third party (3PL) service provider. The 3PL promotes smooth conveyance of goods in the supply chain. Parcel service delivery involves carriers that transport items which can be handled by a person (Choi, Laik and Shung, 2013). Logistics can offer point to point service, an attribute that makes road transportation the dominant mode of transport. It can contribute to gaining a competitive edge

since it operates according to a scheduled timetable. Previously, logistics supported consumption and production functions (Pienaar and Vogt, 2012:327). Traditionally, only the cost function was considered in the operations of courier companies but nowadays, courier logistics firms are under increased pressure due to the mushrooming of such companies (Ho *et al.*, 2012:257). In logistics, courier service delivery is an aspect of 3PL service providers that guarantees the smooth transportation of goods in the form of small parcels between supply chains. All or some of the activities of courier company logistics are performed by the 3PL that acts as an outside supplier (Yee and Daud, 2011:2). The performance indicators of a good logistics transportation system includes suitability, accessibility, goods security, transit time, reliability and flexibility (Pienaar and Vogt, 2012:29). Vijayvargia and Dey (2010) maintain that a 3PL service provider should offer good service quality, operational flexibility and timeliness. Hsaio, Kemp, Van der Vorst and Omta (2010:78) suggest that value is created by logistics through accommodating customers' delivery requests in a cost effective manner. Logistics service performance evaluates a service provider's ability to consistently transport products as demanded by the customer within the stipulated time at reasonable cost.

2.6.1 Courier Service Company

Courier services are small businesses that have positive influence in communities by virtue of their contribution to service delivery. A courier is a company or person hired to convey mail, messages and packages (Oko, 2014:34). In contrast to regular mail, couriers offer additional services such as security, speed, committed delivery times and customized services at a premium rate. This is a customer driven business with high levels of customer expectations. Courier services function in cities, towns, nationally and globally using road transport that ranges from trucks, to bicycles, cars and motorcycles (eln administrator, 2008:1). A good courier service company is characterised by efficient and smooth coordination of transportation, delivery and collection of items from specified locations to a defined destination. However, De Marco, Cagliano, Mangano and Perfetti (2014:500) note that limitations such as traffic congestion and uncertainty may negatively impact performance. According to Moussaid *et al.*, (2009:1756) a courier business is a business that collects and delivers items within a specified time chosen by the customer. Rates are determined by the distance between the pickup and delivery location, parcel weight with volume, and the type of service requested by the customer.

Lin, Choy, Ho, Lam, Grantham, Pang and Chin (2014:6917) note that courier services are provided by express firms due to the demand for rapid shipment and delivery. Courier services are the activity of a domestic or international parcel shipping service, where the courier firm responds to immediate customer requirements by collecting parcels at varied places. The packages are transported to the mailing centre for sorting and freight (Lin *et al.*, 2014:6917). Courier services are known for their demand-responsive transportation which offer on-time and rapid-response customer service. The dynamics associated with changing customer demands, such as new customer instructions as well as order withdrawals, often occur after the couriers have been dispatched. This hampers the accomplishment of a pre-determined courier routing schedule and could cause an increase in transportation costs and customer service delays.

2.7 Defining Services

The service environment is unique and focuses on information processing and the customer relationship. Accordingly, when services are rendered well, information on its performance goes a long way in improving an organisation's bottom line. Gronroos (2000:27) defines service "as a process consisting of a series of more or less intangible activities, that normally (but not necessarily always) take place in interactions between the customer and service employees, and/or physical resources or goods and/or systems of the service provider, which are provided as solutions to the customer problems". In defining services, Spohrer, Maglio, Bailey and Gruhl (2007:72) state that they are "a value-coproduction configuration of persons, expertise, internal and external service arrangements, and shared information such as laws, policies and rates". Fitsimmons and Fitsimmons (2011:4) define services as "a time-perishable, intangible experience completed for a customer acting as a co-producer". For their part, Paton *et al.*, (2011:153) refers to service as "any value or activity that a party can propose to another that is essentially vague and does not result to ownership". Delivery and production of service occur concurrently; therefore, services cannot be stored. The similarity in the above definition of outsourcing hinges on the fact that services must be provided immediately. This implies that the degree of satisfaction or dissatisfaction of services rendered is shown accordingly by the customers.

2.7.1 Service Operations

Any service operation requires inputs or resources. Resources include labour, capital and goods, and the inputs are the customers. Therefore, customers are usually participants in a service system. Hence, the challenge is to balance service capacity with demand, especially when customers arrive at their own discretion with unique demands (Fitsimmons *et al.*, 2011:19). Service operations are primarily characterised by simultaneity. This means that services cannot be stored but are produced and consumed instantaneously. This eliminates many opportunities for quality-control (Fitsimmons *et al.*, 2011:19). Jacobs and Chase (2011:257) observe that demand must be met immediately during service delivery since it cannot be inventoried. The process and the product must be developed concurrently. The second factor is intangibility. Services are concepts and ideas that are not protected by patents. This is a creative form of advertising that is commonly available in goods production. For this reason, customers have to rely on the service firm's reputation. Thirdly, services are perishable; they are lost when not utilised because they cannot be inventoried. Opportunity is lost when capacity is idle; therefore, there is heightened need to match supply with demand. The final factor is heterogeneity; there is a high level of customization and customer involvement in the delivery process results in variability (Fitsimmons *et al.*, 2011:20-21).

2.7.2 Service Design

An analogue to this design process is the service concept that consists of the elements that are required to identify and provide an on-going service offering that will achieve a service vision (Fitsimmons *et al.*, 2011:72). Service design elements include the delivery system, facility design, location, capacity planning, information, service encounter, and managing capacity in line with demand and quality. Paton *et al.*, (2011:153) explain that some service characteristics are extended or consumed consecutively over a period of time. Hence, all the elements of a service system must be designed in a way that creates consistency in its service offering and can achieve the firm's strategic service vision. The service delivery design includes strategic service design choices, service delivery execution, renewal, assessment and customers' perceptions of the value of entire service concept.

2.7.3 Service Quality and Gaps

Courier services has evolved into a global business with a diverse range of organisations, thereby enabling it to perform better in offering its services to sectors such as educational institution (Yousapronpaiboon, 2014:1088). Aggressive competition among tertiary institutions calls for such institutions to improve service quality and thereby gain competitive advantage (Cardona and Bravo, 2012:23). Tertiary institutions can gain an edge on their competitors by offering unique services of superior quality. Customers (students) have high expectations of these institutions and outsourcing courier services is one way to improve quality. Service quality is defined by Parasuraman, Zeithaml and Berry (1985) “as the ability of an organization to meet or exceed customer expectations”. In a competitive business environment, service quality is an essential differentiator and it is a necessity in service-based businesses (Thaichon, Lobo, Prentice, and Quach, 2014:1047). Trust, commitment and customer value can be enhanced through service quality which is a prerequisite for customer loyalty.

Gefen (2002) also defined service quality as customers’ personal assessment of the quality of service they aspire to receive and what they eventually receive. Engaging the services of courier companies offers higher institutions an opportunity to improve service quality. Therefore, professional staff members that deal directly with the courier company can provide feedback on perceptions of the quality of the service rendered to UKZN. Information on the quality of supplier activities and administrative processes are important for higher education institutions in prioritising resource allocation, containing costs and strengthening promotion plans (Cardona and Bravo, 2012:24). Quality services exceed customer needs and expectations. According to Roslan, Wahab and Abdullah (2015:459) the quality of a service can make or break a company as it determines customer loyalty the company. Kranias and Bourlessa (2013:454) note that there is widespread consensus on the aspect of service quality. These include assurance, empathy, responsiveness, reliability and tangibility.

2.7.4 Dimensions of Service Quality

According to Kranias and Bourlessa (2013:454) reliability is aligned with performing services accurately and in a timeous manner with minimal errors. Secondly, responsiveness refers to readiness to assist customers and offer speedy service. Attending to a service failure creates positive perceptions of quality (Fitsimmons *et al.*, 2011:117). In this regard, it is suggestive that during examination periods, the courier company may take up detailed schedule of UKZN's needs and integrate its system with UKZN's logistics system. Hence, UKZN should specify and prioritise the importance of examination process to the institution. Thirdly, assurance is concerned with service providers' knowledge of the job and courtesy to customers. This helps to build trust and confidence between the parties. Empathy involves a close relationship with customers such as understanding their needs and providing a solution to their problems. It requires individualised customer attention. Finally, tangibility is concerned with the physical appearance of facilities, personnel and equipment (Fitsimmons *et al.*, 2011:117). Hence, service quality is based on a comparison of the expected and perceived service offered to clients. The gap between expected and perceived service measures service quality; therefore, satisfaction can either be positive or negative.

2.7.5 Service Quality Gap

Identifying and measuring the gap between the expected service and perceived service is a repetitive customer feedback process that is practiced by top service companies (Fitsimmons *et al.*, 2011:117).

GAP 1 – This is the market research gap and is the difference between customer expectations and management perceptions of such expectations. This gap arises when management does not fully understand how customers articulate their expectations based on issues such as past experiences with firms, personal needs, and advertising. This gap can be closed through better communication between management and employees, and improved market research.

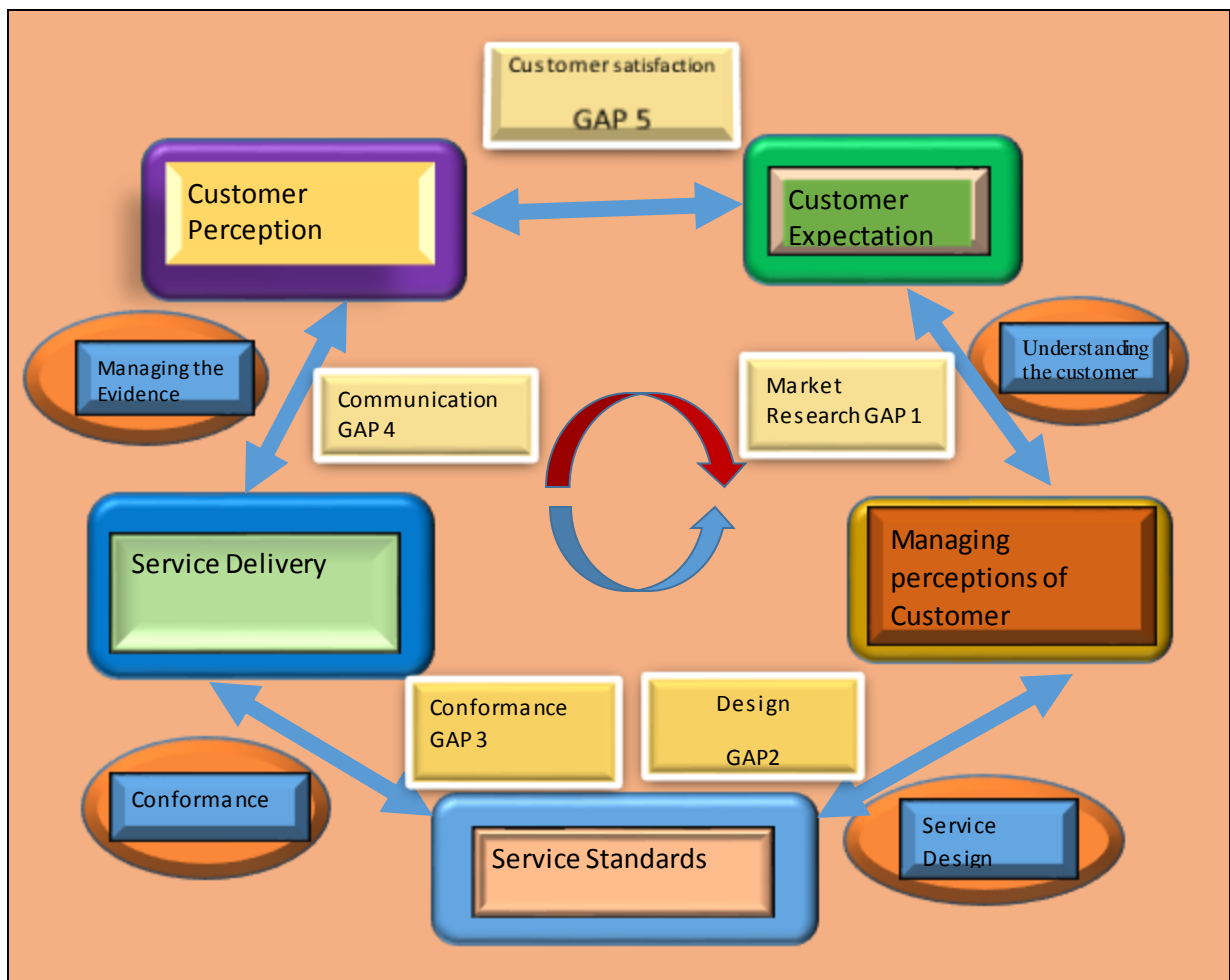
GAP 2 – This gap may result from management's lack of commitment to service quality or the realisation that customers' expectation are not being met. Hence, the consequence of management's failure in setting targets to meet customer expectations and translate these into workable terms affect the objectives of any organisation to attain competitive edge over rivals. When goals are set and tasks are standardised, this gap can be closed.

GAP 3 – This conformance gap occurs for a number of reasons such as poor employee satisfaction, inappropriate job design, inadequate training, and a lack of teamwork. It occurs when specifications set by management are not met.

GAP 4 – This is inconsistency between service delivery and external communication such as a lack of information and personal contact and inflated promises. Customers' expectations of service are defined by communication from the firm and advertising in the media.

GAP 5 – This is the gap between customer expectations and perceptions. Customer satisfaction depends on reducing the gaps associated with service delivery (Fitsimmons et al., 2011:117).

Figure 2.3 Service Quality Gap Model



Source: Fitsimmons, J. A. and Fitsimmons, M. J. (2011) *Service Management: Operations, Strategy, Information Technology*. 7th ed., McGraw-Hill International Edition.

2.7.6 Service Experience

Experience is a personal sensation that can fulfil a need. Many researchers have studied the aspects of a service experience. Others examined service experience through service procedures or the service blueprint structure (Grace and O’Gass, 2004).

According to Berry, Carbone and Haeckel (2002) the service experience includes clues with emotional, mechanical and functional characteristics. Services are believed to be performances rather than objects. For a client, service performance is the sole source of value creation. Clues in a service experience are seen as absent or present by clients using the five senses. Managers and customers have acknowledged the importance of experience. Some researchers regard skills as a distinctive economic offering which is different from goods and services but embodies fulfilment of customers’ internal needs and sensations (Chang and Horng, 2010:2401). Managers views experience as products which they have created and managed and are able to sell, while customers perceive experience as the satisfaction of their personal needs that they are willing for (Chang and Horng, 2010:2401). Increased competition in the courier service sector and desire to remain customer-focused reinforce the need to offer excellent, quality service to attract and retain customers.

In the current climate in this sector, the true measure of success lies in an organisation’s efforts to continually satisfy its customers through service delivery. In other words, the service experience offered by courier companies to their customers has a critical influence on organisational profits since it is associated with customer satisfaction, retention and loyalty (Mohsin, McIntosh and Cave, 2005:108). Having repeat customers is closely linked to satisfying customers and stimulating a feeling of pleasure from the service delivery experience. The service experience can take the form of flexibility and the timely manner in which customers are attended to. The steps that need to be taken to optimise the service experience include:

- A. Reduce customer effort by providing a personalised experience. Most customers want access to information with minimal effort. Therefore, the information that courier companies have about their customers should be used to tailor personalised services.
- B. Allow customers access to different channels. Courier services should offer customers the flexibility of multi-channel options that align with their age and technical proficiency.

- C. Customers want a consistent experience. Courier companies provide such a service via different channels to track and use their functionalities.
- D. Agents must be empowered. The courier company must empower its staff to have good knowledge of a customer's profile so as to engage and empathise with them.
- E. Leverage social media. The media is an important source of information due to technological advancement. Courier service companies should take heed of the issues that makes their customers unhappy.
- F. A process based customer experience management platform should be implemented to monitor and track customer issues, thereby providing courier companies with the visibility and control required to offer a good service experience (Kana, 2013). Furthermore, when customers experience great service, they tend to sell the firm through 'word of mouth' advertising, thereby offering the firm the leverage to benchmark its performance against its competitors.

2.8 Key Performance Indicators

2.8.1 University of KwaZulu-Natal

According to UKZN (2014), the former Natal University College was founded in 1910 and was granted autonomous university status in 1949. The University of Durban-Westville (UDW) was founded in the 1960s as the University College for Indians on Salisbury Island in Durban Bay. Enrolment figures were initially low as the Congress Alliance rejected apartheid government structures (UKZN, 2014). Student numbers grew thereafter and the College was granted university status in 1971. In 1972, the new UDW moved onto its modern campus in Westville. In 1984 UDW became an autonomous, diverse institution (UKZN, 2014). UKZN was formed on the 1 January 2004 as a result of the merger between UDW and the University of Natal. It has five campuses: Edgewood, Howard College, the Medical School, Pietermaritzburg and Westville.

2.8.2 Motivation for UKZN to Outsource

In 2011, the organisational structure of the university was reconfigured into four Colleges with a total of 19 schools. Each College is headed by a Deputy Vice-Chancellor and Head of college (UKZN, 2014). UKZN's strategic decision to improve its operational processes and expedite the realisation of the university's objectives is known as business process reengineering (BPR).

This reconfiguration introduced new concepts such as outsourcing non-core functions, and transformation of the university's structure, processes, people and technology. It was decided to use external entities to provide services such as food services, computer services, print services, bookstores and courier services (Quigley *et al.*, 2014:1). Other reasons related to capability; technology; enhancing the efficiency of the university's service operations; decreasing delivery lead times; enhancing service quality; reducing the cost of services; improving flexibility and responsiveness to variability in demand; taking advantage of service providers' greater innovative capability and achieving UKZN's main strategic objectives and goals.

2.8.3 Key Performance Indicators

According to the schedule 2 (appendix D) of UKZN's performance appraisal form, the key performance indicators include the supplier representative's response to the purchaser's request, after sale support, meeting promised delivery dates on time and delivery as per order, conformance with agreed specifications, invoices/ delivery notes and test certificates and assistance with account queries. A number of activities at the university involve the use of courier services to transport and deliver documents such as examination papers to external examiners, deliver mail packaged by administrators to different locations, procurement of stationery and office supplies, and graduation ceremonies and alumni functions. For the purpose of this research study, the focus is on examination periods at UKZN.

2.8.4 Examination Scheduling

A schedule is a timetable for executing activities, utilising resources, or facility allocation. Scheduling is the core of a process (Jacobs and Chase, 2011:664). It involves assigning jobs to employees in a given time period and the systematic design of tasks that must be performed at a specific time. For this purpose of this study, a short term schedule is discussed which is characterised by reduced completion time, maximising utilisation and minimising customer waiting time. Educational institution such as UKZN are characterised by workflows, graduation ceremonies, tests and examination periods, making this a complex and dynamic environment. These activities are subject to a schedule in order to ensure the institution's smooth operation. To schedule means to allocate tasks and decisions over a relatively short period; it is also geared towards performance achievement. The examination period is characterised as the busiest in higher

education institutions. Almost all the staff at a university is expected to contribute to this period because virtually everything else comes to a halt. Every decision taken by any organisation has a defined time frame at which it will take place. The courier company offers a short term schedule which accommodates UKZN's examination timeframe. Therefore, courier companies are expected to provide optimal service according to the defined schedule and timeframe. While UKZN creates supply relationships, it expects the suppliers to perform at a certain level. However, it is important to establish whether or not the scheduled time for examinations at UKZN is reliable in terms of the flexibility of professional service staff. It is also important to determine if the schedule is too tight and compressed since examinations are conducted at the same time in every School on all the five campuses. Examinations at UKZN are scheduled over a period of two (2) weeks during which time School administrators are expected to capture students' marks, collate them and send them to external examiners for moderation.

There are challenges in moving examinations from one place to another. Firstly, the last day of the two weeks set aside for examinations is counted and this does not allow the School administrators flexibility to update the marks and send the scripts to the external examiners. Secondly, there is only a week's gap before the supplementary examination takes place. This exerts pressure on the School administrators since they await external examiners' moderation results before sending information to students that qualify for supplementary examinations. Is this time frame sufficient for professional service staff members that handle a number of scripts during examinations? Is the examination period linked to courier services? Hence, the core of this study was determining whether the perceptions of professional service staff on effect of courier service at UKZN. If the courier company achieves the performance levels required by UKZN and if these key performance indicators are linked to service dimensions. How the professional service staff perceives the services rendered by the service provider during examination period hence achieving the performance indicator index of UKZN may vary in terms of service quality dimensions. The following table lists UKZN's performance indicators, service quality dimensions and the qualities of a good courier company.

Table 2.1 Service Performance Comparison

UKZN key performance indicator	Dimensions of service quality	Qualities of a good courier company
1. Responsiveness	1. Responsiveness	1. Responsiveness
2. Delivery	2. Service reliability	2. Reliable delivery
3. Product quality	3. Tangible	3. Suitability
4. Documentation	4. Assurance	4. Accessibility
	5. Empathy	5. Transit time
		6. Competence
		7. Price competition
		8. Communication

Source: Designed by researcher to show Service performance comparisons

From the above table, it can be seen that a good service provider must attain all dimensions of service quality in order to fulfil the key performance indicators of UKZN.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

Chapter one provided a general overview of the research questions and the research methodology utilised while the second chapter presented a detailed literature review and the theoretical framework that underpinned this study. This chapter discusses the research methodology employed to fulfil the research objectives. It presents the research methodology, research design, research approaches, sampling design and sampling technique, the study site, target population, sample size, data collection method, the ethical considerations taken into account in conducting this study, questionnaire distribution and the methodology used to analyse the data. The chapter outlines how the research design and research approach were used to answer the research questions and hence achieve the study's objectives. It also explores the manner in which the researcher ensured that data collection in the field yielded information that could be used to draw valid conclusions.

3.2 Research Strategy/Purpose

The research strategy that will be employed in this study includes literature review analysis, pilot study, brainstorming ideas and jotting down ideas such as a research outline. Also, academic research journals were used to collect important and relevant information related to the issues to be addressed. According to Saunders et al., (2012) research strategy are helpful to collect valid data that can assist to achieve the research aims and objectives. This study employed an exploratory research purpose design. A research design is the overall plan within which a study will be conducted. An exploratory research design was employed in this study. Sekeran and Bougie (2011:103) defined an exploratory study as "a study conducted when a little information is known about the problem, issues and situation at hand." An exploratory study is appropriate when there are high levels of uncertainty about a subject or when the problem is difficult to understand. According to Dane (2011:7) an exploratory design can be used in qualitative, quantitative and mixed methods research. This was a pertinent design for this study because deeper understanding was sought on the phenomenon. Moreover, there is little knowledge of professional service staff's perceptions of courier service providers at UKZN. However, there is a body of literature on the concept of outsourcing. The researcher's primary interest was the services provided by the courier company so as to assess performance in line with the university's performance indicators. A small

scale pilot study was conducted by collecting information from some professional staff, which is not uncommon in exploratory research. Viechtbauer, Smits, Kotz, Bude, Spigt, Serroyen and Crutzen (2015:1) note that a pilot study is used to identify unclear questions, omissions or misinterpretation of the data collection instrument.

It also assists in evaluating the feasibility of the technique to be used in the larger, comprehensive study. To refine the instrument, a pilot study was conducted through consultation with some supervisors and managers so as to ensure that the questionnaire captured the real issues between the courier company and university professional staff administrators. The information provided by the pilot study was not included in the main study; rather, it was used to ensure that every question was relevant. Ethical clearance was obtained prior to the pilot study and after the questionnaire was amended, a reapplication was made since it was then a new instrument. The pilot study consisted of general questions to refine relevant points around the main theme or constructs of the study.

3.3 Research Approach

This study adopted a quantitative research approach and emphasised data generalisation across populations (UKaid, 2013:4). This approach offers the advantage of research independence. Creswell (2014:4) describes quantitative research as a means of testing theories by investigating the relationship variables. The variables are measured on instruments so as to evaluate the numbered data using statistical packages and procedures. The quantitative research approach is a design that evaluates objective data and depends on numerical and statistical data, without taking feelings and opinions into account (Sibanda, 2009:2). The aim of this study was to access the professional service staff's perceptions of the challenges of outsourcing courier services at UKZN.

3.4. Sampling design and sampling technique

The sampling design is the procedure used to select a sample that embodies the larger population it is selected from (Sekaran and Bougie, 2011:267). There are two kinds of selection technique: probability and non-probability sampling. For the purpose of this study, probability sampling was employed; the respondents selected represented all professional service staff at UKZN.

Disproportionate stratified random sampling was used. In this sampling technique, the target population is separated into various strata and thereafter a sample is drawn from each stratum.

This technique has the advantage of enabling all population groups in the strata to be part of the final sample (Sarantakos, 2013:172). Since UKZN has five campuses that include the target population of professional service staff, the strata were the university's four Colleges which comprise of 19 schools. This ensured homogeneity within each College.

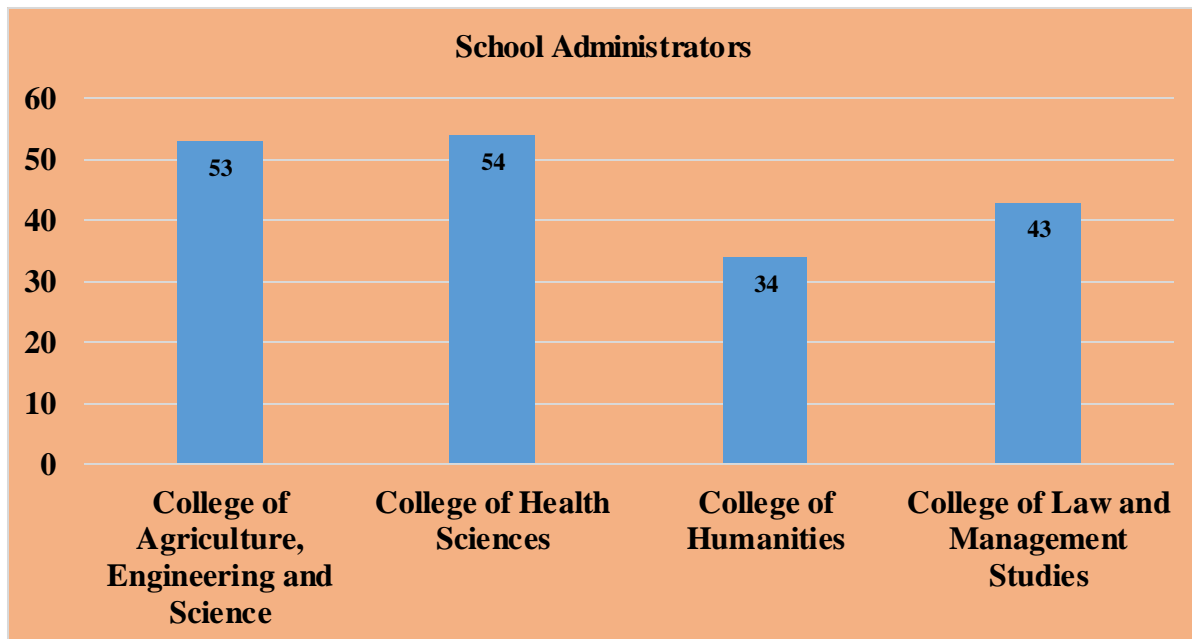
At the time of the study, there were 184 School administrators. The subjects drawn from each stratum were altered but the sample size remained unchanged. Redistribution of the numbers in the strata might be necessary to ensure representivity (Sekaran and Bougie, 2011:273) if variability is evident within a particular stratum. The school administrators selected included 53 in College of Agriculture, Engineering and Science, 54 in the College of Health Sciences, 34 in the College of Humanities and 43 in the College of Law and Management Studies. A disproportionate stratified random sampling of about 124 was targeted.

Table 3.1: Disproportionate Stratified Random Sampling Design

Category	Number of elements	Disproportionate Sampling
College of Agriculture, Engineering and Science	53	34
College of Health Sciences	54	40
College of Humanities	34	20
College of Law and Management Studies	43	30
Total	184	124

Source: Designed by researcher from the Stratified Random Sample in the UKZN's Colleges'

Figure 3.1 The Number of school administrators in the Four Colleges at the University of KwaZulu-Natal



Source: Designed by researcher from statistical results on school administrators.

The figure shows that, at the time of the study, 53 administrators were employed in the College of Agriculture, Engineering and Science; 54 in the College of Health Sciences, 34 in the College of Humanities and 43 administrators were employed in the College of Law and Management Studies. Thus, a total of 184 administrators worked in the 19 Schools at UKZN.

3.5 Study Site

According to Simons (2009:89) the study site is the exact location where the data is collected. The study site for this research comprised of all five (5) UKZN campuses which are all located in KwaZulu-Natal province. Westville campus has the largest number of professional service staff with the School Management Studies, IT and Governance, School of Accounting, Economics and Finance, the Graduate School of Business and Leadership, the School of Mathematics, Statistics and Computer Science, School of Life Sciences and the School of Chemistry and Physics, all situated on the campus. Howard College is the second largest campus with a well-defined pool of professional service staff and comprises of the School of Health Sciences, School of Engineering, School of Nursing and Public Health, School of Arts, School of Built Environment and Development Studies, School of Social Science, part of the School of Law and the School of

Applied Human Sciences. The Pietermaritzburg campus comprises of the School of Law, School of Education, part body of the School of Chemistry and Physics, part of the School of Mathematics, Statistics and Computer Science, the School of Religion, Philosophy and Classics and the School of Agriculture, Earth and Environment Sciences. The Nelson R. Mandela Medical School campus comprises of the School of Clinical Medicine and the School of Laboratory Medicine and Medical Sciences. Edgewood is the smallest campus with only the School of Education.

3.6 Target Population

The target population is all the elements in the group that will be studied or the population that is relevant to the study. The target population for this study was the Schools' professional service staff members (teaching administrators) in the four different Colleges on UKZN'S five campuses. According to the data obtained from the various Schools' operation managers, at the time of the study there were approximately 184 teaching administrators at UKZN. The study aimed to acquire information from the professional staff in the university's 19 Schools separated into Colleges. According to Isreal's (2013:3) sample size table, this figure (184) lies between the population of 175 and 200 with a sample size of 122 and 134, respectively.

3.7 Sample Size

According to Singh and Masuku (2014:6) the sample size is a critical feature in any research study in which the objective is to make suggestions about a population from the sample. Generally, the sample size is determined by the costs of data collection and adequate statistical power. McCrum-Gardner (2010:10) describes the sample size as "a function that comprises of three factors - the significant level, the effect size and the power". A sample is expected to be as large as possible for generalisability. Israel's (2013:3) table for sample size for a given population was used in this study. The table shows that a population size of 200 will yield a sample size of 134. A hundred and thirty questionnaire were distributed and 124 were returned, thereby conforming with the guide (Isreal, 2013:3) and representing a 95 % return rate.

3.8 Data Collection Method and Instruments

The qualities of measurements are optimally controlled by cautious construction of the instrument such as a well-designed questionnaire which can increase the reliability and validity of the data. For the purpose of this study, a personally administered questionnaire was used. This type of questionnaire offers advantages such as: doubts can be clarified, an almost 100% response rate, a high level of anonymity of respondents and clear and simple design. However, a disadvantage might be that some organisations or individuals may not want to sacrifice work time to complete the questionnaire and it can be expensive when the sample is spread over a wide geographical location (Sekaran and Bougie, 2011:217).

3.8.1 Ethical Considerations

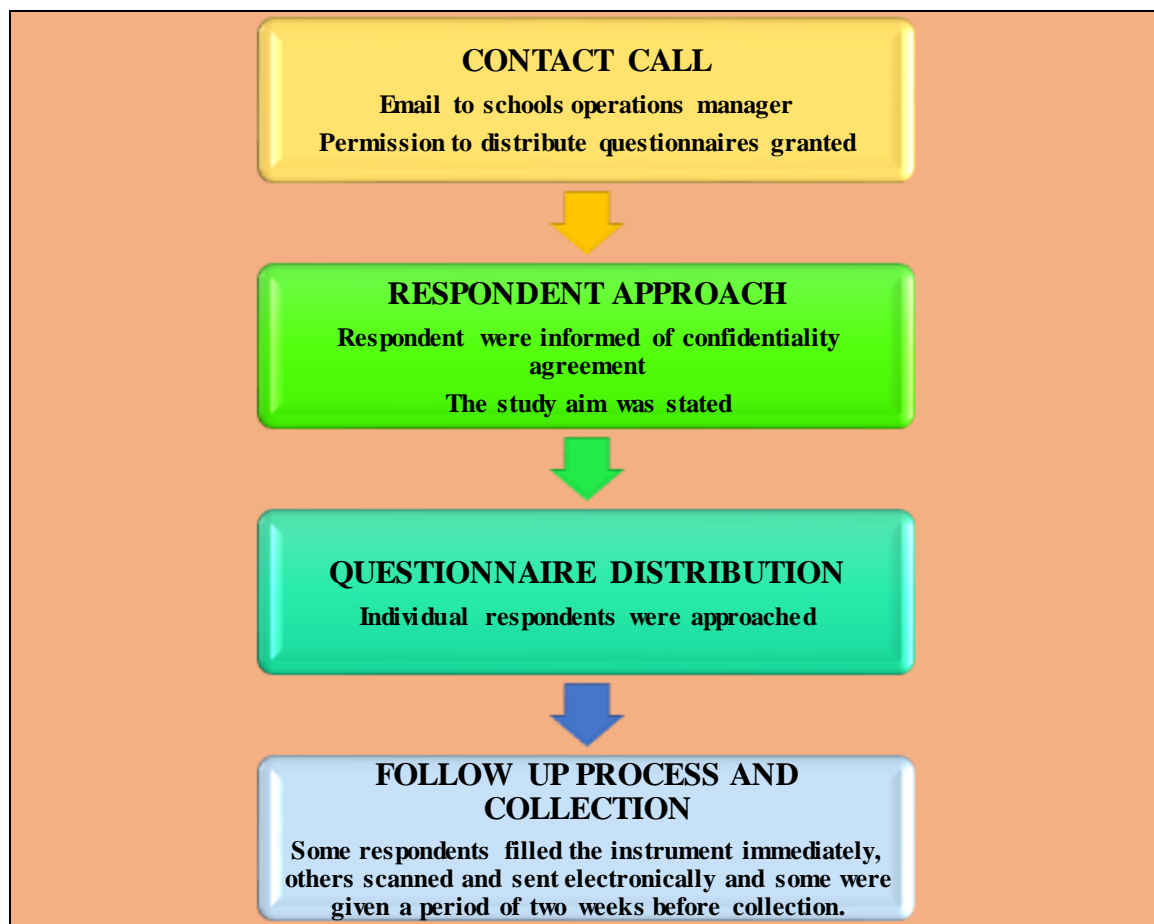
The information provided by all respondents was treated as strictly confidential in order to protect their privacy. The nature of the study was not misrepresented or violated. The respondents were not coerced to participate in the study but did so voluntarily and their individual desires were not distorted when collecting and reporting on the data. The following ethical principles were adhered to in the course of this study: permission to conduct the study was obtained from the UKZN's Research Office on the Westville campus and no monetary benefits were given to the respondents.

3.8.2 Questionnaire Distribution

The questionnaire was titled "Perceptions of professional service staff on the effects of outsourcing of courier services: University of KwaZulu-Natal". It consisted of four sections and was designed in line with the literature reviewed. Section one covered the respondents' biographical data such as level of education. Section two included dichotomous questions with responses as "Yes" or "No". This section sought concise information on the challenges of outsourcing courier services to a supplier, the dynamics of examination process scheduling and the quality of the service provided by the courier company to UKZN. The third section of the questionnaire was based on 5 point Likert scale questions. Respondents were asked to indicate their level of agreement or disagreement with each statement in a scale ranging from: "1" as strongly disagree, "2" as disagree, "3" as neutral (neither agree nor disagree), "4" as agree and "5" as strongly agree. Finally, the fourth section involved a more defined approach where the respondents were asked to tick two options from the list that are most important to them.

This section was grouped into five categories, namely: service performance of the courier company, examination time frame, logistics and the courier company, the cost containment strategy and effective limited resource allocation. Administering a questionnaire involved various steps which are illustrated in the diagram below. These included initiating contact through an email to the different Schools, seeking permission to distribute questionnaires to respective School administrators, and individually approaching respondents in different Schools on the five campuses to fill in the questionnaire. A two week interval was set for the completion of the instrument, follow-up and collection of the completed questionnaires. A total of 130 surveys were circulated and 124 responses were received, representing 95% return rate.

Figure 3.2 Data Collection Process



Source: Diagram designed by the researcher on the data collection procedure

Data Analysis

The information collected was processed using Microsoft Excel. Univariate analysis and inferential analysis were conducted using statistical software, the Statistical Package for the Social Sciences (SPSS®) in combination with Microsoft Excel's abilities of analysing and processing data. Univariate analysis such as central tendency measure and measure of dispersion was used for mean, mode, median, standard deviation and variance so as to examine each variable. Bivariate analysis was used to test the hypothesis of two related means. Finally, cross tabulation was used to test the relationship among the variables in the study.

3.9 Univariate Analysis

According to Vogt and Johnson (2011:411) univariate analysis involves the study of distribution of cases of one variable only. It is occasionally used in regression analysis to illustrate a problem in which there is only one dependent variable. Data analysis in this research study included:

3.9.1 Frequency Distribution: this illustrates the number of respondents and the percentage that belongs to each category of the question.

Diagrams: In displaying the quantitative data, histograms and bar charts were used to present the data. This offers ease in interpreting the collated information. A summary of the data was provided through the measurement of central tendency and dispersion. According to Cooper and Schindler (2008) bar charts, histograms and pie chart are used when nominal or ordinal variables are analysed. Frequency distribution was used to analyse data from sections one (1) to four (4) of the questionnaire with common responses in the sample.

3.9.2 Descriptive Statistics

Descriptive statistics include means and standard deviation wherever possible. Vogt and Johnson (2011:104) defined descriptive statistics as "the procedure for summarizing, organizing, graphing and generally describing quantitative data". It can also show the location of a data distribution. Descriptive statistics are summaries of data sets which are useful for data investigation (Dytham, 2011:52). In this study, descriptive statistics were used to explain the features of the data analysed in terms of dispersion, distribution and central tendency which are used in summarising the nature of the variable.

Central Tendency: the signal of an ideal value in a sample is known as central tendency (Cooper and Schindler, 2008:448). Central tendency is used to measure the mean, mode and median. The mean indicates the arithmetic mean throughout some observations.

- I. The mean describes the average value of the data set. It is sensitive to extremely small or large values.
- II. The mode indicates the most frequently occurring phenomenon in the sample
- III. The median shows the central item in the data set (Sekaran and Bougie, 2011:316). It measures the central tendency. The three measures can be compared to indicate the skewness of the distribution. These three measures are expected to meet the following:

If

- I. $\text{Mean} > \text{Median} > \text{Mode}$, then distribution will be skewed to the right
- II. $\text{Mean} < \text{Median} < \text{Mode}$, then distribution will be skewed to the left
- III. $\text{Mean} = \text{Median} = \text{Mode}$ then, distribution is symmetric

Secondly, in establishing data distribution, the frequency of the individual value will be identified. It can be represented using a frequency histogram. Finally, dispersion describes the variability which exists in a set of observations in terms of how dispersed the values are. A measure of dispersion includes the range, variance and standard deviation. Descriptive statistics were used to separately assess the variables in sections 3 and 4 variables of the questionnaire. These results were appraised against the bivariate and multivariate data analysis. Furthermore, a one sample t-test was conducted to test whether the average response for each question is significantly different from a neutral score of '3'. If significance is shown, there is agreement if $\text{mean} > 3$ and disagreement if $\text{mean} < 3$.

3.10 Bivariate Data Analysis

Two variables are identified using bivariate analysis. According to Creswell (2014:165) bivariate analysis looks at the relationship between two variables. This involves a number of statistical methods relating to diverse measurement levels. Cross-tabulation technique was used in this study to examine the relationship between ordinal and nominal variables.

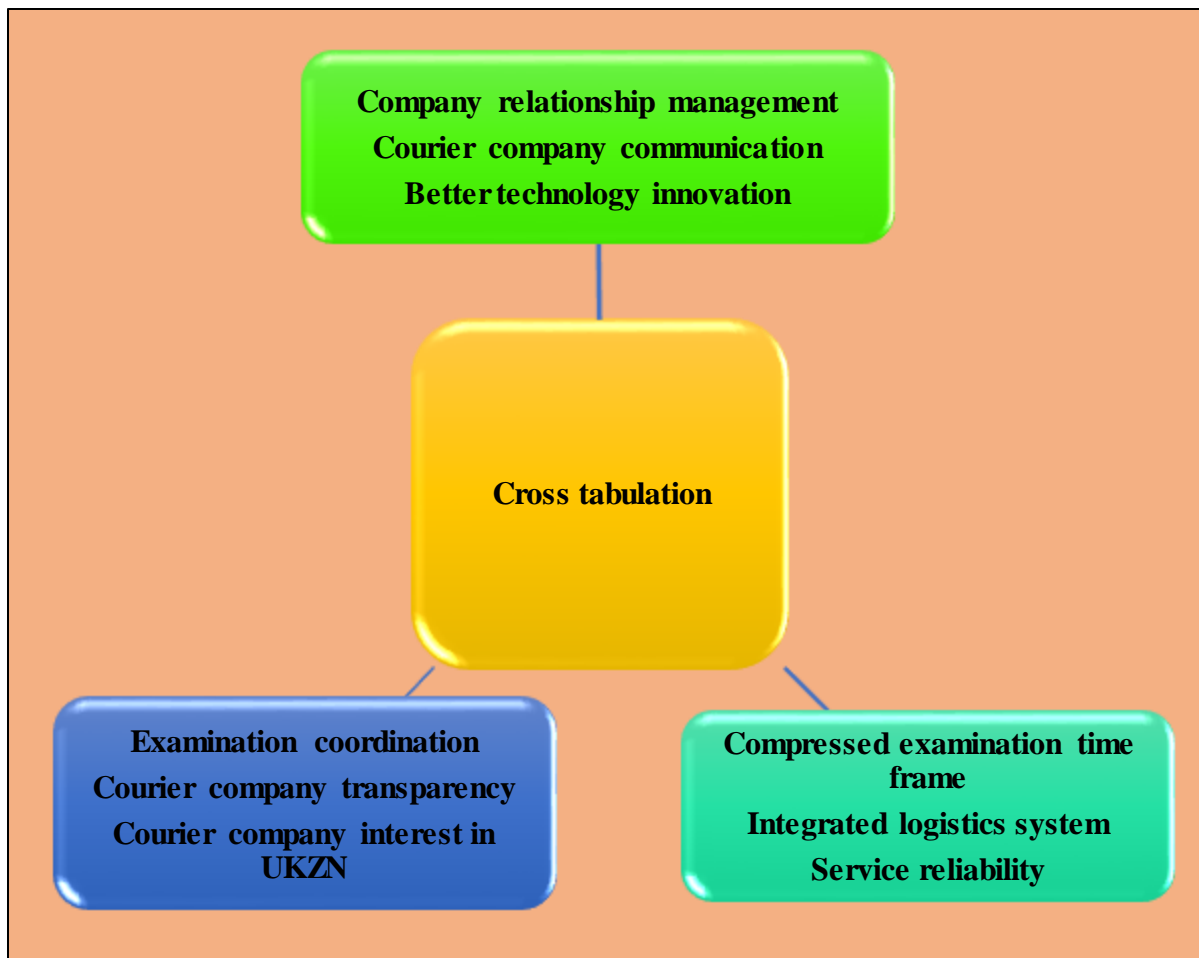
Binomial Test: A binomial test was conducted to test whether the responses from a dichotomous variable are equally selected.

Correlation: Correlation analysis was used to determine the power and direction of the linear association amongst two variables or more variables (Pallant, 2011:121).

3.10.1 Cross Tabulation and Chi-Square

Cross tabulation is the way in which data are arranged about the categorical variables in a matrix so that the relationship can be clearly viewed and becomes obvious (Vogt and Johnson, 2011:87). It allows for the use of tables that consist of rows and columns which correspond to some coded values for the variables so as to establish a relationship between any two variables.

Figure 3.3 Cross tabulation variables



Source: Researcher designed the diagram from the cross tabulated variables

According to Saunders, Lewis and Thornhill (2012:498) cross tabulation enables an examination of interdependence between the variables. The following questions were cross tabulated:

- A. Question 18: Service Reliability and Question 12: Examination Coordination
- B. Question 22: Empathy and Question 35: Better Technology Innovation
- C. Question 11: Courier Company Transparency and Question 33: Integrated Logistics System
- D. Question 8: Good Relationship Management and Question 33: Integrated Logistics System

The variables that were cross tabulated from the above diagram provided answers to statements such as:

- A. Courier company service reliability is relative to examination coordination
- B. Better technology innovation relates to courier company interest in UKZN
- C. Integrated logistics system relates to courier company transparency
- D. Maintaining a good relationship enhances the logistics system of UKZN with the courier company. The results of the above cross tabulated variables were then assessed against the Chi-Square test and the hypothesis being examined.

Inferential statistics.

Inference describes the conclusions and test of hypothesis concerning a population which relies on the collected evidence in a sample (Walliman, 2009:257). It is critical to establish whether the variable in a model differs from the population. When it does differ, one should ascertain if the difference is statistically significant or not. Chi-square test of independence statistics were used to test this. This was because the statistical technique used on the questionnaire is a non-parametric technique. Pallant (2011:286) states that a non-parametric test does not have stringent requirements and does not make assumptions about the distribution of an underlying population. The non-parametric technique is also useful when the data are measured on nominal (categorical) and ordinal (ranked) scales (Pallant 2011:286).

Chi- Square

To explore the relationship between two categorical variables, Chi-square is used for independence. It is also used to conduct hypotheses test on the variance (Pallant, 2011:286). In the test, one retains the null hypothesis and rejects the alternate hypothesis if $p > 0.05$, and accept the alternate hypothesis then reject the null hypothesis if $p < 0.05$. This study used the Pearson Chi-Square to test the existence of a relationship between the variables. The following hypotheses were examined and the Pearson Chi-Square value was assessed against the p-value threshold in order to decide whether to reject or adopt the null hypothesis.

- A. H01: There is no relationship between Courier company service reliability and examination coordination
- B. HA1: There is a relationship between Courier company service reliability and examination coordination
- C. H02: There is no relationship between better technology and Courier company staff interest (Empathy)
- D. HA2: There is a relationship between better technology and Courier company staff interest (Empathy)
- E. H03: There is no relationship between courier company transparency and integrated logistics system
- F. HA3: There is a relationship between courier company transparency and integrated logistics system
- G. H04: There is no relationship between Courier company relationship management and isolated logistics system
- H. HA4: There is a relationship between Courier company relationship management and isolated logistics system

3.11 Multivariate Data Analysis

Multivariate data analysis is mainly used in situations when information comes from more than one variable. It is also used when an independent variable and dependent variable are analysed. It determines or identifies the relationships that exist amongst a set of variables, with the purpose of predicting which variable has a contingency effect on another. Variables can either be dependent or independent.

According to Saunders *et al.*, (2012:669) a dependent variable is a “variable which changes in response to changes in another variable”, while an independent variable is described as “one which causes changes to a dependent variable”. In this study, logistic regression was used to analyse the data by testing and explaining the data since the data collected comprised non-parametric statistics.

3.11.1 Logistic Regression

This is a statistical tool that is used to predict a variable's score by illustrating the effect a dependent variable has on an independent one. In logistic regression, the dependent variable is categorical. In such cases, logistic regression allows for one to forecast/guess the results of two or more categories in a study (Pallant, 2011:287). This type of regression was applied to the dichotomous questions in the questionnaire using the force entry method and the analysis will assist in achieving objective five of the study. The analysis output yields the Omnibus Test of Model Coefficients showing the model overall performance (a high significant value which is less than 0.05) and is evaluated against the Hosmer and Lemeshow Test (most reliable test of fit- a value greater than 0.05). In providing an indication of the variation amount for the dependent variable of the model, the Cox and Snell R square and the Nagelkerke R Square values were used (from a lowest value of 0 to a highest value of 1) (Pallant, 2011:287). The sensitivity and specificity of the model are described as true positives and negatives respectively. This only describes the percentage of the group that possesses or does not possess the trait being tested (Pallant, 2011:177). The Wald test identifies the predictive variable with corresponding significant outcome at 95% confidence level and can control the model's predictive power. The direction of the relationship of which the chance of obtaining a yes or decreasing the chance, is clarified through the positive and negative B values. The goodness of any data is to be tested. Reliability and validity are a critical feature of any data analysis. Hence, this study conducted such analysis.

3.12 Reliability

The reliability of any measured data can be established through consistency and stability. It evaluates how well the measuring items come together as a set. Cronbach's alpha is a reliability measurement which demonstrates how fit the items in a set are positively correlated to each other. The nearer the Cronbach's alpha is to 1, the greater the internal consistency reliability and the more reliable the data (Sekaran and Bougie, 2011:324).

Reliability is usually realized when the Cronbach's Alpha significance is higher than 0.6 with the use of SPSS. The value of Cronbach's Alpha for this study is 0.901, indicating that the data in this study is reliable.

3.13 Validity

Validity is used to test how well an instrument is developed and how well it measures the concept that it is meant to measure. Construct validity is used to measure the extent to which a scale measures a concept. Validity need to be achieved in order to ensure correct measurement of a concept which an investigator claims to measure (Beins and McCarthy, 2012:68). Validity is determined by analysing the form of correlation of a measure with other measures and invariably, arguing from the form of correlation with which the measure is related to other variables in a theoretically anticipated way.

3.14 Conclusion

The research methodology is a vital aspect of the entire research process. While there are many definitions of a research design, none covers the full range of the critical aspects. This study aimed to measure professional service staff's perceptions of the challenges of outsourcing courier services at UKZN. Sample selection and size, measurement and techniques are included in the research methodology. Questionnaires were distributed to respondents from the target population. The data collected from the questionnaires were captured on Microsoft Excel and analysis was done using SPSS®. The following chapter presents the findings on UKZN's operations after adopting restructuring as a cost containment strategy that were produced using this research methodology and different data analysis methods.

CHAPTER FOUR

DATA ANALYSIS AND PRESENTATION

4.1 Introduction

This chapter presents and analyses the data collected for this study. Univariate, bivariate and multivariate data analysis techniques were used to gain insight into professional staff's perceptions of courier services at UKZN. All valid responses to the questionnaire were analysed using figures and tabulated using graphs. Data analysis involves facilitating a decision making process on the findings from the study, eliminating human interference through the use of statistical applications.

4.2 Univariate Analysis

4.2.1 Frequency Distribution

Frequency distribution graphs are presented on all questions in the questionnaire.

Figure 4.1 Gender

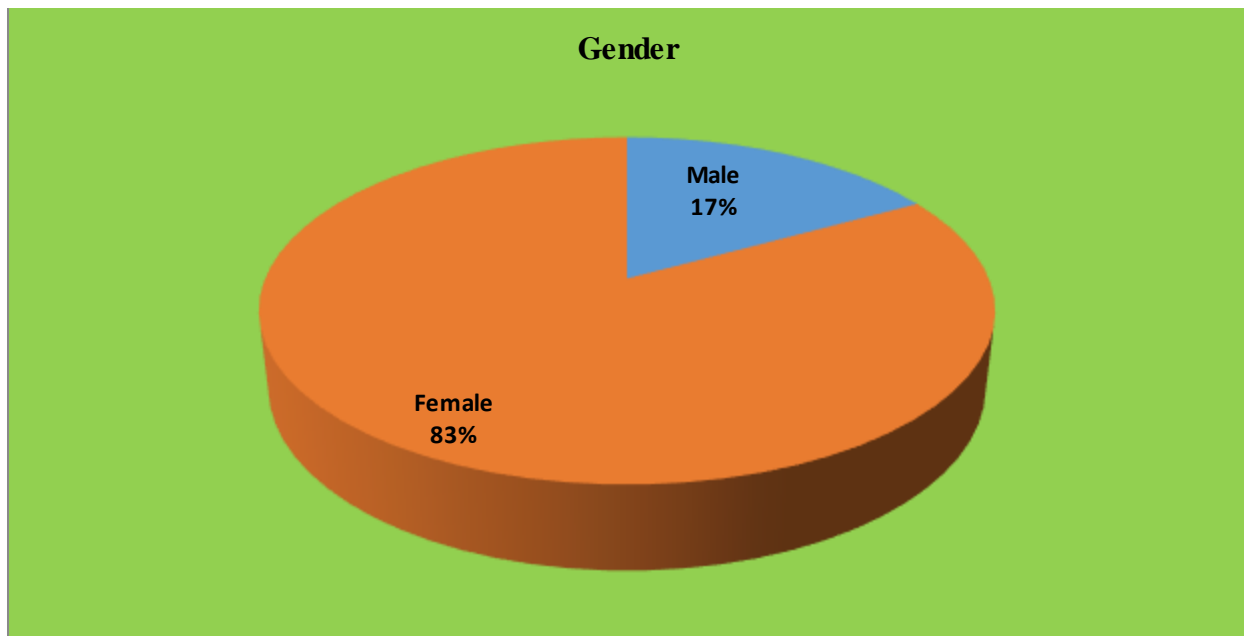


Figure 4.1, shows that the large majority of the respondents, (83%) were female, with males representing only 17%. This illustrates that most of the School administrators employed at UKZN are female.

Figure 4.2 Campuses at UKZN

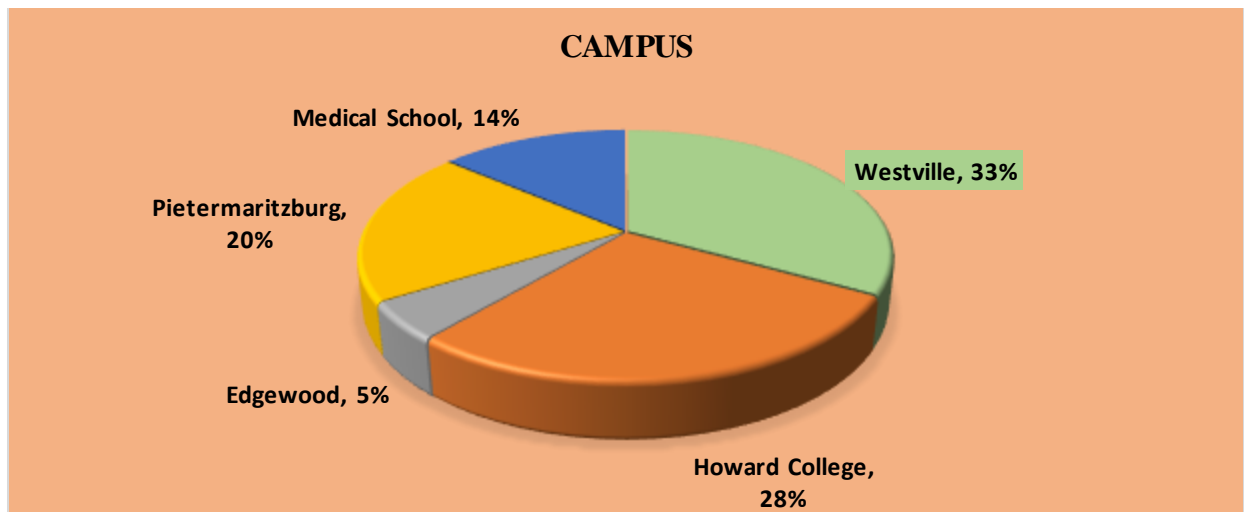
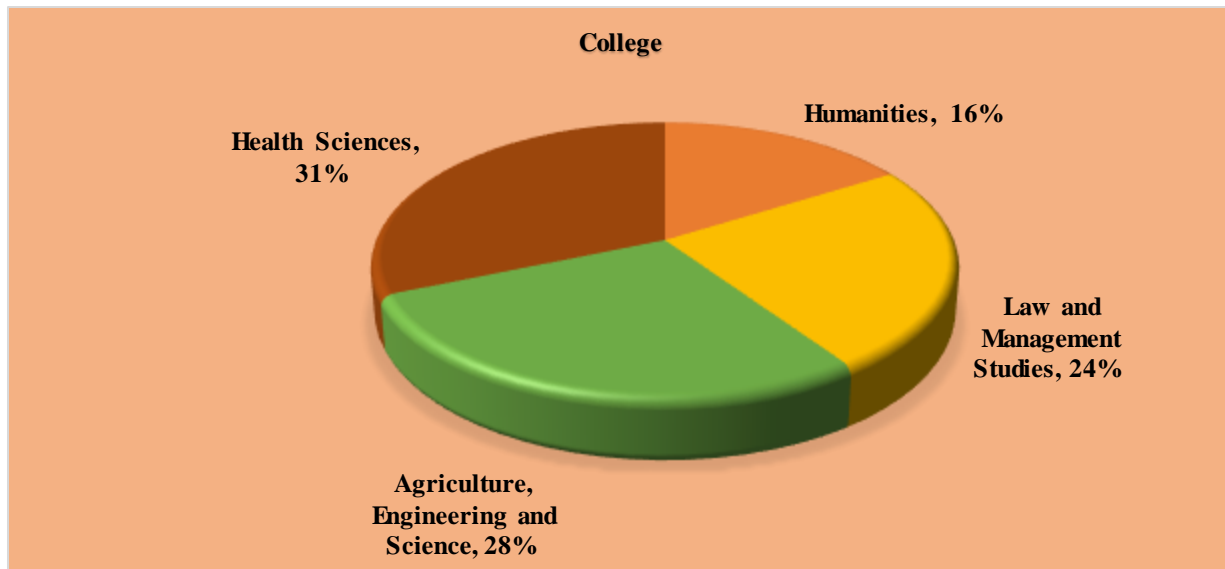


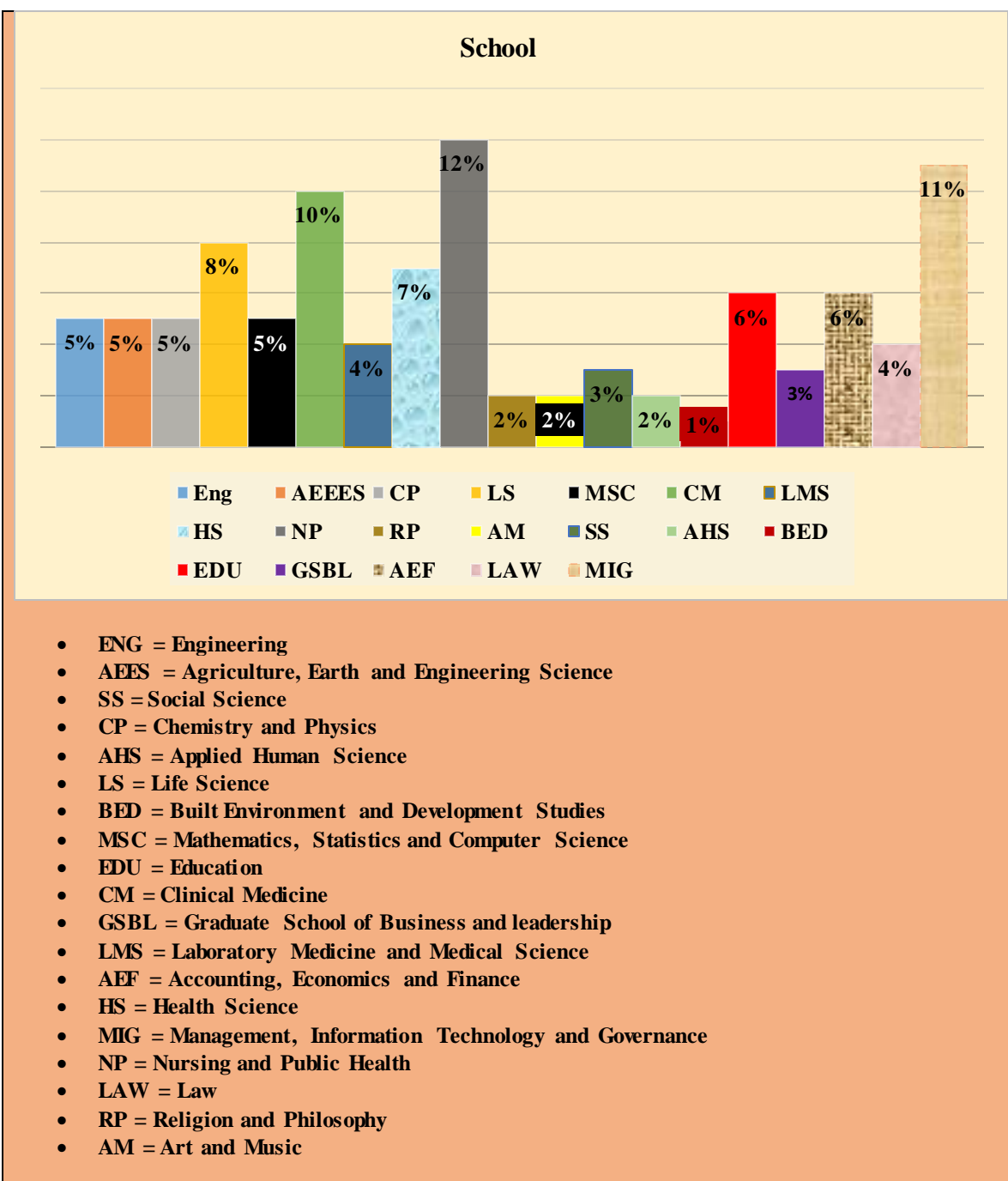
Figure 4.2 indicates that the largest proportion of respondents (33%) worked at Westville campus where most of the university's Schools are located. Furthermore, 28% of the respondents worked at Howard College, 20% works at Pietermaritzburg and 14% works at the medical school, while the lowest number of respondents (5%) worked on the Edgewood campus. The Edgewood campus has only one School and recorded the least amount of respondents in terms of size since it has just a school compared to the total sample in other campuses.

Figure 4.3 Colleges at UKZN



The results displayed in figure 4.3 shows that a significant percentage of the respondents worked in the College of Health Science (32%), while 28% were employed in the College of Agriculture, Engineering and Science, 24% in the College of Law and Management studies and 16% in the College of Humanities.

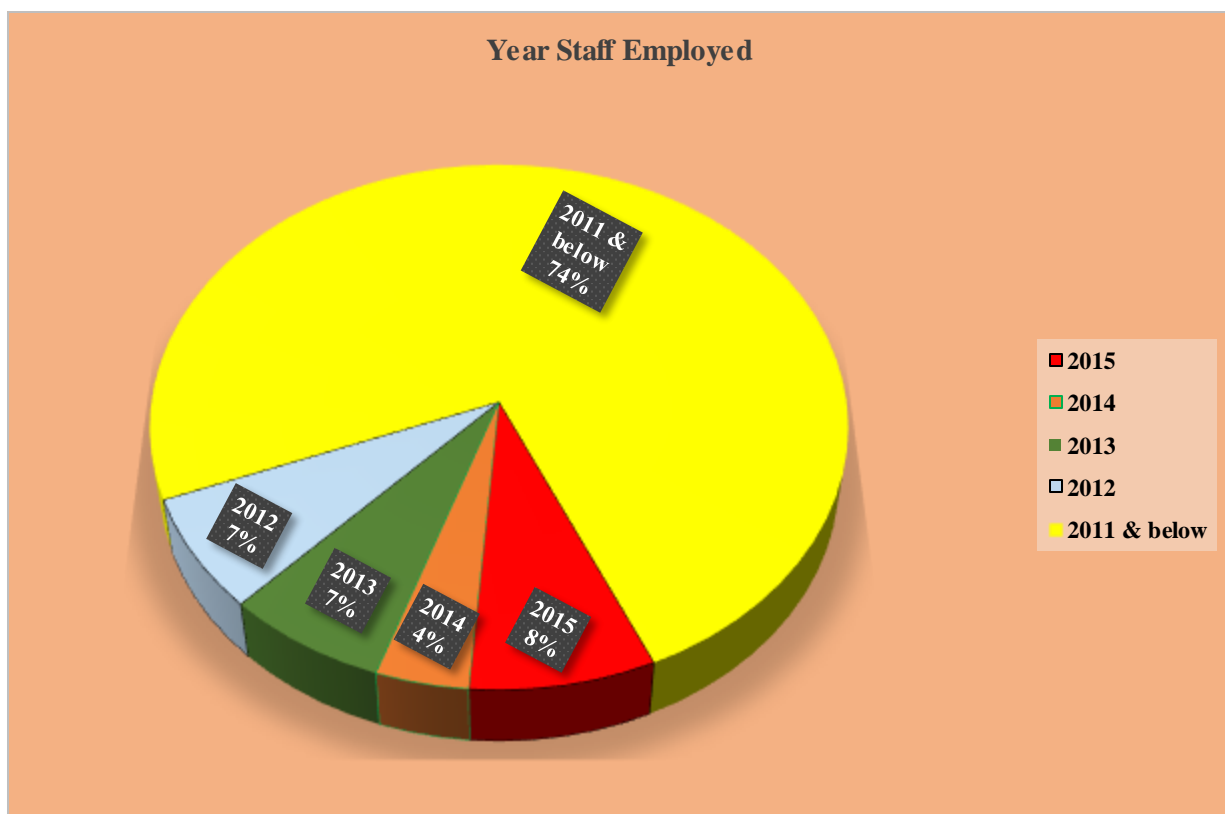
Figure 4.4 Employment by School



The largest number of respondents (12%) were employed in the School of Nursing and Public Health, followed by the Schools of Management, IT & Governance (11%), Clinical Medicine (10%), Life Science (8%), Health Science (7%), and the Schools of Education and school of Accounting, Economics and Finance (6%), with the Schools of Engineering, Agriculture, Earth

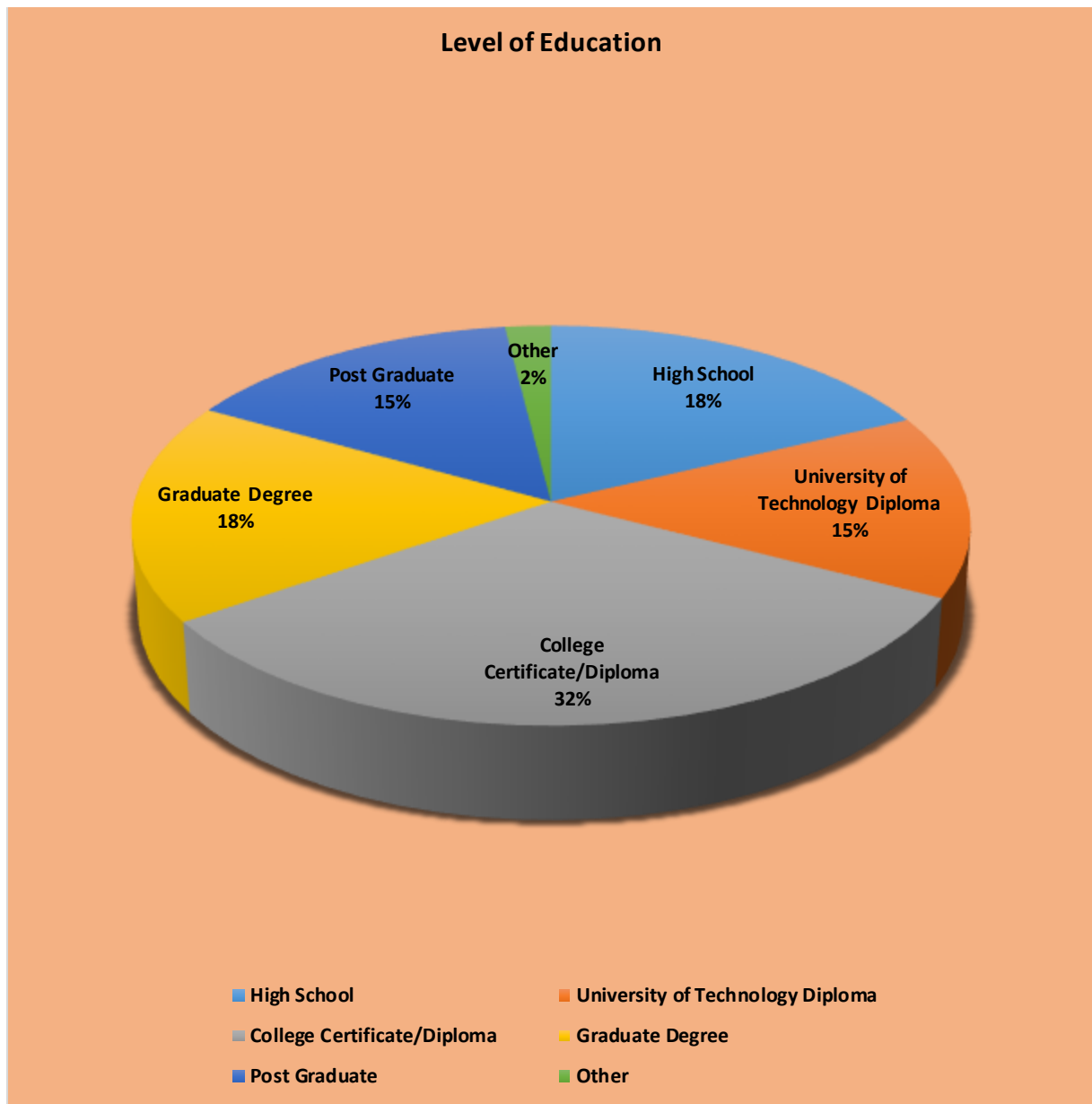
and Environmental Sciences, Chemistry and Physics and Mathematics, Statistics and Computer Science, all at 5%. Four per cent of the respondents were employed in the Schools of Law and Laboratory Medicine and Medical Science with the Schools of Social Science and General Business Studies and Leadership at 3%, the School of Applied Human Science and Arts and Music at 2%, and 2% of the respondents being employed in the School of Religion and Philosophy. The lowest number of respondents worked at the School of Built Environment and Developmental Studies (1%).

Figure 4.5 Employment Year



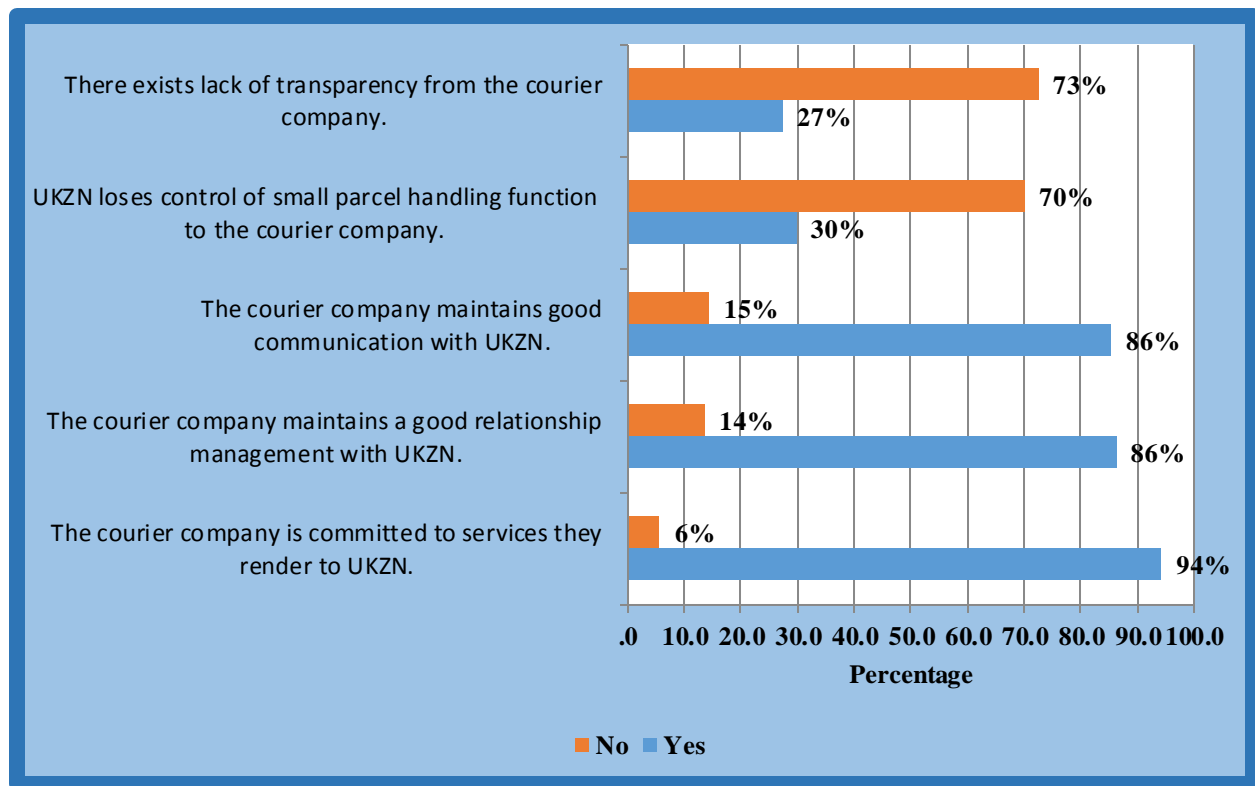
Most of the School administrators were employed prior to or in 2011 with a percentage of 74%, followed by 2015 (8%), 2013 and 2012 (7%, respectively) and the least number of respondents (4.0%) were employed in 2014. This could be due to the fact that during the restructuring process at UKZN, staff employed prior to or in 2011 were retained due to their knowledge of the structures of the university and the need for continuity.

Figure 4.6 Level of Education



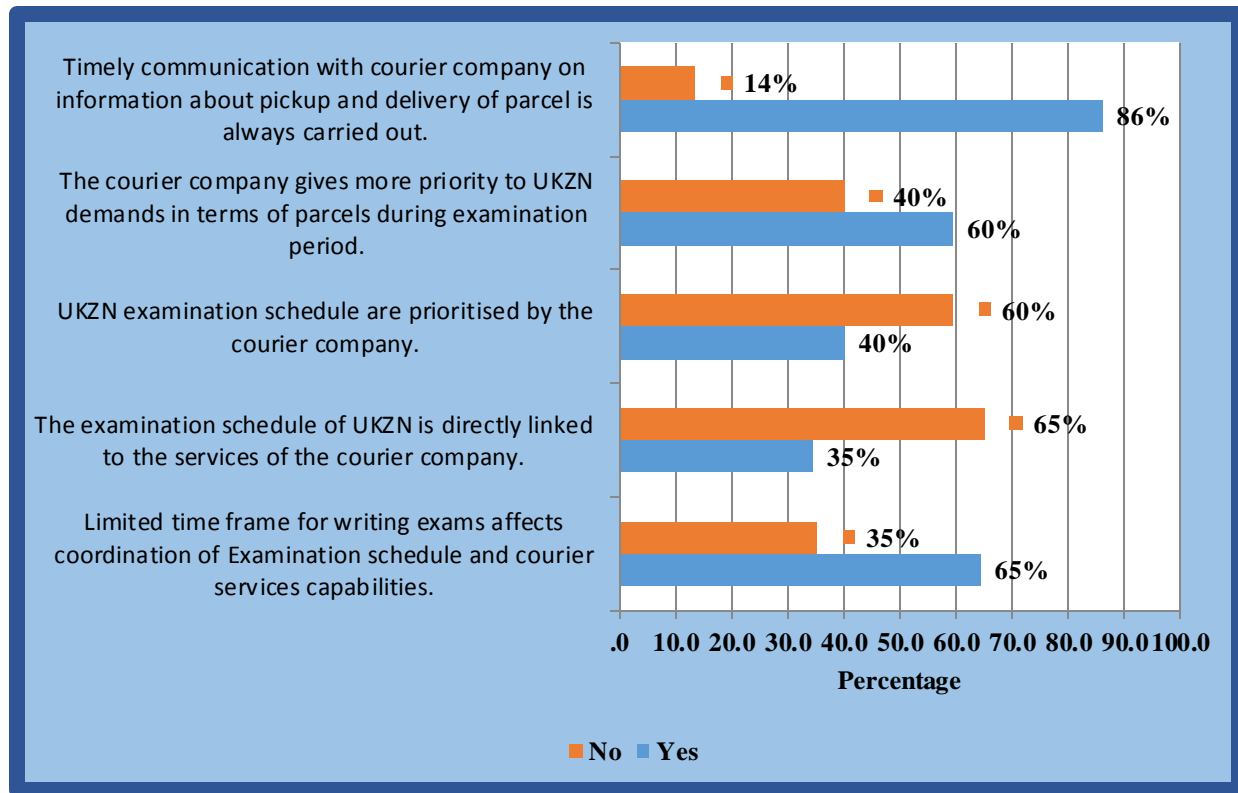
The highest level of education obtained by majority of the respondents is a college certificate/diploma (32%), followed by high school and a graduate degree (18%, respectively), University of Technology diploma (15%), postgraduate degree (15%) and other qualifications (2%).

Figure 4.7 Challenges of Outsourcing



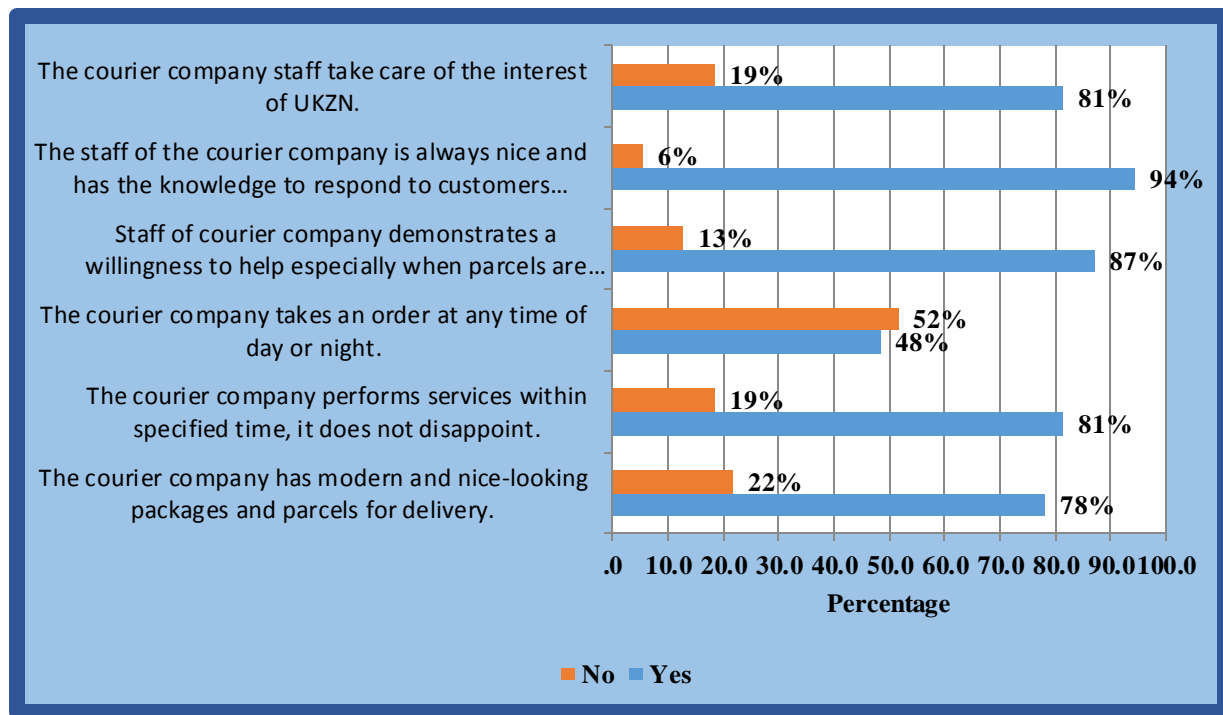
The above figure presents the results on the dichotomous questions. These questions focused on professional service staff's perceptions of the challenges of outsourcing at UKZN. The figure reveals that 94% of the respondents believed that the courier company is committed to the services they render to UKZN, whilst 6% did not agree with this statement. Asked if the courier company maintains good relationship management with UKZN, 86% of the respondents concurred with this statement while 14% disagreed. Furthermore, 86% of the respondents believed that the courier company maintains good communication with UKZN, with 15% disagreeing. Parcel handling is the main reason for UKZN outsourcing services due to the huge movement of examination scripts to and from external examiners. In terms of UKZN losing control of the parcel handling function, Seventy per cent of the respondents disagreed with the statement and only 30% agreed. Finally, 73% of the respondents did not believe that the courier company lacks transparency, with 27% agreeing with this statement.

Figure 4.8 Dynamics of Examination Process Scheduling



Asked whether the limited time frame for writing examinations affects the coordination of the examinations and the service capabilities of the courier company, 65% of the respondents supported this statement and 35% disagreed. It is possible that those that disagreed cater for fewer students during examinations. Moreover 65% of the respondents did not believe that the UKZN examination schedule is linked directly to the courier company's services and 35% believed that a link exists between the courier company's services and the university's examination schedule. Sixty percent of the respondents did not agree that UKZN's examination schedule are prioritised by the courier company, with 40% agreeing that company did prioritise the schedule. In terms of UKZN's demands being prioritised with regard to parcels during examinations, 60% of the respondents agreed with this statement while 40% disagreed. Finally, 86% of the professional service staff agreed that the courier company provides quick and timely communication on pickup and delivery, with 14% disagreeing with the statement.

Figure 4.9 UKZN's Service Quality

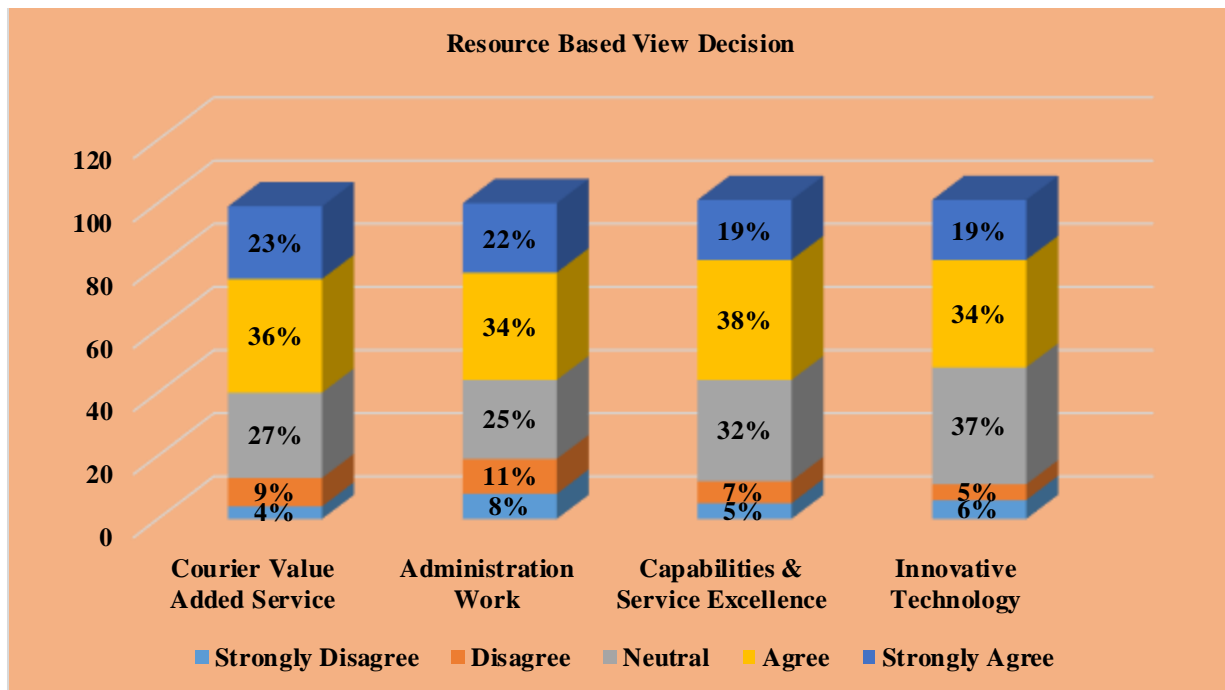


In responding to the question on the courier company's packaging for parcel delivery, figure 4.9 shows that 78% of the respondents believed that the company uses attractive and modern packaging for parcel delivery. However, 22% disagreed and stated that at times the inferior quality of the packaging can cause negative attitudes among package handlers and can result in parcel being lost in transit. In terms of time frames, 81% of the respondents agreed that the courier company performs services within the specified time, but 19% disagreed with this statement. Fifty two per cent of the respondents noted that the courier company does not take orders at any time of the day or night as stated in their terms and conditions. Some respondents noted that additional charges are levied when the courier company is required to urgently deliver a parcel.

However, 48% of the respondents agreed that the courier company accepts orders at any time of the day or night. While 87% of respondents felt that the courier company's staff is willing to help when a parcel is lost in transit, 13% disagreed with this statement. This could be due to a negative experience with the courier company. With regard to the courier company's staff's knowledge of its services and how to render them, 94% of the respondents agreed that this was the case and only 6% respondents felt that the staff did not have knowledge of the services offered to customers.

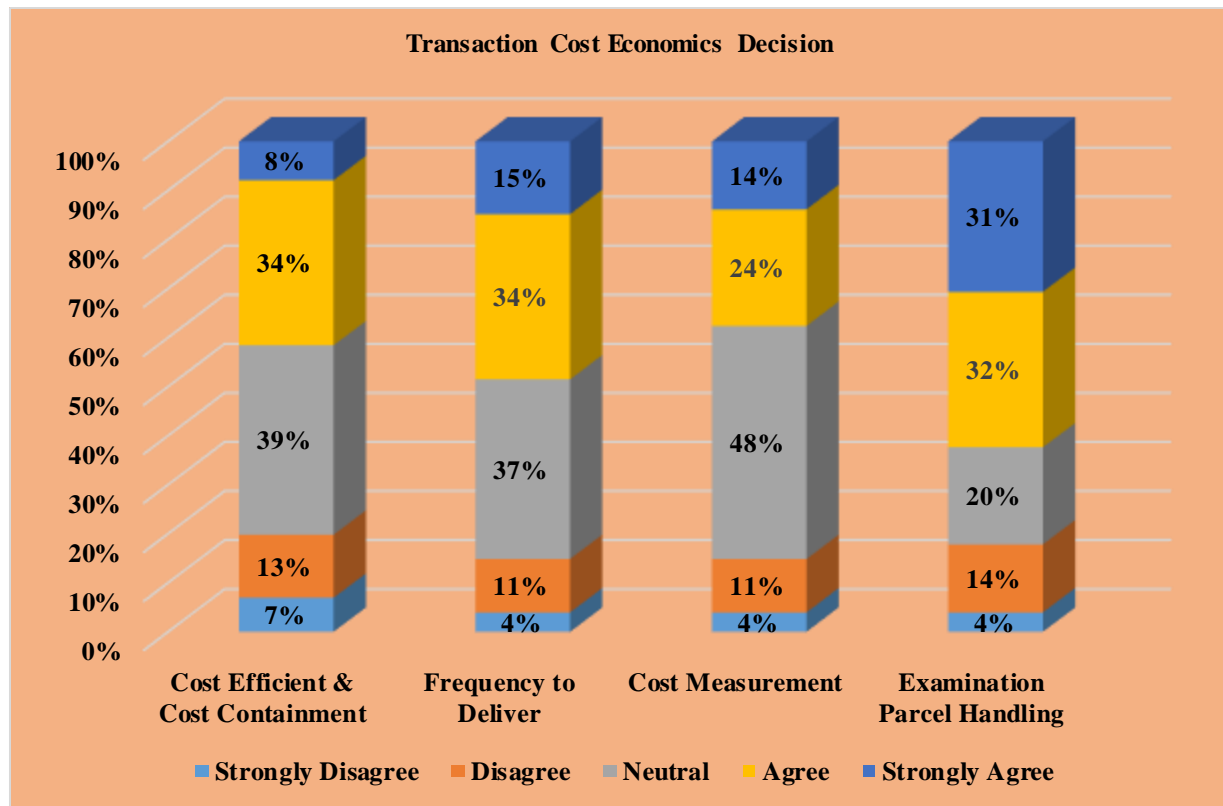
When respondents were asked if the courier staff cater for UKZN's interests, 81% supported the statement. This may be due to positive experiences when dealing with the courier company. However, 19% of the respondents felt that the courier company does not empathise with UKZN.

Figure 4.10 Resource Based View Decision



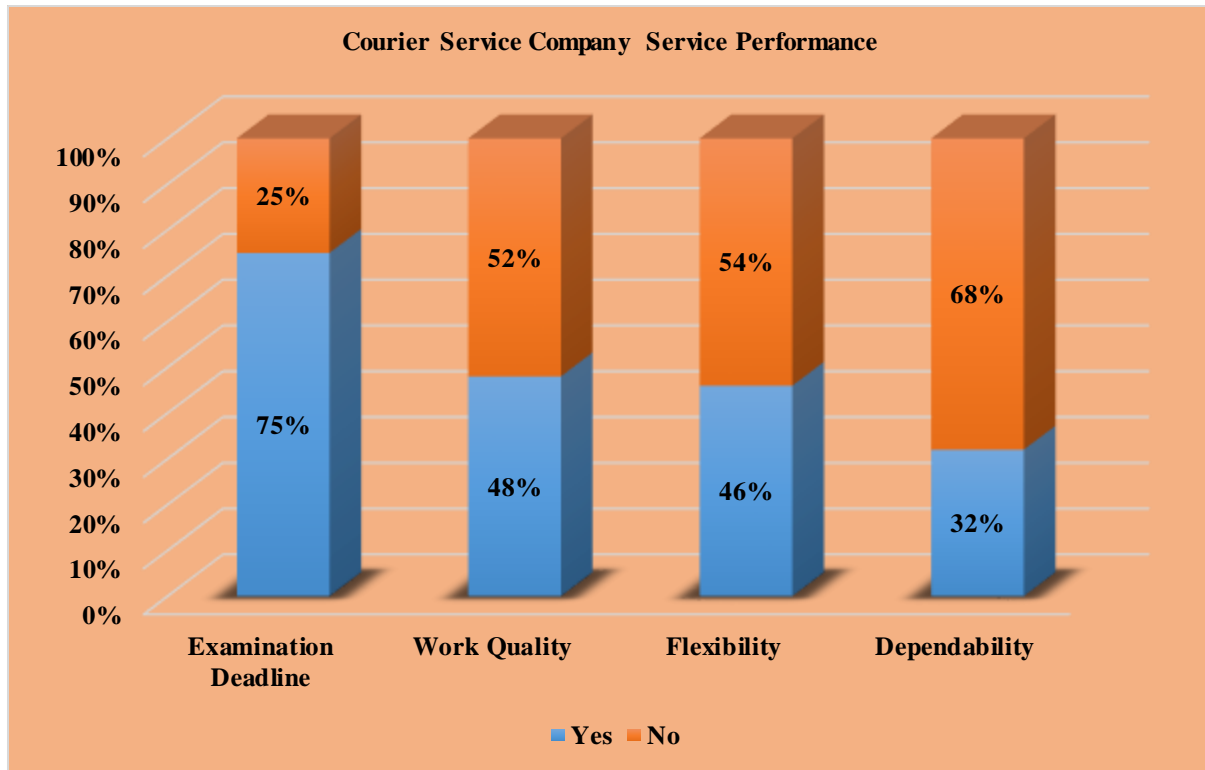
Asked whether UKZN had gained competitive advantage in the form of added value by outsourcing services, 36% of the respondents agreed, 27% were neutral, 23% strongly agreed, 9% disagreed and 4% strongly disagreed. In terms of whether outsourcing allowed them to focus on the administrative work of the School, 34% of the respondents agreed with this statement while 25% were neutral, 22% strongly agreed, 11% disagreed and 8% strongly disagreed. The next question asked whether the use of the courier company's services enabled UKZN to access capabilities and service excellence, 38% of the respondents agreed with this statement, 32% were neutral, 19% strongly agreed, 7% disagreed and 5% strongly disagreed. Finally, 37% of the respondents remained neutral when it came to whether or not innovative technology enhances operations and the use of resources, with 34% agreeing with this statement, 19% strongly agreeing, 6% strongly disagreeing and 5% disagreeing.

Figure 4.11 Transaction Cost Economics



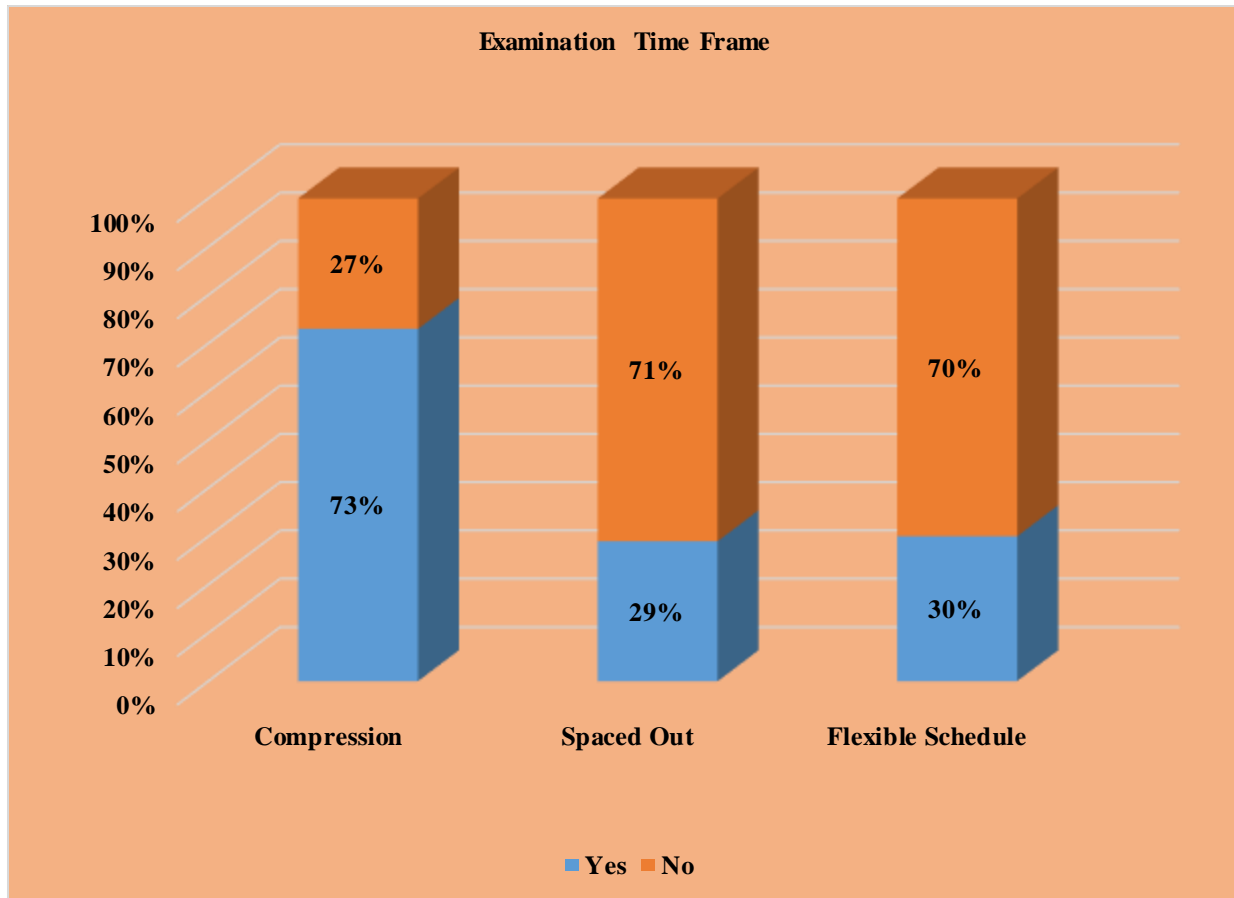
For the section on transaction cost economics, respondents were asked whether outsourcing allows UKZN to manage its costs, 39% of the respondents remained neutral and 34% agreed, 13% disagreed, 8% strongly agreed and 7% strongly disagreed with this statement. In response to the question on whether the frequency of courier delivery is economically viable, 37% of the respondents remained neutral, 34% agreed, 15% strongly agreed, 11% disagreed and only 4% strongly disagreed. Asked whether UKZN has cost control measures in place to monitor the courier company's activities, 48% of the respondents remained neutral, 24% agreed, and 14% strongly agreed whilst 11% disagreed and only 4% strongly disagreed with this statement. Finally, 32% of the respondents agreed that the courier company handled parcels efficiently during the examination period, while 31% strongly agreed, 20% were neutral, 14% disagreed and 4% strongly disagreed.

Figure 4.12 Service Performance of the Courier Service Company



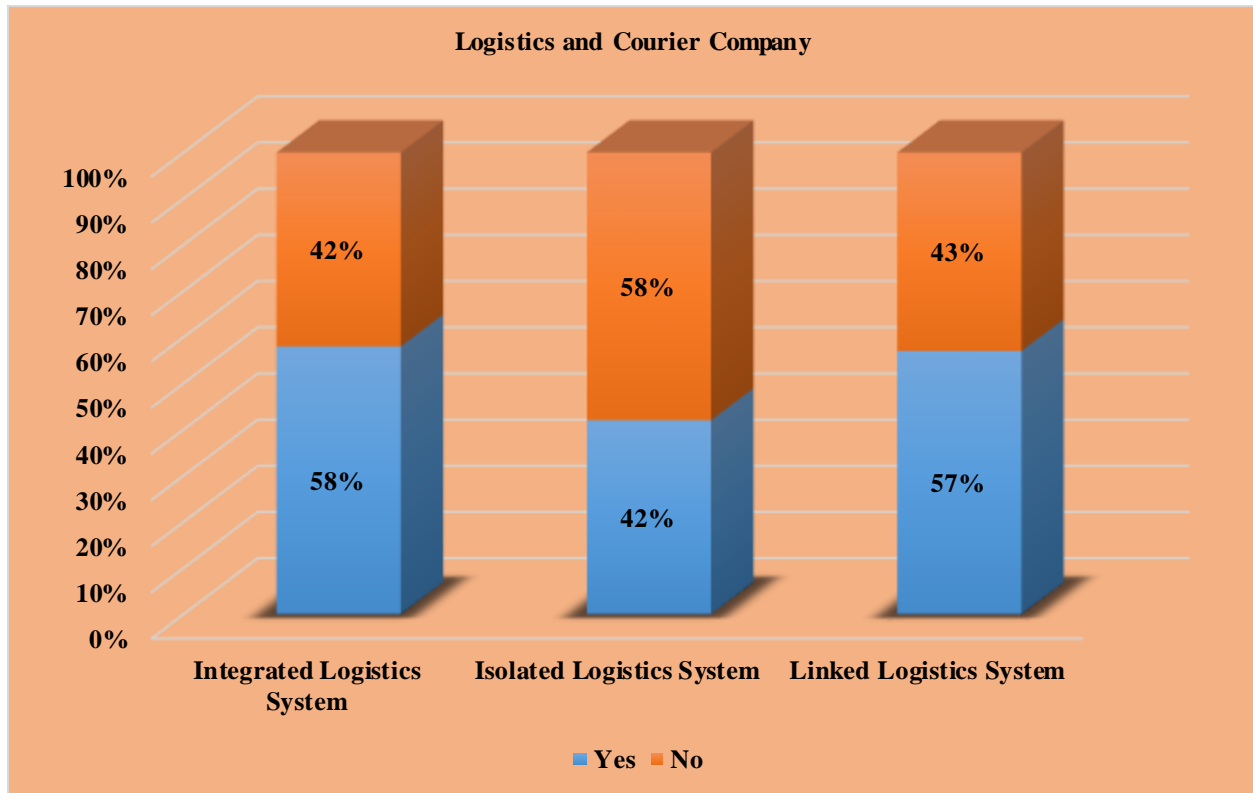
For the statements in question 31, the respondents were asked to select the variables that require immediate attention from their perspective. Seventy five per cent believed that the courier company should meet deadlines during examinations, while 25% did not select this option. Forty eight per cent of the respondents selected the variable work quality, with 52% not selecting this option. For the variable flexibility, 46% agreed and 54% disagreed. Finally, 32% selected the variable dependability and 68% did not.

Figure 4.13 Examination Time Frame



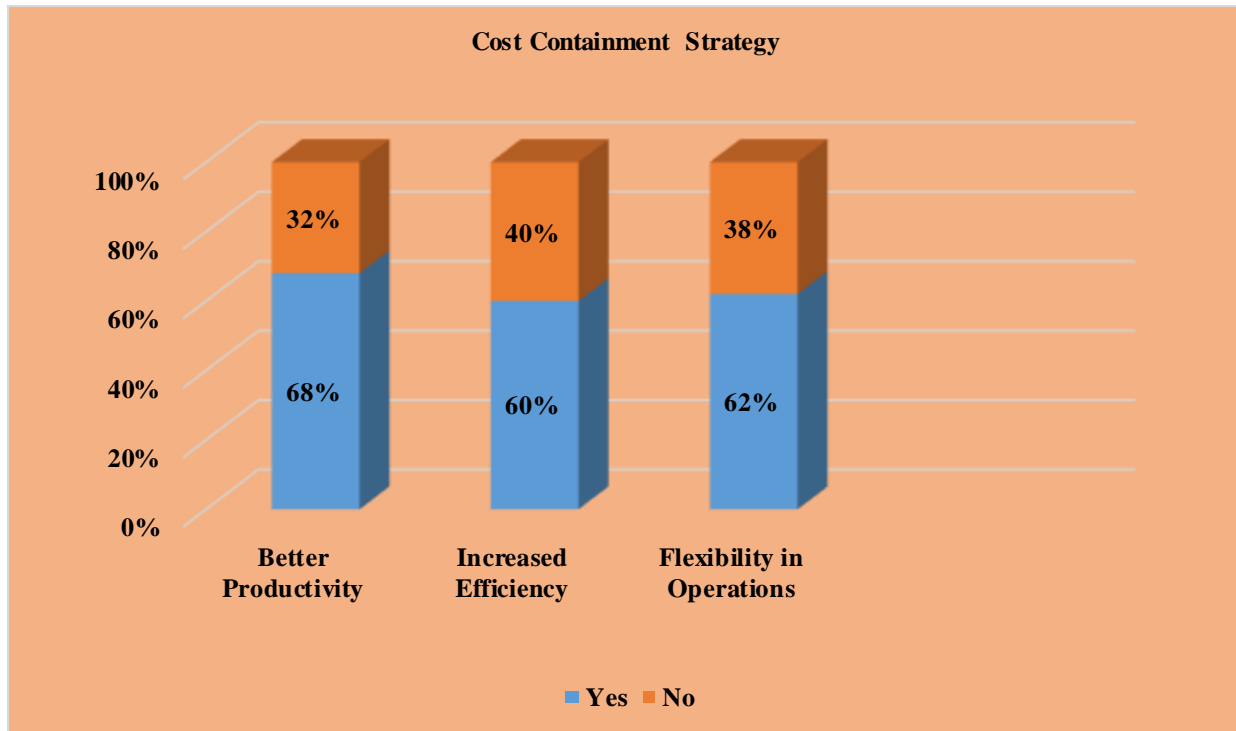
In terms of the statements in question 32, seventy three per cent of the respondents believed that the examination schedule is compressed and 27% disagreed. Furthermore, 29% of the respondents believed that the examination schedule is spaced out, but a high rate of 71% of the respondents disagreed. The response to the variable flexible schedule shows that a minimal percentage of 30% felt that the examination schedule is flexible, with 70% not supporting this statement.

Figure 4.14 Logistics and Courier Company



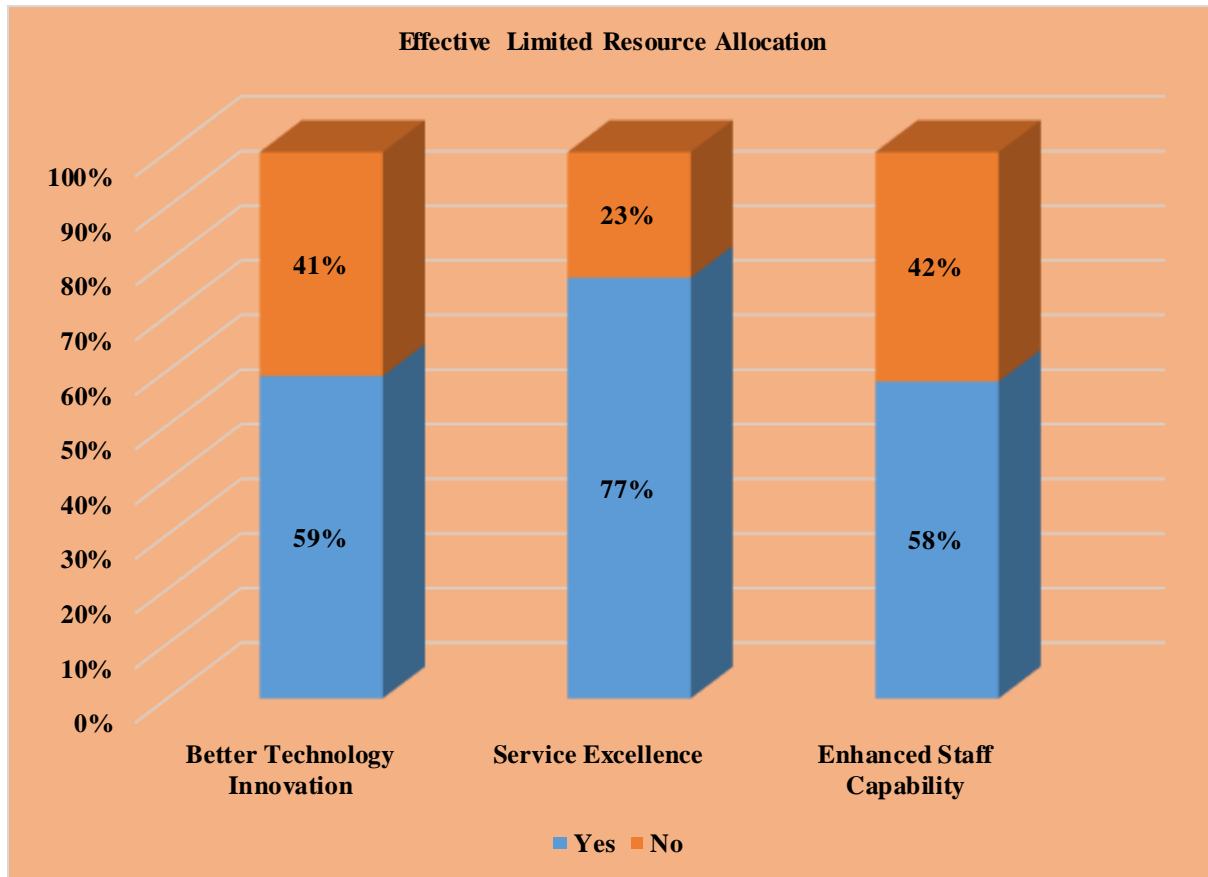
The result displayed in figure 4.14 indicate that 58% of respondents concurred that the logistics system was integrated, while 42% did not. For the variable isolated logistics system, 42% of the respondents agreed and 58% disagreed. Finally, 57% of the respondents concurred that the logistics system of UKZN was linked, with 43% disagreeing.

Figure 4.15 Cost Containment Strategy



In terms of the cost containment strategy, 68% of the respondents believed that this strategy will assist UKZN to achieve better productivity whilst 32% responded negatively. For the variable increased efficiency, 60% of the total of 124 respondents agreed and 40% disagreed. Moreover, 62% of the respondents supported the variable flexibility in operations while 38% disagreed.

Figure 4.16 Effective Limited Resource Allocation



For the above statement in the questionnaire, 59% of the respondents agreed with the variable better technology innovation through effective limited resource allocation by UKZN, with 41% disagreeing. For the service excellence variable, 77% of the respondents agreed and 23% disagreed. Concerning the variable enhanced staff capabilities, 58% of the respondents concurred whilst 42% did not.

Binomial Test

A binomial test was conducted to determine if the responses by the professional service staff members were selected equally. Only the questions that have a statistical significance are reported, with a significance level of $p = 0.05$ at 95% confidence interval.

Table 4.1 Binomial Test of the Dynamics of Examination Process Scheduling

		Category	N	Observed Prop.	Test Prop.	Asymp. Sig. (2-tailed)
Limited time frame for writing exams affects coordination of Examination schedule and courier services capabilities.	Group 1	No	44	.35	.50	.002 ^a
	Group 2	Yes	80	.65		
	Total		124	1.00		
The examination schedule of UKZN is directly linked to the services of the courier company.	Group 1	Yes	43	.35	.50	.001 ^a
	Group 2	No	81	.65		
	Total		124	1.00		
UKZN examination schedule is prioritised by the courier company.	Group 1	Yes	50	.40	.50	.038 ^a
	Group 2	No	74	.60		
	Total		124	1.00		
The courier company gives more priority to UKZN demands in terms of parcels during the examination period.	Group 1	Yes	74	.60	.50	.038 ^a
	Group 2	No	50	.40		
	Total		124	1.00		
Timely communication with courier company on information about pickup and delivery of parcel is always carried out.	Group 1	Yes	107	.86	.50	.000 ^a
	Group 2	No	17	.14		
	Total		124	1.00		

There is a statistically significant ‘YES’ response to the statement that “Limited time frame for writing exams affects coordination of Examination schedule and courier services capabilities” ($p < 0.05$); this infers that the time frame for writing examinations in UKZN does affect operations. A statistically significant ‘NO’ response was received to the statement that “The examination schedule of UKZN is directly linked to the services of the courier company” ($p < 0.05$). This suggests that UKZN should adopt an integrated system with the courier company to enhance its performance. A statistically significant ‘NO’ response was received to the statement that the “UKZN examination schedule is prioritised by the courier company” ($p < 0.05$). This indicates that the courier company also has other commitments.

There was a statistically significant ‘YES’ response to the statement that “The courier company gives more priority to UKZN demands in terms of parcels during the examination period” ($p < 0.05$); this infers that the company performs its services well during examinations at UKZN. Finally, there is a statistically significant ‘YES’ response to the statement that “Timely communication with courier company on information about pickup and delivery of parcel is always carried out” ($p < 0.05$); this suggests that the respondents are happy with the services of the courier company.

Table 4.2 Binomial Test of the Courier Company Meeting UKZN’s Service Quality

		Category	N	Observed Prop.	Test Prop.	Asymp. Sig. (2-tailed)
The courier company has modern and nice-looking packages and parcels for delivery.	Group 1	Yes	97	.78	.50	.000 ^a
	Group 2	No	27	.22		
	Total		124	1.00		
The courier company performs services within specified time, it does not disappoint.	Group 1	Yes	101	.81	.50	.000 ^a
	Group 2	No	23	.19		
	Total		124	1.00		
The courier company takes an order at any time of the day or night.	Group 1	Yes	60	.48	.50	.788 ^a
	Group 2	No	64	.52		
	Total		124	1.00		
Staff of courier company demonstrates a willingness to help especially when parcels are lost in transit.	Group 1	Yes	108	.87	.50	.000 ^a
	Group 2	No	16	.13		
	Total		124	1.00		
The staff of the courier company is always nice and has the knowledge to respond to customers’ questions.	Group 1	Yes	117	.94	.50	.000 ^a
	Group 2	No	7	.06		
	Total		124	1.00		
The courier company staff take care of the interests of UKZN.	Group 1	Yes	101	.81	.50	.000 ^a
	Group 2	No	23	.19		
	Total		124	1.00		

There is a statistical significant ‘YES’ response to the statement that “the courier company has modern and nice-looking packages and parcels for delivery” ($p < 0.05$); this infers that the respondents are happy with the packages used by the courier company for delivery. The statistically significant ‘YES’ response that “the courier company performs services within specified time, it does not disappoint” ($p < 0.05$) shows that the services of the courier company are carried out efficiently.

A statistically significant ‘YES’ response was received to the statement that “Staff of courier company demonstrates a willingness to help especially when parcels are lost in transit” ($p < 0.05$). This indicates that there is good relationship developed with the courier company due to past experience they have encountered. There is a statistically significant ‘YES’ response to the statement that “the staff of the courier company is always nice and has the knowledge to respond to customers questions” ($p < 0.05$); There is also statistically significant ‘YES’ response to the statement that “the courier company staff take care of the interest of UKZN” ($p < 0.05$); this infers that the respondents are happy with the company’s services.

Table 4.3 Binomial Test of the Dimensions of Service Quality

			Category	N	Observed Prop.	Test Prop.	Asymp. Sig. (2-tailed)
Courier company should always achieve deadlines during the examination period.	Group 1	Yes	93	0.75	0.50	0.000 ^a	
	Group 2	No	31	.25			
	Total		124	1.00			
Maximum dependability on the courier company to always achieve efficiency.	Group 1	No	85	0.69	0.50	0.000 ^a	
	Group 2	Yes	39	0.31			
	Total		124	1.00			

There is a statistically significant ‘YES’ response to the statement that “The courier company should always achieve deadline during examination period” ($p < 0.05$); this infers that this objective must be prioritised by the courier company when dealing with UKZN. A statistically significant proportion of the respondents disagreed with the statement that there is “Maximum dependability on the courier company to achieve efficiency always” ($p < 0.05$). This suggests that UKZN should not depend totally on the courier company to be efficient but should use its internal mailing centre to support its operations.

Table 4.3.1 Binomial Test of the Dimensions of Service Quality

	Category	N	Observed Prop.	Test Prop.	Asymp. Sig. (2-tailed)	
The examination schedule is too compressed.	Group 1	Yes	91	0.73	0.50	0.000 ^a
	Group 2	No	33	0.27		
	Total		124	1.00		
The examination schedule is well spaced out	Group 1	No	88	0.71	0.50	0.000 ^a
	Group 2	Yes	36	0.29		
	Total		124	1.00		
	Total		124	1.00		

There is a statistically significant ‘YES’ response to the statement that “the examination schedule is too compressed” ($p < 0.05$); this result infers that most of the respondents feels that the schedule is too compressed and may be the reason why the defined jobs assigned are not completed on time. This has a ripple effect on the courier company’s services to UKZN. A statistically significant proportion disagree to the statement that “the examination schedule is well spaced out” ($p < 0.05$). When the examination schedule is not spaced out, professional service staff becomes stressed and cannot accomplish their designated duties or rather perform haphazardly, compromising service performance.

Table 4.3.2 Binomial Test of the Dimensions of Service Quality

		Category	N	Observed Prop.	Test Prop.	Asymp. Sig. (2-tailed)
Better productivity	Group 1	No	39	0.31	0.50	0.000 ^a
	Group 2	Yes	85	0.69		
	Total		124	1.00		
Increased efficiency	Group 1	Yes	75	0.60	0.50	0.024 ^a
	Group 2	No	49	0.40		
	Total		124	1.00		
Flexibility in operations	Group 1	Yes	77	0.62	0.50	0.009 ^a
	Group 2	No	47	0.38		
	Total		124	1.00		
		Category	N	Observed Prop.	Test Prop.	Asymp. Sig. (2-tailed)
Service excellence	Group 1	Yes	96	0.77	0.50	0.000 ^a
	Group 2	No	28	0.23		
	Total		124	1.00		

There is a statistically significant ‘YES’ response to the statement that “through cost containment strategy, UKZN would achieve better productivity” ($p < 0.05$), increased efficiency ($p < 0.05$), and flexibility in operations ($p < 0.05$). This result infers that through a cost containment strategy, UKZN will achieve increased efficiency and flexibility in operations, but improved productivity might not be as important. There is a statistically significant ‘YES’ response to the statement that “through effective use of limited resource allocation, UKZN will achieve service excellence” ($p < 0.05$).

4.3 Descriptive Statistics

According to Cohen, Manion and Morison (2011:622) descriptive statistics allow researchers to interpret the data produced by statistical analysis. Descriptive statistics includes features such as frequencies, measures of dispersion, standard deviation, central tendency measures and cross tabulations. The descriptive statistics look at each variable at a time in terms of whether the average respondents are weighed in terms of agreeing or disagreeing with the statements from the interval data. In this study, descriptive statistics were used to determine the number of respondents that shared varied feelings on questions asked. The variables included in this analysis were used to determine the views of the professional service staff on the theories of outsourcing employed in this study. These theories are important since it is on this basis that UKZN took the decision to outsource some non-core functions. The following selected descriptors (range, mean, maximum, minimum, standard deviation) are relevant in terms of examining the central point and deviations therefrom.

A 95% confidence interval is presumed to be the basis of all statistical analysis and hence, was employed in this study. In this instance, the reflection of the sample mean involves a normally shaped sampling distribution of the mean. When values lie within 1.96 standard deviations of the mean, the data is distributed normally. Accordingly, the sample mean has a 95% probability of being within 1.96 standard deviation errors from the true population mean. Table 4.4 shows that courier value added services, capabilities and excellence, innovative technology and finally administrative work were the four highest ranked means within the scale. This shows that these variables are the most essential and can create value in the efficient operations of Schools' logistical services at UKZN. These identified variables include some values that lie within 1.96 standard deviations of the mean. Therefore, the sample mean reflects the true population mean. The figure in the mode cells further confirms the centre point in the sample, thereby indicating "agree" as the most frequently occurring value amongst these four variables.

Table 4.4 Descriptive Statistics from Resource Based View

Statistics				
	Courier value added service	Administrative work	Capabilities and service excellence	Innovative technology
Mean	3.66	3.50	3.58	3.55
Median	4.00	4.00	4.00	4.00
Mode	4	4	4	3
Std. Deviation	1.058	1.186	1.029	1.031
Skewness	-.580	-.550	-.585	-.539
Std. Error of Skewness	.217	.217	.217	.217
Kurtosis	-.116	-.474	.137	.234
Std. Error of Kurtosis	.431	.431	.431	.431
Range	4	4	4	4

Pertaining to the four variables (Courier value added service, Administrative work, Capabilities and service excellence and Innovative technology), the information received from the respondents show that the range is 4. In all occurrences, the standard deviation is less than the mean, indicating little variation in the data. The central figure (median) is 4 and the mode is 4 in this normal distribution, nonetheless, the variation still lies within 1.96 standard deviations from the mean. The above statistics show that more than 50% of the respondents in the sample confirmed the value added benefits of resource based view decision. From the descriptive analysis table, it can be seen that the mean values ranges from 3.50 to 3.66 and as known, mean values are determined by average. Firstly, the variable Courier value added services has the highest mean value of 3.66 which indicates its strength in contributing to the value created for UKZN in the form of competitive advantage. Due to outsourcing courier services to service providers, UKZN has been able to perform much better than before. The university is performing its varied but critical functions, hence providing good service to its clients (the students). The next mean value of 3.58 relates to the capabilities and service excellence attained by UKZN since outsourcing courier services. This supports the resource based view that when value is created firms achieve excellence and efficient capabilities due to effective use of their resources (Kamyabi and Devi, 2011:92). Adopting the latest innovative technology (with a mean value of 3.55) is essential and will assist UKZN to achieve competitiveness in the higher education sector.

While the variable administrative work has a mean value of 3.50, hence, making it the least of the four generated statistics analysis. This shows that outsourcing courier services does not necessarily enable professional service staff to concentrate on their specific jobs. Rather, most professional staff still collate and packages courier parcels in addition to their allotted daily tasks. From table 4.4, the median value is 4, showing that the closest variable with a value of 3.66 is the variable courier value added services. This variable has been selected by the respondents to be the most significant variable that adds the most value in resource based view decision. The description of how repeatedly the different values occur is known as the distribution. Distribution is also a suitable means of summarising cross-sectional data which can be denoted by a frequency histogram. The relative symmetry and skewness can also be described by the variable distribution but kurtosis describes information on the distribution ‘peakedness’ (Pallant, 2011:52). In all four (4) cases, the skewness is a negative value ranging from -0.59 to -0.54, indicating a negatively skewed distribution with scores clustering towards the right upper end of the scale. The kurtosis value ranges from -0.12 to 0.23 thereby indicating that the distribution is clustered in the centre.

Table 4.5 Descriptive Statistics from Transaction Cost Economics

Statistics				
	Cost efficient and cost containment	Frequency to deliver	Cost measurement	Examination parcels handling
Mean	3.24	3.44	3.33	3.71
Median	3.00	3.00	3.00	4.00
Mode	3	3	3	4
Std. Deviation	.999	.998	.977	1.160
Skewness	-.405	-.340	-.071	-.586
Std. Error of Skewness	.217	.217	.217	.217
Kurtosis	-.076	-.101	-.012	-.592
Std. Error of Kurtosis	.431	.431	.431	.431
Range	4	4	4	4

Frequency of delivery, cost measurement and cost efficient and cost containment lie between 3.24 and 3.71. The variable Examination parcel handling has the highest mean value of 3.71, indicating that it is foremost variable that creates value for the university, enhancing cost containment. Examination parcel handling is the most significant factor in table 4.5.

The respondents (administrators that deal with modules) agreed that the courier company is very efficient in handling scripts during examination periods, leading to the highest mean being recorded for this variable. The foremost average relates to the better handling of parcels by the courier company. This supports the university's decision to outsource some of its non-core functions such as courier services and also acknowledges that this decision was a crucial cost reduction strategy hence it should be adopted. The Frequency to deliver variable has a mean of 3.44, indicating that although the courier company easily picks and delivers UKZN's parcels, this does not mean that such activity is economically viable for UKZN. Unforeseen circumstance such as traffic congestion can prevent the courier company from offering good service to the university in terms of on time parcel delivery, hence increasing the cost of delivery.

The variable, cost measurement has a mean value of 3.33 which is the second to lowest value generated in the analysis. This shows that respondents did not have knowledge of the cost measurement of courier services at UKZN as cost issues are handled by each Schools operation manager. Finally, the cost efficiency and cost containment variable has the lowest mean value of 3.24. This suggests that the respondents did not know whether outsourcing courier services promotes cost containment at the university. This also means that this variable is the least important in impeding the delivery of important parcels such as examination scripts which need to be delivered to a specific location. Values in this range are considered moderately skewed. In these four (4) cases, the skewness is also a negative value ranging from -0.59 to -0.07, designating a negatively skewed distribution with scores clustering towards the right upper end of the scale. The kurtosis value ranges from -0.60 to -0.01 thereby indicating that the distribution is clustered in the centre.

4.4 Bivariate Analysis

4.4.1 Cross Tabulation

According to the Qualtrics.com (2013:1) cross tabulation analysis is mainly used when analysing categorical (nominal) data. The tabulation table can be a two or more dimensional table that accounts for the frequency with which respondents are related by the traits of the response which are shown in the table cells. Mujis (2011:122) states that cross tabulation tables can be used when there are two ordinal variables, a nominal and categorical variable, or when there are two nominal variables. It allows for the comparison of a definite response in the sample analysed with what is expected if no relationship exists among the variables. According to Mujis (2011:98) cross tabulation looks at the relationships that exist between nominal and ordinal variables. It includes a table that shows the number of cases that falls into each combination of the category of two or more variables.

This study employed a cross tabulation table to determine whether a relationship exists between the selected nominal and categorical variable of interest. Four hypotheses were identified and were further verified and because the study instrument was mainly based on nominal and ordinal variables, categorical data was used. Cross tabulation offers deeper understanding of whether any of the variables influence the other and was used to further analyse the data using a 95% significance level.

Table 4.6 Service Reliability and Examination Coordination

Does Service reliability relate to Examination coordination?			Examination Coordination		Total
			Yes	No	
Service Reliability	Yes	Count	60	41	101
		% within Service reliability	59.4%	40.6%	100%
		% within Examination coordination	75.0%	93.2%	81.5%
		% of Total	48.4%	33.1%	81.5%
	No	Count	20	3	23
		% within Service reliability	87.0%	13.0%	100.0%
		% within Examination coordination	25.0%	6.8%	18.5%
		% of Total	16.1%	2.4%	18.5%
			80	44	124
	Total		Count	64.5%	35.5%
% within Service reliability			100.0%	100.0%	100.0%
% within Examination coordination			64.5%	35.5%	100.0%
Chi-Square Tests					
			Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square			6.211 ^a	1	.013
Likelihood Ratio			7.065	1	.008
Linear-by-Linear Association			6.161	1	.013
N of Valid Cases			124		
0 cells (.0%) have expected count less than 5. The minimum expected count is 8.16. ^a					

H₀₁: There is no relationship between service reliability and examination coordination.

H_{A1}: There is a relationship between service reliability and examination coordination.

Table 4.5 indicates the relationship or lack thereof between service reliability and the coordination of the examination schedule. The results show that 81.5% of the respondents responded positively, while 18.5% disagreed. There is a 13% probability that service reliability is influenced by the coordination of the examination schedule. There is a statistically significant relationship between service reliability and coordination of the examination schedule with a 0.013 *p* - value for the Chi-square test for independence. In this analysis, 0.05 is greater than 0.013 probability value (*p*-value = 0.013). This means that the null hypothesis can be rejected at the 5% level of significance indicating an interaction between service reliability and coordination of the examination schedule. It suggests that the courier company's services are reliable when the examination schedule is well-coordinated.

Table 4.7 Empathy and Better Technology Innovation

Does Empathy relate to better technology innovation?			Better Technology Innovation		Total	
			Yes	No		
Empathy	Yes	Count	55	46	101	
		% within Empathy	54.5%	45.5%	100.0%	
		% within Better technology innovation	75.3%	90.2%	81.5%	
		% of Total	44.4%	37.1%	81.5%	
	No	Count	18	5	23	
		% within Empathy	78.3%	21.7%	100.0%	
		% within Better technology innovation	24.7%	9.8%	18.5%	
		% of Total	14.5%	4.0%	18.5%	
		Count	73	51	124	
			% within Empathy	58.9%	41.1%	100.0%
			% within Better technology innovation	100.0%	100.0%	100.0%
		% of Total	58.9%	41.1%	100%	
Chi-Square Tests						
		Value	Df	Asymp. Sig. (2-sided)		
Pearson Chi-Square		4.385 ^a	1	.036		
Likelihood Ratio		4.679	1	.031		
Linear-by-Linear Association		4.349	1	.037		
N of Valid Cases		124				
a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 9.46.						

H02: There is no relationship between empathy and better technology innovation.

HA2: There is a relationship between empathy and better technology innovation.

The results in table 4.6 show that 81.5% of the respondents agreed that the empathy, a dimension of service quality, is linked to better technology innovation. However, the most significant percentage rate that contributes to this total involves 44.4% of the respondents whose opinions are positive. A total of 18.5% respondents disagreed that a relationship exists between empathy and better technology innovation. There is a 36.0% probability that better technology innovation is linked to the courier service's interest (empathy) in UKZN, just by chance. This infers that there is a relationship between empathy and technology innovation with a significant statistical result of $p\text{-value} = 0.036$. In this analysis, 0.05 is greater than 0.036 probability value ($p\text{-value} = 0.036$).

Table 4.8 Courier Company Transparency and Integrated Logistics System

Does Courier company transparency relate to integrated logistics system?			Integrated System	Logistics	Total
			Yes	No	
Courier Company Transparency	Yes	Count	12	22	34
		% within Company transparency	35.3%	64.7%	100.0%
		% within Integrated logistics system	16.7%	42.3%	27.4%
		% of Total	9.7%	17.7%	27.4%
	No	Count	60	30	90
		% within Company transparency	66.7%	33.3%	100.0%
		% within Integrated logistics system	83.3%	57.7%	72.6%
		% of Total	48.4%	24.2%	72.6%
		Count	72	52	124
	Total		% within Company transparency	58.1%	41.9%
% within Integrated logistics system			100.0%	100.0%	100.0%
% of Total			58.1%	41.9%	100.0%
Chi-Square Tests					
			Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square			9.975 ^a	1	.002
Likelihood Ratio			9.939	1	.002
Linear-by-Linear Association			9.894	1	.002
N of Valid Cases			124		
a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 14.26.					

H03: There is no relationship between courier company transparency and an integrated logistics system.

HA3: There is a relationship between courier company transparency and an integrated logistics system.

Table 4.7 illustrates that 27.4% of the respondents answered this question in the affirmative while 72.6% disagreed, believing that an integrated logistics system does not relate to courier company transparency. There is a 2.0% probability that an integrated logistics system influence the courier company's transparency to UKZN, just by chance. This infers that there is an association between courier company transparency and an integrated logistics system. The generated Chi-square test for independence shows a significant statistic of $p = 0.02$. Thus, 0.05 is greater than 0.02 probability value (p -value = 0.02).

Table 4.9 Company Relationship Management and Isolated Logistics System

Does Company relationship management relate to isolated logistics system?			Isolated System	Logistics	Total
			Yes	No	
Company Relationship Management	Yes	Count	41	66	107
		% within Company relationship management	38.3%	61.7%	100.0%
		% within Isolated logistics system	78.8%	91.7%	86.3%
		% of Total	33.1%	53.2%	86.3%
	No	Count	11	6	17
		% within Company relationship management	64.7%	35.3%	100.0%
		% within Isolated logistics system	21.2%	8.3%	13.7%
		% of Total	8.9%	4.8%	13.7%
		Count	52	72	124
	Total	% within Company relationship management	41.9%	58.1%	100.0%
% within Isolated logistics system		100.0%	100.0%	100.0%	
% of Total		41.9%	58.1%	100.0%	
Chi-Square Tests					
			Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square			4.195 ^a	1	.041
Likelihood Ratio			4.148	1	.042
Linear-by-Linear Association			4.161	1	.041
N of Valid Cases			124		
a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 7.13.					

H04: There is no relationship between company relationship management and an isolated logistics system.

HA4: There is a relationship between company relationship management and an isolated logistics system.

Table 4.9 above reveals that 86.3% of the respondents supported the statement that there is a relationship between UKZN's isolated logistics system and courier company relationship management. However, 13.7% stated otherwise. There is a 41% chance that a relationship exists between an isolated logistics system and courier company relationship management. The Chi-square test reveals a significant p -value of 0.041. Hence, a relationship exists between UKZN's

isolated logistics system and courier company relationship management. Thus, 0.05 is greater than 0.041 probability value (p -value = 0.041).

Table 4.10 Pearson Chi Square Values – Hypotheses Results

Hypothesis	Pearson Chi-Square	Decision
H01: There is no relationship between service reliability and examination coordination	P = 0.01 < 0.05	Reject
HA1: There is a relationship between service reliability and examination coordination		Accept
H02: There is no relationship between empathy and better technology innovation	P = 0.036 < 0.05	Reject
HA2: There is a relationship between empathy and better technology innovation		Accept
H03: There is no relationship between company transparency and an integrated logistics system	P = 0.02 < 0.05	Reject
HA3: There is a relationship between company transparency and an integrated logistics system		Accept
H04: There is no relationship between courier company relationship management and an isolated logistics system	P = 0.04 < 0.05	Reject
HA4: There is a relationship between courier company relationship management and an isolated logistics system		Accept

4.4.2 Pearson Product-Moment Correlation Coefficient

The Pearson Chi Square values confirmed the outcomes of the cross tabulated variables and reinforced the decision to accept or reject the null hypothesis. Nonetheless, multivariate analysis technique was conducted to define the existence of multivariate relations. The Pearson Product-Moment Correlation Coefficient measures the extent and direction of linear associations. Represented by an r symbol, the value of the coefficient lies between +1 and -1 (Pallant, 2011:285). The extent of the relationship is indicated by a magnitude. The negative or positive sign only designates the direction in which the relationship lies (Pallant, 2011:286). This was applied to section four of the instrument which evaluated service dimension quality.

Table 4.11 Pearson Product-Moment Correlation

Pearson r	Strength and Direction
+1	Perfect positive
+0.7	Strong positive
+0.4	Moderate positive
0.0	No relationship
-0.4	Moderate negative
-0.7	Strong negative
-1	Perfect negative

Source: Cooper and Schindler. (2008) *Business Research Methods*. 10th Edition. New York: McGraw Hill.

Table 4.12 Correlations between Variables

	Increased Efficiency
Dependability	.192 [*]
Sig. (2-tailed)	.032
Isolated logistics system	-.149
Sig. (2-tailed)	.099

There is a moderate, positive correlation between dependability and increased efficiency. The dependability and increased efficiency variables give values of ($r = 0.192$, $n = 124$, $0.03 < 0.05$). Furthermore, there is a moderate, negative correlation between an isolated logistics system and

increased efficiency with values of ($r = -0.149$, $n = 124$, $0.99 > 0.05$). There is an insignificant statistical relationship between an isolated logistics system and increased efficiency.

Table 4.13 Correlations between Variables

	Service excellence	Increased efficiency
Compressed examination schedule	-.151	-.225
Sig. (2-tailed)	.095	.012
Flexible schedule	.184*	.203
Sig. (2-tailed)	.041	.024

There is a moderate, negative correlation between compressed examination schedule and service excellence. The compressed examination schedule and service excellence variables give values of ($r = -0.151$, $n = 124$, $0.095 > 0.05$), with an insignificant statistical relationship. Furthermore, there is a moderate, negative correlation amongst compressed examination schedule and increased efficiency. The variables of compressed examination schedule and increased efficiency give values of ($r = -0.225$, $n = 124$, $0.12 < 0.05$) with a significant statistical relationship. There is a moderate, positive correlation between flexible schedule and service excellence. The variables of flexible schedule and service excellence gives values of ($r = 0.184$, $n = 124$, $0.041 < 0.05$), with a significant statistical relationship. Furthermore, there is a moderate, positive correlation between flexible schedule and increased efficiency. The variables of flexible schedule and increased efficiency give values of ($r = 0.203$, $n = 124$, $0.24 < 0.05$), with a significant statistical relationship.

Table 4.14 Pearson Correlation

		CVAS	AW	CSE	IT	CEC C	FTD	CM	EPH
Pearson Correlation	CVAS	1.000	.674	.697	.462	.463	.443	.361	.595
	AW	.674	1.000	.673	.532	.364	.409	.312	.532
	CSE	.697	.673	1.000	.663	.550	.531	.454	.592
	IT	.462	.532	.663	1.000	.478	.560	.569	.501
	CECC	.463	.364	.550	.478	1.000	.715	.634	.503
	FTD	.443	.409	.531	.560	.715	1.000	.740	.456
	CM	.361	.312	.454	.569	.634	.740	1.00 0	.530
	EPH	.595	.532	.592	.501	.503	.456	.530	1.000
CVAS = Courier value added service CSE = Capabilities and Service excellence CECC = Cost efficient and cost containment CM = Cost measurement AW = Administrative work IT = Information technology FTD = Frequency to deliver EPH = Examination parcel handling									

Values between 0.4 and 0.6 show a moderate relationship whilst correlation values that are greater than 0.7 are considered a strong positive relationship. Most of the variables in the correlation table 4.14 have a moderate positive relationship whilst a few have a strong relationship. Table 4.14 provides a statistical summary illustrating the strong positive relationship among the variables considered in this study. From the variables analysis, a model predictor was generated that influences the dependent variable (courier valued added services).

4.4.3 Factor Analysis

Graham (2010:40) describes factor analysis as “a statistical method for classifying sets or collections of variables”. It is a way of creating the composition of the concealed variables in a data set. Factor analysis is mainly used to better understand the factors in questionnaire responses and to reduce the volume of data while retaining the essential traits. Each factor is made up of grouped variables in the data set with each variable allocated to a factor loading constant that describes the significance of that variable to the structure of the factor.

Table 4.15 KMO and Barlett’s Test, Communalities, Total Variance Explained, Rotated Component Matrix

KMO and Bartlett's Test						
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.					.868	
Bartlett's Test of Sphericity	Approx. Chi-Square				593.715	
	Df				28	
	Sig.				.000	
Rotated Component Matrix						
	Factor Loading	Eigen value	% of Variance	Cumulative %	Communalities Extraction	Alpha
Factor One: Courier Value Added Service and Effectiveness						
Administrative Work	.873	1.122	14.023	73.470	.780	.893
Courier Value Added Service	.845	4.756	59.448	59.448	.760	.888
Courier Service Excellence	.800				.785	.880
Examination Parcel Handling	.646				.600	.889

Factor Two: Cost Management and Efficiency						
Cost Measurement	.884				.817	.891
Frequency To Deliver	.860				.813	.887
Cost Efficient and Cost containment	.797				.724	.889
“Extraction Method: Principal Component Analysis., Rotation Method: Varimax with Kaiser Normalisation, Reliability Statistics: Overall Cronbach’s Alpha = 0.902, and Number of items = 8”.						

The use of factor analysis allows one to condense the items number to a manageable factor. The Bartlett’s test of Sphericity and the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy were used as statistical measures to access the data factorability. The Kaiser-Meyer-Olkin (KMO) score of $0.87 > 0.6$ indicates sampling adequacy. KMO usually has a very high degree of variance which is desirable in a study. The Bartlett’s test of Sphericity is used to determine the homogeneity of variance assumption. It should produce a significant value that is 0.05 or smaller (Pallant, 2011: 286). The result from the KMO is 0.868, and the Bartlett’s test is significant ($p = 0.000$), therefore factor analysis is suitable at 28 degree of freedom. Communalities’ values range from 0 to 1 and generally speaking, any value that is less than 0.3 indicate that the item does not fit with the other items in its component. From the above table, all figures obtained in the communality extraction cell are greater than 0.3, illustrating the fit with other items.

The interest in this study was in all the components which have an eigenvalue of 1 or more. In table 4.15 above, only the first two components have eigenvalues above 1 (4.756, 1.122). These two components describe a total of 73.47% of the variance. A scree plot allows one to identify the number of components extracted through the use of Kaiser Criterion. The Scree test suggests that all factors that are high above the ‘break’ on the plot add to most of the explained variance in the data set (Pallant, 2011:183). To assist in the interpretation, the factors are rotated since all critical factors of the variance are known. The varimax technique was used to achieve this so as to report the factor loadings for each specified variable. Hence retained items must have a correction value greater than 0.05.

Interpretation and Factor labelling

Once the number of factors was determined through the factor analysis in table 4.14, an interpretation of the data followed. The factors were 'rotated' by presenting the pattern of loadings so that it was easier to interpret (Pallant, 2011:185). Using the Varimax rotation, component 1 explains 37.93% of the variance and component 2 explains 35.54%. The total variance explained (73.47%) does not alter after rotation, only just the way it is dispersed between the two components. The nature of the underlying latent variable represented by each component can be identified by the highest loading on each of the components. In this analysis, the main loadings are items 1 and 2, which are all positive affect items (administrative work and courier value added service). The main items on component 2 are cost measurement and frequency to delivery.

The explanation thus includes:

Factor One: Courier Value Added Service and Effectiveness

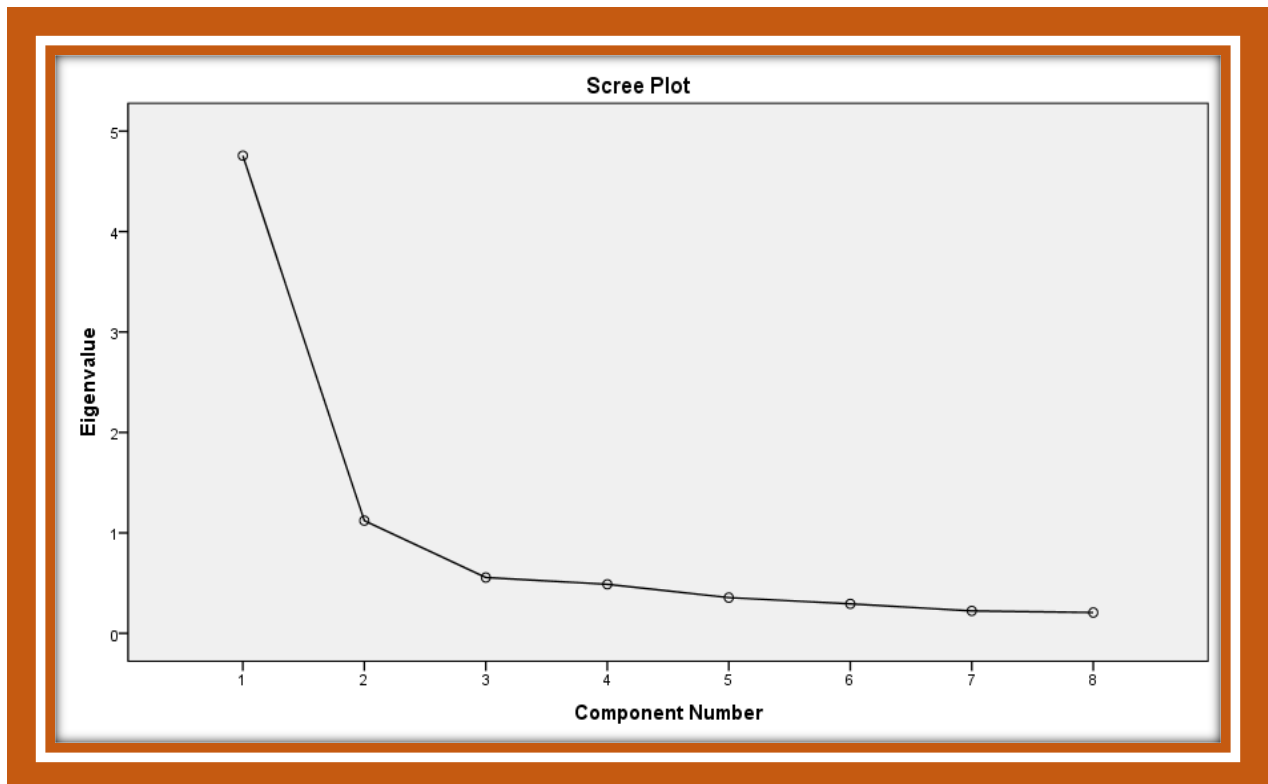
This factor retains the highest loadings from the two factors extracted (courier value added service) and also has the highest variance of 59.45%. The second highest factor (administrative work) has a variance of just 14.03%. Both factors fall in the same category of items with a combination of courier value added service, administrative work, capabilities and service excellence and examination parcel handling. They are independent but when combined, outline impressive benefits such as efficient and flexible operations, improved work quality, better productivity which can lead to an increase in the bottom line of any organisation and most importantly, effective use of limited resources.

Outsourcing offers competitive advantage to any organisation and will allow more administrative duties to be accomplished with limited resources. This factor makes reference to the value added by the courier company and the level of administrative work it provides to the university. It further touch on the capabilities of the courier company and the level of excellence in terms of service provision and how best they can handle parcels during the examination period. In summary, this factor looks at the amount of value added by the courier company in terms of providing an excellent service, especially with regard collecting and delivering parcels during the examination period.

Factor Two: Cost Management and Efficiency

This factor makes reference to costs, and how the university has attempted to contain costs, while at the same time measuring the costs it incurs in terms of the courier service and how frequently this kind of delivery has been achieved. The university is looking at how efficiently the system could be with outsourcing in place.

Figure 4.17 Eigenvalue Scree Plot



Variance in data segmentation is mostly described by the scree plot. All points appear in a descending order of the listed eigenvalue magnitude (Pallant, 2011:294). The relative importance of the factors can also be viewed from the scree plot. From figure 4.17, it can be seen that the scree plot identifies only two components as the most critical with little contribution to solutions displayed by the lower end components.

4.5 Multivariate analysis

4.5.1 Multiple regression

This model can be analysed further with respect to the degree of explanatory power, variation and model fit. A critical consideration is the regression model and how it describes the dependent variable variation using the model summary table. The extent of linear explanation by the model is measured by the coefficient of determination (R squared) and this involves the variation proportion in courier value added service on the regression model.

Table 4.16 Correlation between Variables

	Cost Efficient and Cost Containment	Cost Measurement
Frequency to Deliver	0.72	0.74

With the identification of the strength and direction of relationships between these variables, all the variables that have a predictive impact on the dependent variable will be identified. From the analysis, the variable frequency to deliver has a strong positive association with cost measurement and cost efficient and cost containment.

This shows that for the university to receive the prime service of the courier company in terms of the frequency to deliver, it must be able to measure its cost. This enables efficiency and cost containment to be achieved. Cost is one factor that an organisation must be mindful of, hence a good management towards this, leads to increased benefit.

Table 4.17 Model Summary, ANOVA, Coefficients

Model Summary								
Model		R	R Square	Adjusted Square	R	Std. Error of the Estimate	Durbin-Watson	
1		.776 ^a	.602	.578		.688	1.758	
Predictors: (Constant), Examination Parcels Handling, Frequency to Delivery, Administrative Work, Innovative Technology, Cost Efficient and Cost Containment, Cost Measurement, Capabilities and Service Excellence								
ANOVA								
Model		Sum of Squares	Df	Mean Square	F	Sig.		
1	Regression	82.896	7	11.842	25.032	.000 ^b		
	Residual	54.879	116	.473				
	Total	137.774	123					
Predictors: (Constant), Examination Parcels Handling, Frequency to Delivery, Administrative Work, Innovative Technology, Cost Efficient and Cost Containment, Cost Measurement, Capabilities and Service Excellence								
Coefficients								
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	.645	.272		2.374	.019		
	Cost Efficient and Cost Containment	.075	.096	.071	.781	.436	.418	2.395
	Cost Measurement	-.065	.105	-.060	-.612	.542	.362	2.762
	Administrative Work	.296	.074	.332	3.979	.000	.494	2.023
	Capabilities and Service Excellence	.377	.101	.366	3.728	.000	.355	2.813
	Information Technology	-.106	.089	-.103	-1.187	.238	.452	2.211
	Frequency to Deliver	.068	.109	.065	.630	.530	.327	3.058
	Examination Parcel Handling	.200	.074	.220	2.699	.008	.518	1.930

Table 4.18 Residuals Statistics

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	1.38	5.28	3.66	.821	124
Std. Predicted Value	-2.773	1.973	.000	1.000	124
Standard Error of Predicted Value	.077	.333	.167	.052	124
Adjusted Predicted Value	1.42	5.35	3.66	.823	124
Residual	-1.467	2.171	.000	.668	124
Std. Residual	-2.133	3.157	.000	.971	124
Stud. Residual	-2.243	3.257	.003	1.011	124
Deleted Residual	-1.622	2.332	.004	.725	124
Stud. Deleted Residual	-2.283	3.403	.006	1.025	124
Mahal. Distance	.567	27.757	6.944	5.028	124
Cook's Distance	.000	.190	.011	.025	124
Centered Leverage Value	.005	.226	.056	.041	124
a. Dependent Variable: Courier value added service					

Table 4.19 One Sample Test

	Test Value = 0					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Administrative Work	32.863	123	.000	3.500	3.29	3.71
Capabilities and Service Excellence	38.755	123	.000	3.581	3.40	3.76
Innovative Technology	38.330	123	.000	3.548	3.37	3.73
Cost Efficient and Cost Containment	36.139	123	.000	3.242	3.06	3.42
Frequency To Delivery	38.407	123	.000	3.444	3.27	3.62
Cost Measurement	37.956	123	.000	3.331	3.16	3.50
Examination Parcels Handling	35.607	123	.000	3.710	3.50	3.92

The R squared value is 0.602 in model 1, explaining the variation in courier value added service as the predictor (independent) variables are added to the model. The adjusted R squared considers the number of variables used and the fitness of the model to the sample data. Hence, the adjusted R square value is equal to 0.578. The Durbin Watson statistics is 1.758. The actual value should be between the range of 1.5 and 2.5. The study used the ANOVA table to determine if the multiple R in the population equals to zero and also to assess the significance of the result. The ANOVA table yields an F statistics value of 25.032 and significant *p*-value of 0.000.

Only three variables have a significance value of 0 and it is concluded that a relationship exists between the dependent variable (courier value added service) and these three independent variables (administrative work, capabilities and service excellence and examination parcels handling). To check for multicollinearity, the tolerance and VIF values were examined. Table 4.16 shows that, all the respective models' tolerance values are greater than 1 and all the VIF values are less than 10, showing that there is no multicollinearity. The beta values assist in explaining the predictor variable's importance in relation to the dependent variable. The larger it is, the more impact it has on predicting the dependent variable. This is identified in the values of the three dominant independent variables obtained. Capabilities and service excellence has the highest beta value of 0.366 which makes it the foremost contributing factor that can explain the dependent variable when controlling every other variable.

The significance level of the variable (capabilities and service excellence) at 95% confidence interval is $p = 0.000$ which is less than 0.05 indicating that capabilities and service excellence makes a significant contribution when predicting the dependent variable. The significance of this independent variable to the dependent variable can be further explained by the one-sample t -test from the regression analysis. The fact that all seven predictor variables obtained a significant p -value of $0.000 < 0.05$ indicates that the average response from the sample represents the true population mean.

Residual Statistics

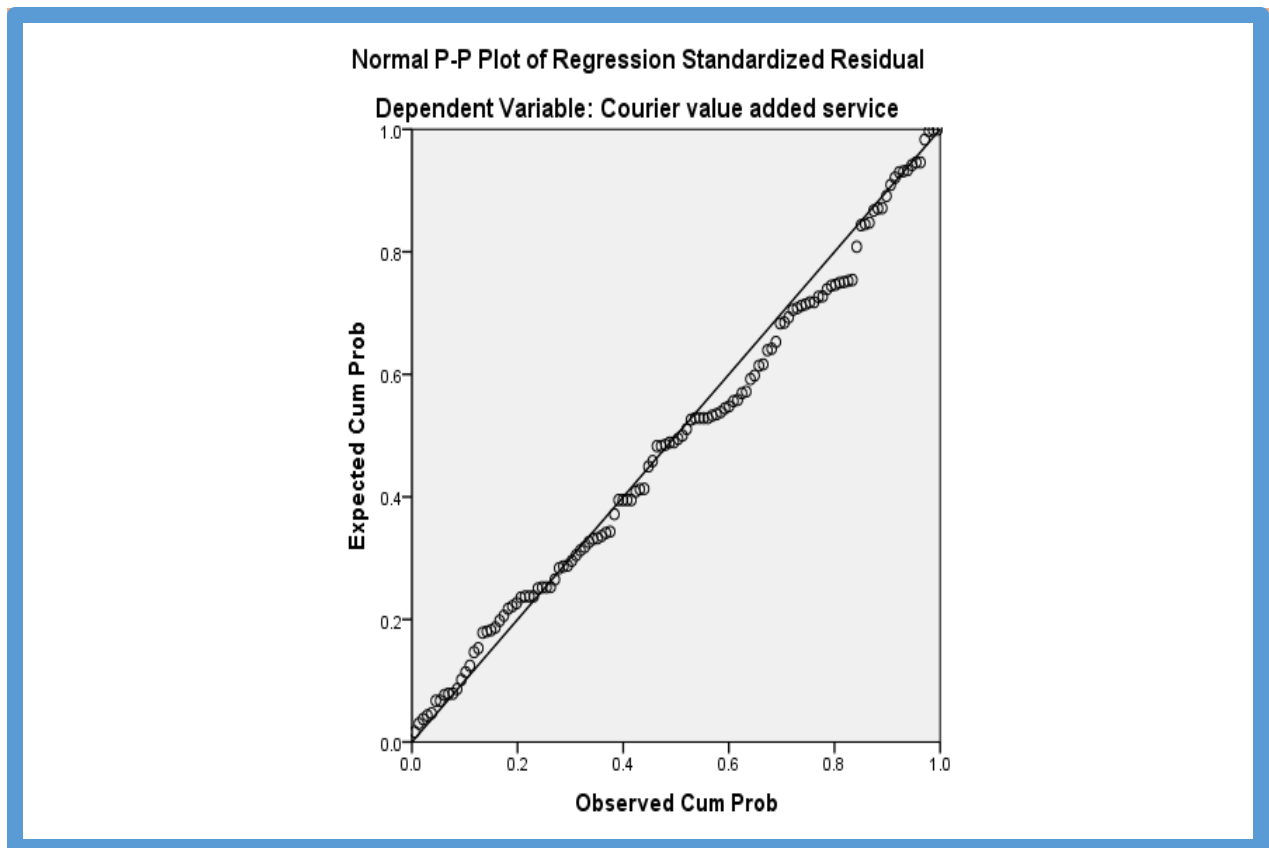
The standardised residual from this study is (min = -2.133 and max = 3.157) which is within an expected value between (-3.3 and ± 3) and a studentised residual (min = -2.243 and max = 3.257). The above model has a normal distribution with mean 0 (0.000) and standard deviation close to 1 (0.971) from standardised. The Cook's distance (D) measurement indicates the impact which an observation has on the overall model. When $D > 1$, an outlier problem exists (Pallant, 2011:295). The study's statistical result indicates that the Cook's value is between (min = 0.000 and max = 0.190) therefore, the D value is lower than 1, showing that the observation does not have a significant large influence on the regression analysis. Leverage observation takes the value with a range of between 0 and 1 with 0 indicating no problem or effect on regression and 1 states otherwise. In this study, the leverage level lies between a min. of 0.005 and max. of 0.226).

The Mahalanobis distance is used to detect outliers in an observation by exploring the extent to which the score lies from the centre of all the predictor variables. The values include (min = 0.567 and max = 27.757).

Normality and Linearity

The normality and linearity plot of regression ensures that variances in common are not violated. Validity indicates that the assumptions about the residual values of a normal P-P plot follow a normal distribution. The points on the line are the expected values which coincide with the diagonal line which is suggestive of no deviations from normality.

Figure 4.18 Normal P-P Plot of Regression Standardised Residual



From the plot diagram in figure 4.18 above, most of the points lie in a reasonable straight diagonal from bottom left to top right. This indicates that there are no major deviations from normality.

4.5.2 Logistics regression

According to Graham (2010:44) linear regression, which relies on a primary casual association, is a technique by which a variable is predicted based on other variables and allows the relative strengths of the predictor variables to be determined. Binary logistics regression was used in this research through the use of the forced entry method utilising the dichotomous dependent variable – timely order (responsiveness - a service quality dimension) (Pallant, 2011:161). The predictor variables (independent) were categorical. Respondents were asked whether the courier company takes orders at any time of the day or night (yes/no). This variable was used as the dependent variable in the analysis. The set of predictors (independent variables) includes all the other dichotomous variables in the survey instrument.

In this instance, the logistics regression model was primarily developed to explain the factors that predict the likelihood that respondents concurred that the courier company had problems of taking orders any time of the day or night. Through developing knowledge of the data through the cross-tabulations and factor analysis, the variables to be used in the logistic regression model were determined. Nevertheless, a conclusive examination was conducted of the entire correlation coefficients to identify any probable concerns of multicollinearity and to define the relative strength of the relationships amongst variables. Understanding which variable correlated with another allowed the variables to be added to the model systematically so as to ascertain best-fit from the pseudo Rsquare and predicting power accuracy. Tables 4.20 and 4.21 are significant since they provide information on the extent to which the model predicts the result of the tested variables. The model fitness and worthiness are tested by the Omnibus tests of model co-efficient and Hosmer-Lemeshow goodness of fit test, respectively.

Table 4.20 Classification Table – Model 1 and Omnibus Test of Model Co-efficient – Model 2

Observed		Predicted		
		Responsiveness		Percentage Correct
		yes	No	
Responsiveness	Yes	0	60	.0
	No	0	64	100.0
Overall Percentage				51.6
Omnibus Tests of Model Coefficients				
		Chi-square	df	Sig.
Step 1	Step	31.761	15	.007
	Block	31.761	15	.007
	Model	31.761	15	.007

The classification table provides the analysis results with only the dependent variable included in the model (model 1). Therefore from table 4.20, the overall percentage of correctly classified cases is 51.6%. The, SPSS classification thus indicates that all cases believed that the courier company would not take orders at any time of the day or night (this is due to the fact that most of the respondents answered No to the question). Subsequent tests revealed the accuracy of this result when the predictor variables were added to the model. The Omnibus Tests of Model Co-efficient offers the complete goodness-of-fit test. The outcome from this model surpasses the results produced by the classification table because it comprises of the independent variables in the set and provides a suggestion of overall model performance over and above the results generated when none of the predictors are considered in the previous model (Pallant, 2011:167). The result from this model must have a significance level (p) lower than 0.05. The p value is $0.007 < 0.05$ from model 2, which comprises of the set of predictor variables. It can be inferred that model 2 is more effective than model 1 with the assumption that the courier company will take orders at any time of the day or night. The Chi-square value is 31.761 with 15 degrees of freedom.

The Hosmer and Lemeshow Test also attest to the worthiness of the model. Reported as the most reliable test for model fit, the Hosmer and Lemeshow Test are stated otherwise from the Omnibus test. This test evaluates whether the observed outcome equals the expected outcome rates in the sample (Hosmer, Lemeshow and Sturdivant, 2013:112). The interpretation of the result is stated thus: a significance level of less than 0.05 indicates a poor fit or values greater than 0.05 are most desirable.

Table 4.21 Hosmer – Lemeshow Goodness of Fit Test, Model Summary, Classification Table: Model 2

Hosmer and Lemeshow Test					
Step		Chi-square	df		Sig.
1		10.380	8		.239
Model Summary					
Step		-2 Log likelihood	Cox & Snell R Square		Nagelkerke R Square
1		140.010 ^a	.226		.301
Classification Table : Model 2					
Observed			Predicted		
			Responsiveness		Percentage Correct
			yes	no	
Step 1	Responsiveness	Yes	53	7	88.3
		No	28	36	56.3
	Overall Percentage				71.8

The classification table outlines the analysis results in model 2. Therefore, from table 4.20, the Chi-square value for the Hosmer-Lemeshow test is 10.380 with 0.239 significance level. Obviously, this value is more than 0.05, thereby demonstrating support for model 2. The model summary table explains the amount of variation in the dependent variable.

To report the degree of variation, the Cox and Snell R Square and the Nagelkerke R Square values must be in the range of 0 and 1. The range of variability is 22.6% to 30.1% explained by the predictor variables set shown in the model summary. The results from classification table model 2 can be likened with the result from table 4.21 so as to validate the improvement when the set of independent variables is included in the model. The overall percentage in the classification table model 2 shows that the model correctly assigns a respondent to the correct group over 72%% of the time.

The sensitivity of the model is the percentage of the group who agreed that courier company should take orders at any time of the day or night through accurate identification by the model (the true positives) and in this study, 88% of the respondents were classified in support of this. The specificity of the model is the percentage of the group that does not agree that the courier company should take orders at any time of the day or night that is correctly identified (true negatives) and this involves 56% of the respondents.

Hence, the positive predictive value is 88%, showing that the respondents predicted to agree that the courier company should take order at any time of the day or night, this model accurately picked 88% while the negative predictive value is 56 %. Table 4.21 shows the predictor variables that contribute most to the model.

Table 4.22 Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)	95% EXP(B)	C.I.for
								Lo wer	Upper
Step 1 ^a	CC(1)	.829	1.368	.367	1	.545	2.290	.157	33.473
	CRM(1)	.130	.936	.019	1	.889	1.139	.182	7.131
	CCC(1)	.257	.884	.085	1	.771	1.293	.229	7.310
	PHF(1)	-.006	.655	.000	1	.993	.994	.275	3.590
	CT(1)	.214	.724	.087	1	.768	1.238	.299	5.120
	EC(1)	.397	.445	.796	1	.372	1.488	.622	3.562
	ESL(1)	-.707	.512	1.906	1	.167	.493	.181	1.345
	ESP(1)	.374	.494	.574	1	.449	1.453	.552	3.826
	DP(1)	-.062	.548	.013	1	.910	.940	.321	2.752
	PDI(1)	-1.447	.829	3.048	1	.081	.235	.046	1.194
	TAN(1)	.184	.590	.097	1	.756	1.202	.378	3.817
	SR(1)	.325	.793	.168	1	.682	1.385	.293	6.549
	AS(1)	.878	.996	.777	1	.378	2.406	.341	16.962
	COM(1)	-20.447	13829.996	.000	1	.999	.000	.000	.
	EMP(1)	-2.790	1.077	6.709	1	.010	.061	.007	.507
	Constant	21.613	13829.996	.000	1	.999	2435216022.499		
<p>Variable(s) entered on step 1: CC, CRM, CCC, PHF, CT, EC, ESL, ESP, DP, PDI, TAN, SR, AS, COM, EMP.</p> <ul style="list-style-type: none"> • CC = Courier Company • CCC = Courier Company Communication • CT = Company Transparency • ESL = Examination Schedule Linkage • DP = Demands Priority • SR = Service Reliability • CRM = Courier Relationship Management • PHF = Parcel Handling Function • EC = Examination Coordination • ESP = Examination Schedule Priority • PDI = Parcel Delivery Information • AS = Assurance • TAN = Tangibility • COM = Competence • EMP = Empathy 									

The column headed 'Sig' ascertains the Wald statistical significance showing whether the separate predictors are significant and that the predictor variable coefficients can be measured as significantly dissimilar from zero (Graham, 2010:47). From table 4.22, it can be seen that only one predictor variable achieved a statistically significant contribution to this model, namely, empathy. This predictor is statistically significant at 95% confidence level with p value of 0.010. This means that the courier company should always act in the interests of UKZN. The Wald criterion is a conservative approach in that it allows a decision maker that wishes to be cautious to choose an outcome that is least bad under uncertain conditions (Pallant, 2011:171). The Wald criterion generates a significant statistics result corresponding to 6.709 for the predictor variable. This variable includes the most significant predictive power in the model and has a direct influence on whether the respondents report that courier company staff takes care of the interests of the university. All the other variables do not contribute significantly to the model (as indicated by the generated statistically insignificant *p* - values). Positive and negative B values indicates the direction of the relationship.

The variable which measures whether the courier company takes care of the interests of UKZN has a negative B value of -2.790. This indicates that the more interest the courier company develops in UKZN, the better the service performance. The logistic regression model can be deduced as follows: The courier company staff is 6.1 times more likely to care for UKZN's interest. According to Pallant (2011:169) the odds ratio (OR) involves an increase or reduction (if the ratio is less than one) in odds, existing in an outcome category as long as the predictor value increases by one unit. In this study, the odds of a respondent supporting the statement that courier company staff take care of the interest of UKZN is 0.061 higher than for respondents that disagree with statement, all other factors being equal. For the individual odd ratios, a 95% confidence interval exists whereby the researcher can be assured of the true value of the odds ratio. The sample size of data also determines the confidence one has in this being an ideal representation of the true value of a population (Pallant, 2011:169). This research study used a sample of 124 respondents. The confidence interval for empathy (OR = 0.061) ranges from 0.007 to 0.507. Thus even if the calculated OR is 0.061, one can be 95% confident that the actual OR population value lies between 0.007 and 0.507. The result is statistically significant since the confidence interval does not contain the value of 1.

4.6 Reliability and Validity

Table 4.23 Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.901	.902	8

When constructs are measured with sufficient reliability by presenting construct validity, a Cronbach's Alpha value will indicate internal consistency. The method of internal consistency determines the reliability of an instrument. Respondents were requested to answer some questions on a five point Likert scale where 1 specifies 'strongly disagree' and 5 'strongly agree'. Cronbach's Alpha tests the reliability of an instrument and also describes the internal consistency of a study. The range is between 0 and 1, and when a value is closer to 1, it means a higher degree of internal consistency. The reliability of a scale also relies on the sample used (Pallant, 2011:91). The Cronbach's Alpha value in this study is 0.901 and since this value is above 0.7, the scale is considered reliable with the sample. Through assessing eight (8) variables on the five point Likert scale, the Cronbach's Alpha of the instrument is 0.901. Hence, the instrument is reliable.

Table 4.24 Item-Total Statistics

Item-Total Statistics				
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Courier value added service	24.35	32.751	.688	.888
Administrative work	24.52	32.154	.643	.893
Capabilities and service excellence	24.44	32.036	.783	.880
Innovative technology	24.47	32.950	.693	.888
Cost efficient and cost containment	24.77	33.428	.674	.889
Frequency to deliver	24.57	33.141	.702	.887
Cost measurement	24.69	33.843	.652	.891
Examination parcels handling	24.31	31.905	.684	.889

The degree to which each item correlates with the total score should not be less than 0.3, and in this study, all items have a total above 0.3 (**indicated in Corrected Item-Total Correlation table**). This shows that the variables used for the reliability test measure what they are supposed to measure; hence, none of the items have low total correlation. The Alpha coefficient for standardised items notes that when the total scale items have equivalent variances and mean, reliability and internal consistency attains a value of 0.902, indicating the reliability of the instrument. Therefore, insight into the investigated variables is provided by this analysis. The study's objectives were achieved using the theoretical framework defined in earlier chapters. Moreover, some of the hypotheses tested in the bivariate data analysis produced the same outcome in the multivariate data analysis. This endorses the validity of the measuring scale that underlies the concept of interest.

4.7 Conclusion

The various methods described in chapter three were applied to produce the results presented in this chapter on professional service staff's perceptions of outsourcing at UKZN. In as much as this served as a pilot study, this study gathered data that provided an understanding of the operations of courier services at UKZN and the challenges faced by professional service staff members in this regard. The data collected related to the challenges involved in outsourcing courier services, the dynamics of examination process scheduling, the quality of the services provided by the courier company; and theories of outsourcing (resource based view and transaction cost economics) and the dimensions of service quality. A number of cross-tabulations, verified through chi-square test of independence, showed some associations amongst the data. The analysis revealed that, the courier company's staff is likely to care for UKZN's interests. From the factor analysis, the eight decisional statements on outsourcing were reduced to two factors and a one-way analysis of variance discovered significant differences in these factors - courier value added services rather than the cost effects of the services rendered. Furthermore, a logistic regression model was constructed for the identified relationships. Using a dichotomous dependent variable - timely order - logistic regression enables the magnitude and significance of the independent variables to be evaluated, thereby providing a better understanding of service quality of the courier company. The last model showed that courier company staff interest had the most significant effect on service performance.

CHAPTER FIVE

DISCUSSION OF RESULTS

5.1 Introduction

The objectives of this study are discussed in this chapter using the results obtained from the data analysis. The research questions in chapter one are also evaluated so as to provide insight. The biographical data results are discussed first, followed by the two objectives that examine the challenges of outsourcing, the dynamics of examination process scheduling and the courier company achieving UKZN's service quality requirements. The following objectives compare the literature with the findings on the resource based view and the transaction cost economics decision. The last objective is discussed to determine the relationship between service quality and the university's service performance requirements in terms of cost containment and limited resources.

5.2 Biographical Data Discussion

A hundred and three of the respondents were female and 21 were male. The majority of the respondents were based on the Westville campus. The College of Health Sciences recorded the most respondents in the School of Nursing and Public Health. This School offers external courses which may be why it employs the most professional service staff. It was also noted that the majority of the respondents had been employed prior to or since 2011, suggesting that the sample was made up of knowledgeable respondents who had served in the university for a long period. The highest level of education was a college certificate/diploma, suggesting that school administrators might be too busy to pursue further studies.

5.3 Discussion of Research Objectives

Objective One: Professional Service Staff's Perceptions of the Challenges of Outsourcing Courier Services at the University of KwaZulu-Natal

The majority of the respondents (94%) agreed that the courier company was committed to the services that it rendered to UKZN. This was followed by a positive response rate of 86% on company relationship management and 85% on maintenance of good communication with UKZN. However, a negative high response rate of 70 % was noted for the parcel handling function variable and lack of transparency on the part of the courier company (73%). From the binomial test results, it can also be seen that the statistically significant 'No' response was recorded for the statements

“UKZN loses control of small parcel handling function to the courier company” with a p – value of 0.000 and “there exists lack of transparency from the courier company with p – value of 0.000”. These challenges were identified by the respondents as contributing to the problems encountered in dealing with the courier company. Thus, professional service staff felt that a lack of transparency and UKZN’s loss of control of the small parcel handling function would actually affect service performance at the university.

This challenge affects the operations at the university and School administrators’ capacity to perform well. According to Raphaelle and Loic (2013:4) consumers are becoming more demanding and delivering parcels is becoming more difficult for courier companies. They suggest that customers should be co-creators of the service; therefore some knowledge of parcel movements and the logistics involved might improve efficiency. Lim and Shiode (2011:733) argued that the main challenge confronting courier services is the way in which logistics service providers react in order to cope with increased demand. This should involve the restructuring of the logistics network and using the company’s existing resources more effectively. It is therefore suggested that UKZN management should look into the service providers’ contract and amend it to reflect these concerns.

Objective Two: The effects of the Dynamics of Examination Process Scheduling on the Capabilities of Courier Services

The study found that 86% of the respondents agreed that the collection of parcels is done timeously by the courier company which is a necessity during examinations. However, large number of respondents agreed with the statement that the limited time frame for writing examinations affects the coordination of examination schedules and courier service capabilities. Prior to the examination being written, it is expected that School administrators send a copy of the main examination paper via courier services to external examiners for vetting. This is repeated for the supplementary examination. At UKZN, examinations are written over a period of two weeks. School administrators are expected to collate the results, update same for student viewing and forward the marked scripts to external examiners. Examinations that are written on the final day of the two weeks are also expected to be marked, updated and collated to be sent along with those written on the first day. This places tremendous pressure, on the School administrators who work

tirelessly to get these scripts to the external examiners on time as well as ensure a high degree of accuracy. Subsequently, a week separates the main and supplementary examinations, which places further pressure on the School administrators. Most of the respondents, (60%) believed the statement that the courier company gives more priority to UKZN's demands in terms of parcels delivery during examination period and a minimal number of 40% did not. A probability may occur, just by chance, that the courier staff are available at a close proximity to the university thereby permitting the timeous pick up of parcels. The same number of respondents 60% did not believe in the statement that UKZN's examination schedule is prioritised by the courier company. This may mean that the courier treats UKZN the same as other customer and does not take its speciality or busy periods into account. The responses on the examination schedule being directly linked to the services of the courier company were rated highly negatively at 65%.

This indicates that university's examination schedule needs to be aligned with the services of the courier company in order to improve efficiency. Finally, 65% of the respondents indicated that the limited time frame for writing examinations affects the coordination of the examination schedule and courier services capabilities. From cross tabulation, it was identified that all the negative responses are a real concern in achieving service excellence. If UKZN's examination schedule were to be prioritised by the courier company, the examination schedule directly linked to the services of the courier company and the time frame for examinations are readjusted, then improved performance management would be the norm in UKZN.

Objective Three: Courier Company Attaining UKZN's Service Quality

This objective was set in order to determine whether the courier company meets the service quality indicated by UKZN. The majority of the respondents agreed that the courier company achieves most of the dimensions of service quality such as competence, assurance empathy, reliability and tangibility. With respect to the questionnaire, the capabilities shown by the courier company staff in providing important information to enable UKZN to make better decisions is purposeful. This conveniently relates to how the relationship is established. Once there is a good relationship between the parties, the quality of service will not be hampered or compromised. However, in terms of responsiveness, 52% of the respondents disagreed that the courier company takes orders at any time of the day or night. This is an attribute which a small parcel handling company offer

as added services to its customers. According to Ho *et al.*, (2012:114) timelines significantly influences customer satisfaction. In terms of courier services, it involves whether the orders placed are sent on time as promised. This is essential as professional service staff is relieved of the burden off following up on whether or not the parcel has been received. Timeliness includes billing accuracy, accurate record keeping and service completion within the specified time. It is critical for a courier company to meet demand in relation to quality and quantity upon delivery in case the package is damaged (Lu, Tu and Jen, 2011:1071). Furthermore, customer satisfaction is enhanced when the courier company offers flexible services based on demand. The courier company's inability to satisfy this need that represents one of the qualities of a good logistics company will hamper UKZN's operations, especially during the critical period when their services are needed most (the examination period). This will also defeat the purpose of conforming to UKZN's requirements and decision to outsource courier services to an outside provider since the examination scripts may not be delivered to the destination as desired. This breaks the distribution network in the supply chain, with a negative impact on the different School administrators whose performance falls below required. Timeliness reduces the cost of School administrators calling various destinations to determine whether or not the parcel has been delivered and received.

Objective Four: The Extent of outside Value Creation to which Resource Based View Decisions enhance Efficient Operations at UKZN

The majority of the respondents (36%) agreed that outsourcing courier services offered UKZN competitive advantage in form of the efficient use of available resources. Resource efficiency involves accomplishing more with less. According to Mudgal, Tan, Lockwood, Eisenmenger, FischerKowalski, Giljum and Brucker (2012:18) resource efficiency mainly relies on the use of resources and their contribution to the economy. It also reduces the risks associated with the security and scarcity of resource supply. Arguing from the resource based perspective Sandberg and Abrahamsson (2011:3) state that for a company to be successful, it requires superior logistics and dynamic capability. To exploit these resources, it is suggested that organisations such as UKZN adopt defined and standardised processes to put them to good use. In addition to contributing to competitive advantage, resources may also enhance an organisation's performance by relating value to competitive advantage. Secondly, most of the respondents (34%) agreed that due to UKZN's decision to outsource some services, especially courier services, more

administrative work is accomplished by professional staff although a large number of respondents remained neutral on this issue. It should be noted that while the courier function is outsourced, the actual collating of examination scripts and packaging is still carried out by professional staff, thereby indicating that the parcel handling function is not eliminated, but reduced. Thirdly, the majority of the respondents (38%) agreed that by outsourcing of courier services, UKZN now has access to complementary capabilities and service excellence. This enhances the university's performance, especially in achieving service excellence. Nevertheless, some respondents, (about 37%) remained neutral on whether the use of technology enhanced efficient operations and the use of resources at UKZN. This could be due to the difficulty that respondents may have in acknowledging the positive effect of technology in any system, especially when dealing with service providers. The study results suggest that technology is a very important area for value creation which means that its adoption will enhance the operations of the university. Without innovative technology, a resource may not be efficient and cannot contribute to growth in an organisation because resource efficiency offers significant opportunities for economic growth and improved productivity and ultimately boosts competitiveness (Smits, 2011:7). It can also be noted from the factor analysis, that while innovative technology is not essential in creating value through enhancing effective operations at the university, factors such as administrative work, courier value added services and service excellence are crucial in achieving this. The responses for this objective show that the resource based view contributed to UKZN's decision to outsource courier services.

Objective Five: The Extent of outside Value Creation Service to which Transaction Cost Economics Decision are Strategically Derived

Most of the respondents (39%) were neutral when asked if outsourcing courier services allowed UKZN to manage costs efficiently. According to Arbor (2012:7) the main reason that process companies transform their supply chain, is cost pressures, accompanied by increased customer service demands and the requirements of restructuring about by the increase in acquisitions. Cost containment is a favourable strategy when exploited well. The cost of conducting the business of a university follows a higher trajectory as these costs may increase above normal inflation. This is due to the fact that teaching and learning are more labour intensive than other economic activities. A high rate of neutral response (37%) is also noted on the statement concerning the economic viability of the variable (frequency of courier delivery) for UKZN; however, most respondents (34%) agreed that the statement was true. From Kramer and Kramer's (2010:4) perspective,

customers will always choose a logistics service provider that offers high delivery frequency because it is able to maintain average inventory holding costs at a minimum. Frequency of delivery relates to efficiency in parcel delivery (examination scripts) to its destination (external examiners) and back by the courier company. If this aspect of the logistics service is well-catered for, every other variable will be achieved. Thirdly, in relation to cost measurements being put in place to monitor the courier company, many respondents' answers were neutral (48%). This may be due to the fact the respondents do not personally deal with the cost aspects of the courier company. However, 24% of the respondents agreed that cost measurements exist between UKZN and the courier company, since without these the courier company's services would have been terminated and given to another company. Furthermore, cost reduction was among the reasons why UKZN initially decided to outsource. Fourthly, the majority of the respondents (32%) agreed that the courier company handles parcels efficiently during the examination period, with 20% remaining neutral and 14% disagreeing, reflecting that some School administrators have had negative experiences of the company's services.

The examination period is the single most crucial period at any university and therefore, poor service quality in any aspect of the operations of the institution should not be tolerated. Rather, a specified and approved mode of conducting affairs during this time should be in place. This could take the form of planning the examination schedule in consultation with service providers so that dedicated staff from the courier company handles this function. The examination period is cyclic in nature and is of high priority since it examines students' level of understanding of modules taught and is carried out at the end of a defined study period. Needless to say, the cost of ensuring that this sensitive time period proceeds smoothly should not be the primary consideration as it is a short, single, defined period in a university's annual plan. Hence, it is important to ensure that the required resources are available to ensure success whilst also considering the cost involved. From the factor analysis, frequency to deliver, examination parcels handling, cost measurement, cost management and efficiency are considered essential in strategically creating value.

5.3.6 Service Performance Requirements

Aranko (2013:19) notes that the elements of logistics service include delivery time, delivery reliability, accuracy of order, information access, damage, ease of doing business and value added services. The results of this study show the relationships that exist between the variables of interest such as maximum dependability, increased efficiency, an isolated logistics system, a compressed examination period, service excellence and a flexible schedule. From the correlation result, it was discovered that there is no relationship between an isolated logistics system and increased efficiency. The frequency distribution also asserted that an isolated logistics system will not assist UKZN to achieve the desired service performance. Therefore, for UKZN to achieve increased efficiency, the isolated logistics system should be abandoned. Secondly, an insignificant statistical result ($0.095 > 0.05$) was generated in the correlation between compressed examination schedule and service excellence. This shows that for service excellence to be meaningful and achievable, the compressed examination schedule should be re-examined with a view to making modifications. Updating examination records for students' viewing within a space of five days, and sending and awaiting examination scripts to and from external examiners all contribute to the factors that hamper operations and the service offering at UKZN. Thirdly, there is a significant statistical relationship ($0.32 < 0.05$) between maximum dependability and increased efficiency. The correlation result indicates that increased efficiency can be improved from UKZN's degree of dependency on the courier company to deliver as required. Operational improvements can be seen when these two variables come into play. Finally, a significant relationship exists between flexible schedule and service excellence. This supports the second correlation; that compressed examinations will affect service excellence at UKZN. As long as the examination schedule is flexible, so will service excellence be improved.

5.4 Logistics and Multiple Regression Discussion

Given growing competition among universities, responsiveness is a driving force for institutions like UKZN. The dependent variable from the dichotomous questions (responsiveness), is one of most vital dimensions of service quality. The likelihood of the courier company achieving every component in factor one is indicated in logistics regression where the only independent variable is the courier company's staff taking care of the interests of the university.

The logistics regression outcomes suggest that by ensuring responsive service, the courier company will work in UKZN's interests especially during the examination period thereby achieving service performance. The multiple regression results show that courier value added service (dependent variable) is significantly affected by three predictor variables (administrative work, examination parcels handling, and capabilities and service excellence). In order to gain competitive advantage, organisations such as UKZN advocate for service excellence, a strategy that is supported by this study's results. Service excellence has the highest significant relationship with courier value added service. This means that, if UKZN can achieve service excellence through the use of its available resources, it can gain competitive advantage through the services rendered by the courier company.

5.5 Conclusion

The research objectives set for this study were achieved. However, correlations and benchmarks from institutions other than UKZN should be obtained so as to assess the university's performance variations. This would offer suggestions for a better approach to working with a service provider and could result in improvements through adjusting and enhancing various policies so as to support optimal performance. While institutions are managed differently, coordination and integration can enhance the value chain.

CHAPTER SIX

RECOMMENDATIONS AND CONCLUSIONS

6.1 Managerial Implications Recommendations

Many previous studies such as (Kumar, V., Batista, L. and Maull, R. (2011); Boyne, G.A. (2010)) have delved sparingly into the importance of service performance in an organisation. This study has shown that responsiveness, an aspect of the service quality dimension has no association with increased efficiency which is crucial in the operations of a higher education institution like UKZN. It has also showed that the interest of the courier company in the university is predicted by an integrated logistics system. However, the compressed examination schedule is a very important variable that UKZN should examine. It exerts much pressure on professional service staff. This was evident in the correlation between the parcels handling function and the compressed examination schedule. Another result shows an insignificant statistical value between courier company communication and examination coordination. When there is good communication from the courier company, a ripple effect occurs in the coordination of examinations and a fast response to deliver scripts to the external examiners. The study's results suggest that improved technological innovation and an integrated logistics system can influence the level of service rendered to UKZN by the courier company. Technology is at the core of any business since it enables the accomplishment of day-to-day activities.

A high proportion of the respondents believed that there exists lack of transparency from the courier company. When professional service staff becomes aware what happens at the courier company in terms of the time it takes to pick-up and deliver parcels, it becomes a defined approach whereby much spending is not incurred by UKZN through frequent call outs to identify the parcel location. Another managerial implication involves UKZN losing control of small parcel handling function to the courier company. This can be sorted through an integrated logistics system that connects UKZN database with the courier company. This can assist the professional staff to track parcels online and at a cheaper rate. The study also identified that most staff that handle module administration does not practically know the job description assigned to them. This is due to the university restructuring which reshuffled various staff to defined jobs and positions.

During the data collection, the following gaps were identified:

Firstly, lack of performance at higher levels (when lecturers do not complete script marking on time for onward packaging and delivery to external examiners); this might require even more speedy delivery. It affects professional service staff since any delay will reduce the time available to call the courier company to dispatch and deliver of scripts to the external examiners and return them to the university. From the courier company's perspective, a call from UKZN to pick up a document will not communicate the urgency of the request; their decision may be based on how many documents to pick up from each campus at any point in time. Secondly, emergency parcel are not accommodated. The time specificity and urgency is not stated. The manner in which the request is logged does not determine how urgent it is to pick up the parcel. This creates the conformance gap (GAP 3) of the service quality gap. Thirdly, the restructuring process has changed the dynamics of work within disciplines that used to have administrative secretaries. Teaching and administrative secretaries are now centralised within Schools, but pick-up and delivery of parcels often occurs in departments.

No training has been done to make staff aware of their job description. This creates the design gap (GAP 2). The restructuring of processes in organisations often results in negative attitudes and frustrations. Courier staff can lack the motivation at work and may be tempted to check the contents of parcels; they can mistakenly send packages to wrong locations or even keep them in the office longer than expected by the sender. This creates the communication gap (GAP 4). Restructuring involves cost savings and could result in retrenchment. Can these saved costs sustain a business? Fourthly, the courier company promises a 24-hour service. This promised service is not achievable because some respondents criticised its efficacy since most of their requests for pick-up of parcels and better service delivery at a certain time of the day is not fulfilled. However, the respondents complained that this resulted into additional costs, thereby, making UKZN an unsatisfied customer. This creates the customer satisfaction gap (GAP 5).

6.2 Major Findings of the Study from the Research Objectives

Objective 1: Professional Service Staff's Perceptions of the challenges of Outsourcing Courier Services at the University of KwaZulu-Natal

- There is a lack of transparency from the courier company. This factor can impede service operations of the university. The integration of the value chain of both organisation can bring better business.
- A good communication is maintained between UKZN and the courier company. Communication is important in any relationship and can enhance various aspects and formulation of a firm. Communication can be in form of email messages between both parties and can be an avenue of making the business easier. It can also be in the logistics dispensation of the service provider to its clients.

Objective 2: The effects of the Dynamics of Examination Process Scheduling on the Capabilities of Courier Services

- The examination schedule of UKZN is not directly linked to the services of the company. When UKZN links its schedule with the courier company, it will be able to share related information, better coordinate its affairs and will ultimately be aware of the operations of both parties.
- This study identified that the limited time frame for writing examinations affect the schedule and also hampers the service capabilities of the courier company. Most professional staff finds this factor as most significant since examination period is a critical time period of any university. When the time allocated is short, staff displays certain behaviour such as anxiety and stress which transcends into the job performance.

Objective 3: The Courier Company attains UKZN's Service Quality

- The significant finding in this objective is that the courier company does not actually take order at any time of the day or night. From staff perceptions, it was identified that for the courier company to take out extra time for pick up or delivery of parcels involves additional costs from the university.

But one of the terms and conditions of the courier services relate to achieving a 24 hour services. When such promises are not obtained from clients, trust is lost hence may affect relationship.

Objective 4: The Extent of outside Value Creation Service to which Resource Base View Decisions enhance Efficient Operations at UKZN

- The courier valued added services, the administrative work of the professional staff members, the capabilities and service excellence of the courier company and innovative technology are the factors that impact sparingly on UKZN operations. This confirms the resource based view philosophy that focuses on the internal aspects of an organisation through the use of skills in order to achieve competitive advantage. With the above factors in place, value is created through opportunities in the business environment.

Objective 5: The Extent of outside Value Creation Service to which Transaction Cost Economics Decisions are Strategically Derived

- Cost efficiency and cost containment, frequency of delivery and cost measurement are the factors which relate to UKZN's strategy to outsource courier services. TCE theory advocates for cost reduction so as to provide quality services. If UKZN chooses the lowest cost of operation, activities like courier services outsourcing can prompt bottom line increase and profit margin expansion across the supply chain.

From this study, the managerial implications are overwhelming such as can assist the managers to adjust, amend, implement or create new policies that can help UKZN improve on their business performance and operations; especially those relating to cost containment, optimal limited resource utilisation and customer service satisfaction.

Based on this discussion and the study's results, the following recommendations are made to UKZN management:

- Firstly, good communication between UKZN and the courier company will improve the services received by the university. Technology influences an organisations logistic system hence differentiating it as best amongst good companies. Technology allows for high standard service, good communication channel and resource measurement in any organisation.
 - Secondly, some students do not present themselves to write some examinations. The university need to examine the issues that influence the schedule for the examination period.
 - Thirdly, in order to ensure a consistent business relationship with the courier company, UKZN should ensure that its account is paid on time. UKZN's motivation to outsource was based on cost containment but the system includes some integrated network that handles finance to service providers. Since cost is hard to quantify especially in a dynamic environment, it is imperative that UKZN identifies a unit to cater for service providers account payment so as to avoid constraints in service rendition.
 - Fourthly, an integrated logistics system that involves networking between UKZN and the courier company where there are functional interactions, should be adopted for ease of doing business. This would enable the latest technology to be accessed throughout the supply chain. A joint approach that allows for flexibility and growth opportunities within the system will optimise operations between the university and the company.
 - Staff should be trained to become aware of internal changes in activities in terms of job specifications. Training and awareness raising are recommended for all staff to streamline job descriptions so that all Schools can offer a unique and efficient service.
- Finally, UKZN's examination schedule could be modified to become more flexible. It is recommended that the supplementary examination should be written during the first two weeks of a new semester. This would go a long way in allowing School administrators ample time to collate the scripts, capture the results, update student records and send 10% of the papers to external examiners for vetting.

6.3 Contributions of the Study

This study is able to contribute to the body of knowledge on outsourcing in higher education institutions as perceived by professional service staff. With this information, it is evident that cost reduction strategies and the use of available resources will enhance UKZN's operations; creating competitive advantage. Closely linked network integration to the services of the courier company is suggestive to implement and influence beneficial opportunities for the university.

6.4 Limitations

This study used disproportionate stratified random sampling that can be generalised to a given population. The study was restricted to UKZN's five campuses. Financial constraints made travelling to these campuses difficult and some staff was reluctant to participate in the study. However a good return rate was achieved which was sufficient and the findings can hence be generalised.

6.5 Delimitations

To reduce these limitations, ethical clearance was obtained, allowing the research to be conducted. Data instruments were distributed accordingly to administrators in the university's different Schools with a defined time frame for collection. The questionnaire was collected within six (6) weeks of its distribution.

6.6 Suggestions for Future Research

It would be useful to conduct a comparative study of UKZN and another university in order to determine whether there are differences in courier service outsourcing among higher education institutions. This study examined the core operations of a critical activity of the university (the examination period). The schedule and time frame for the examination period needs to be flexible in order to accommodate unforeseen circumstances such as student protests and unplanned situations. Future research on the issues that cause students not to pursue their chosen degree within a specified time will also offer insight into the university's operations. Students are the primary clients of any higher education institution and their needs must be accommodated.

To strategically achieve a holistic approach to outsourcing of courier services, the professional staff opinions on the lack of transparency of the courier company must be considered. Involving the staffs will increase unprecedented business relationship.

6.7 Conclusion

Outsourcing is here to stay and organisations need to manage their service providers' activity in order to benefit from this strategy. This study is able to answer set objectives of the research and has shown that service excellence, an integrated logistics system and innovative technology, are required if UKZN is to gain competitive advantage through outsourcing. While the University has undergone a restructuring process, it has not linked its database with the players in its supply chain so as to create value. This study has identified a number of initiatives that UKZN can adopt to improve its operations. The study also provided useful information that UKZN management can analyse to fully understand the dynamics of the examination period and identify ways to improve its business performance which is geared towards the use of available limited resources and cost reductions so as to enhance its services. Most of the respondents found it difficult to keep up with their tasks during the examination period; hence, management needs to adopt a better approach to close the gap at this critical time.

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APPENDIX A

Questionnaire

Section One: Biographical Data

The questions below ask about your personal profile. Please “**encircle or tick**” on the appropriate box(es) below.

1. What is your gender?

Male		Female	
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2. Which Campus do you work?

Westville		Howard College		Edgewood		Pietermaritzburg		Medical School	
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3. Which College are you working for?

Humanities	Agriculture, Engineering & Science	Health Sciences	Law & Management Studies

4. Which School are you employed at? (Please Specify)

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5. Which year were you employed with the University of KwaZulu-Natal?

2015	2014	2013	2012	2011 and Below

6. What is your highest level of education?

Primary School	High School	University of Technology Diploma	College Certificate/ Diploma	Graduate Degree	Postgraduate Degree	Other (specify)

Section Two: Dichotomous Questions

This section aims to obtain information on dichotomous questions (*Yes or No*) with regard to general perceptions on courier service handling at UKZN. Please “**encircle or tick**” on the appropriate box(es) below:

What are the perceptions of professional service staff on the challenges of outsourcing courier services at the University of KwaZulu-Natal?			
7	The courier company is committed to services they render to UKZN.	Yes	No
8	The courier company maintains a good relationship management with UKZN.	Yes	No

9	The courier company maintains good communication with UKZN.	Yes	No
10	UKZN loses control of small parcel handling function to the courier company.	Yes	No
11	There exists lack of transparency from the courier company.	Yes	No
What are the dynamics of examination process scheduling on the capabilities of the courier company			
12	Limited time frame for writing exams affects coordination of Examination schedule and courier services capabilities.	Yes	No
13	The examination schedule of UKZN is directly linked to the services of the courier company.	Yes	No
14	UKZN examination schedule are prioritised by the courier company.	Yes	No
15	The courier company gives more priority to UKZN demands in terms of parcels during examination period.	Yes	No
16	Timely communication with courier company on information about pickup and delivery of parcel is always carried out.	Yes	No
To what extent does the courier company meet UKZN's service quality			
17	The courier company has modern and nice-looking packages and parcels for delivery (Tangibility).	Yes	No
18	The courier company performs services within specified time, it does not disappoint (service reliability).	Yes	No
19	The courier company takes an order at any time of day or night (Responsiveness).	Yes	No
20	Staff of courier company demonstrates a willingness to help especially when parcels are lost in transit (Assurance).	Yes	No
21	The staff of the courier company is always nice and has the knowledge to respond to customers questions (Competence).	Yes	No
22	The courier company staff take care of the interest of UKZN (Empathy).	Yes	No

Section Three: Likert scale Questions

This section relates to **value creation** of outsourcing in relation to courier services. It taps into the objectives of the study being investigated. All answers you provide are based your experience, perceptions and knowledge. **Please encircle the appropriate box.**

Select the number you find most appropriate relative to the question

5= strongly agree; 4= agree; 3= neutral; 2= disagree; 1= strongly disagree

Section Four: Dimensions of Service Quality

What is the extent of outside value-creation service sourcing to which resource based view decision enhance the efficient operations at the University?						
23	Outsourcing of courier services added a greater form of competitive advantage to UKZN in form of efficient use of available resource.	1	2	3	4	5
24	Outsourcing of courier services allowed more internal focus on additional administrative work which the professional service managers has to accomplish.	1	2	3	4	5
25	Outsourcing of courier services allowed UKZN access to complementary capabilities and service excellence.	1	2	3	4	5
26	Adopting latest innovation technology enhanced the efficient operations and use of resources at UKZN.	1	2	3	4	5
What is the extent of outside Value-creation service sourcing to which transaction cost economics decision are strategically derived?						
27	Outsourcing courier services allowed UKZN to contain/manage cost efficiently.	1	2	3	4	5
28	The frequency of courier delivery is economically viable to UKZN.	1	2	3	4	5
29	Control cost measures are put in place to monitor the courier company's activity with UKZN.	1	2	3	4	5
30	The courier company handles parcels efficiently during examination periods.	1	2	3	4	5

Select **TWO** (by “ticking” in the boxes) important service performance requirements and should reflect a need for immediate attention:

31	Service performance of the courier service company	Most important
	Courier company should always achieve deadline during examination period.	
	Work quality of the courier company should not be compromised.	
	There should be flexibility in the courier company's fulfilment of UKZN'S examination schedule	
	Maximum dependability on the courier company to achieve efficiency always.	
32	Examination time frame	Most important
	The examination schedule is too compressed.	
	The examination schedule is well spaced out.	
	The examination schedule is flexible.	
33	Logistics and courier company	Most important
	The logistics system of UKZN is well integrated with the courier company.	

	The logistics system of UKZN is isolated from the courier company.	
	The logistics system of UKZN is linked to the courier company.	
34	Through cost containment strategy, UKZN achieves:	Most important
	Better productivity	
	Increased efficiency	
	Flexibility in operations	
35	Through effective limited resource allocation, UKZN achieves:	Most important
	Better technology innovation	
	Service excellence	
	Enhanced staff capabilities	

End of the Questionnaire

Thank you for taking the time to complete the questionnaire.

APPENDIX B

Frequency Distribution Tables

Section 1 Biographical Data

Gender					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	male	21	16.9	16.9	16.9
	female	103	83.1	83.1	100.0
	Total	124	100.0	100.0	

campus					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	westville	41	33.1	33.1	33.1
	howard college	35	28.2	28.2	61.3
	edgewood	6	4.8	4.8	66.1
	pietermaritzburg	25	20.2	20.2	86.3
	medical school	17	13.7	13.7	100.0
	Total	124	100.0	100.0	

college					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Humanities	20	16.1	16.1	16.1
	agriculture, engineering & science	35	28.2	28.2	44.4
	health science	39	31.5	31.5	75.8
	law & management studies	30	24.2	24.2	100.0
	Total	124	100.0	100.0	

school

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Engineering	6	4.8	4.8	4.8
	agriculture, earth and environmental sciences	6	4.8	4.8	9.7
	chemistry and physics	6	4.8	4.8	14.5
	life science	10	8.1	8.1	22.6
	mathematics, statistics & computer science	6	4.8	4.8	27.4
	clinical medicine	12	9.7	9.7	37.1
	lab medicine & medical science	5	4.0	4.0	41.1
	health science	8	6.5	6.5	47.6
	nursing & public health	15	12.1	12.1	59.7
	religion & philosophy	2	1.6	1.6	61.3
	art & music	3	2.4	2.4	63.7
	social science	4	3.2	3.2	66.9
	applied human science	3	2.4	2.4	69.4
	built environment & developmental studies	1	.8	.8	70.2
	Education	7	5.6	5.6	75.8
	General business studies & leadership	4	3.2	3.2	79.0
	Accounting	7	5.6	5.6	84.7
	Law	5	4.0	4.0	88.7
	Management, IT & governance	14	11.3	11.3	100.0
	Total	124	100.0	100.0	

Year of Staff Employment

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2015	10	8.1	8.1	8.1
	2014	5	4.0	4.0	12.1
	2013	8	6.5	6.5	18.5
	2012	8	6.5	6.5	25.0
	2011 and below	93	75.0	75.0	100.0
	Total	124	100.0	100.0	

level of education

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	high school	22	17.7	17.7	17.7
	university of technology diploma	18	14.5	14.5	32.3
	college certificate/diploma	41	33.1	33.1	65.3
	graduate degree	22	17.7	17.7	83.1
	Postgraduate	18	14.5	14.5	97.6
	Other	3	2.4	2.4	100.0
	Total	124	100.0	100.0	

Section 2 Perceptions on Challenges of Outsourcing Courier Services

The courier company is committed to services they render to UKZN.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	yes	117	94.4	94.4	94.4
	no	7	5.6	5.6	100.0
	Total	124	100.0	100.0	

The courier company maintains a good relationship management with UKZN

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	yes	107	86.3	86.3	86.3
	no	17	13.7	13.7	100.0
	Total	124	100.0	100.0	

The courier company maintains good communication with UKZN.

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid yes	106	85.5	85.5	85.5
no	18	14.5	14.5	100.0
Total	124	100.0	100.0	

UKZN loses control of small parcel handling function to the courier company.

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid yes	37	29.8	29.8	29.8
no	87	70.2	70.2	100.0
Total	124	100.0	100.0	

There exists lack of transparency from the courier company.

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid yes	34	27.4	27.4	27.4
no	90	72.6	72.6	100.0
Total	124	100.0	100.0	

Limited time frame for writing exams affects coordination of Examination schedule and courier services capabilities.

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid yes	80	64.5	64.5	64.5
no	44	35.5	35.5	100.0
Total	124	100.0	100.0	

The examination schedule of UKZN is directly linked to the services of the courier company.

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid yes	43	34.7	34.7	34.7
no	81	65.3	65.3	100.0
Total	124	100.0	100.0	

UKZN examination schedule are prioritised by the courier company.

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid yes	50	40.3	40.3	40.3
no	74	59.7	59.7	100.0
Total	124	100.0	100.0	

The courier company gives more priority to UKZN demands in terms of parcels during examination period.

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid yes	74	59.7	59.7	59.7
no	50	40.3	40.3	100.0
Total	124	100.0	100.0	

Timely communication with courier company on information about pickup and delivery of parcel is always carried out.

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid yes	107	86.3	86.3	86.3
no	17	13.7	13.7	100.0
Total	124	100.0	100.0	

The courier company has modern and nice-looking packages and parcels for delivery.

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid yes	97	78.2	78.2	78.2
no	27	21.8	21.8	100.0
Total	124	100.0	100.0	

The courier company performs services within specified time, it does not disappoint.

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid yes	101	81.5	81.5	81.5
no	23	18.5	18.5	100.0
Total	124	100.0	100.0	

The courier company takes an order at any time of day or night.

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid yes	60	48.4	48.4	48.4
no	64	51.6	51.6	100.0
Total	124	100.0	100.0	

Staff of courier company demonstrates a willingness to help especially when parcels are lost in transit.

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid yes	108	87.1	87.1	87.1
no	16	12.9	12.9	100.0
Total	124	100.0	100.0	

The staff of the courier company is always nice and has the knowledge to respond to customers questions.

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid yes	117	94.4	94.4	94.4
no	7	5.6	5.6	100.0
Total	124	100.0	100.0	

The courier company staff take care of the interest of UKZN.

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid yes	101	81.5	81.5	81.5
no	23	18.5	18.5	100.0
Total	124	100.0	100.0	

Section 3 Value Creation – Resource Based View

Outsourcing of courier services added a greater form of competitive advantage to UKZN in form of efficient use of available resource.

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid stronglydisagree	5	4.0	4.0	4.0
disagree	11	8.9	8.9	12.9
neutral	34	27.4	27.4	40.3
agree	45	36.3	36.3	76.6
stronglyagree	29	23.4	23.4	100.0
Total	124	100.0	100.0	

Outsourcing of courier services allowed more internal focus on additional administrative work which the professional service managers has to accomplish.

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid strongly disagree	10	8.1	8.1	8.1
disagree	14	11.3	11.3	19.4
neutral	31	25.0	25.0	44.4
agree	42	33.9	33.9	78.2
strongly agree	27	21.8	21.8	100.0
Total	124	100.0	100.0	

Outsourcing of courier services allowed UKZN access to complementary capabilities and service excellence.

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid strongly disagree	6	4.8	4.8	4.8
disagree	9	7.3	7.3	12.1
neutral	39	31.5	31.5	43.5
agree	47	37.9	37.9	81.5
strongly agree	23	18.5	18.5	100.0
Total	124	100.0	100.0	

Adopting latest innovation technology enhanced the efficient operations and use of resources at UKZN.

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid stronglydisagree	7	5.6	5.6	5.6
disagree	6	4.8	4.8	10.5
neutral	46	37.1	37.1	47.6
agree	42	33.9	33.9	81.5
stronglyagree	23	18.5	18.5	100.0
Total	124	100.0	100.0	

Value Creation – Transaction Cost Economics

Outsourcing courier services allowed UKZN to contain/manage cost efficiently.

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid stronglydisagree	8	6.5	6.5	6.5
disagree	16	12.9	12.9	19.4
neutral	48	38.7	38.7	58.1
agree	42	33.9	33.9	91.9
stronglyagree	10	8.1	8.1	100.0
Total	124	100.0	100.0	

The frequency of courier delivery is economically viable to UKZN.

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid stronglydisagree	5	4.0	4.0	4.0
disagree	13	10.5	10.5	14.5
neutral	46	37.1	37.1	51.6
agree	42	33.9	33.9	85.5
stronglyagree	18	14.5	14.5	100.0
Total	124	100.0	100.0	

Control cost measures are put in place to monitor the courier company's activity with UKZN.

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid stronglydisagree	5	4.0	4.0	4.0
disagree	13	10.5	10.5	14.5
neutral	59	47.6	47.6	62.1
agree	30	24.2	24.2	86.3
stronglyagree	17	13.7	13.7	100.0
Total	124	100.0	100.0	

The courier company handles parcels efficiently during examination periods.

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid strongly disagree	5	4.0	4.0	4.0
disagree	17	13.7	13.7	17.7
neutral	25	20.2	20.2	37.9
agree	39	31.5	31.5	69.4
strongly agree	38	30.6	30.6	100.0
Total	124	100.0	100.0	

Section four Service performance

Courier company should always achieve deadline during examination period.

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid yes	93	75.0	75.0	75.0
no	31	25.0	25.0	100.0
Total	124	100.0	100.0	

Work quality of the courier company should not be compromised.

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid yes	60	48.4	48.4	48.4
no	64	51.6	51.6	100.0
Total	124	100.0	100.0	

There should be flexibility in the courier company's fulfilment of UKZN'S examination schedule

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid yes	57	46.0	46.0	46.0
no	67	54.0	54.0	100.0
Total	124	100.0	100.0	

Maximum dependability on the courier company to achieve efficiency always.

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid yes	39	31.5	31.5	31.5
no	85	68.5	68.5	100.0
Total	124	100.0	100.0	

Exam time frame

The examination schedule is too compressed.

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid yes	91	73.4	73.4	73.4
no	33	26.6	26.6	100.0
Total	124	100.0	100.0	

The examination schedule is well spaced out.

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid yes	36	29.0	29.0	29.0
no	88	71.0	71.0	100.0
Total	124	100.0	100.0	

The examination schedule is flexible.

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid yes	37	29.8	29.8	29.8
no	87	70.2	70.2	100.0
Total	124	100.0	100.0	

Logistics and Courier Company

The logistics system of UKZN is well integrated with the courier company.

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid yes	72	58.1	58.1	58.1
no	52	41.9	41.9	100.0
Total	124	100.0	100.0	

The logistics system of UKZN is isolated from the courier company.

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid yes	52	41.9	41.9	41.9
no	72	58.1	58.1	100.0
Total	124	100.0	100.0	

The logistics system of UKZN is linked to the courier company.

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid yes	70	56.5	56.5	56.5
no	54	43.5	43.5	100.0
Total	124	100.0	100.0	

Cost Containing Strategy

Better productivity

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid yes	85	68.5	68.5	68.5
no	39	31.5	31.5	100.0
Total	124	100.0	100.0	

Increased efficiency

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid yes	75	60.5	60.5	60.5
no	49	39.5	39.5	100.0
Total	124	100.0	100.0	

Flexibility in operations

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid yes	77	62.1	62.1	62.1
no	47	37.9	37.9	100.0
Total	124	100.0	100.0	

Effective Limited Resources Allocation**Better technology innovation**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid yes	73	58.9	58.9	58.9
no	51	41.1	41.1	100.0
Total	124	100.0	100.0	

Service excellence

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid yes	96	77.4	77.4	77.4
no	28	22.6	22.6	100.0
Total	124	100.0	100.0	

Enhanced staff capabilities

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid yes	72	58.1	58.1	58.1
no	52	41.9	41.9	100.0
Total	124	100.0	100.0	

APPENDIX C

Schedule 2 of UKZN Performance Indicator

SCHEDULE 2

KEY PERFORMANCE INDICATOR APPRAISAL FORM

Measures

To be completed by PURCO SA

Compliance rating

5 = Excellent 4 = Good 3 = Average 2 = poor 1 = very poor

Rate by crossing appropriate block						
Responsiveness						Comments
Supplier representative response to Purchaser's requests	5	4	3	2	1	
After sale support – Frequency of calling by Supplier. and call value	5	4	3	2	1	
Delivery						Comments
Meeting of promised delivery dates	5	4	3	2	1	
On time and delivery as per order	5	4	3	2	1	
Product Quality						Comments
Conformance to agreed specification	5	4	3	2	1	
Documentation						Comments
Invoices / delivery notes & test certificates correct	5	4	3	2	1	
Account queries assistance	5	4	3	2	1	

FOR RATINGS OF 3 AND BELOW PROVIDE FACTUAL DETAILS

COMMENTS AND CONSTRUCTIVE RECOMMENDATIONS FOR IMPROVEMENT

Completed by

Signature

Date

Confidential
Not to be distributed to any third party without the consent of either party

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APPENDIX D

English Specialist Report

**62 Ferguson Road
Glenwood
DURBAN 4001
Tel: 072 442 7896
Email: deanne.collins30@gmail.com
Income tax number: 0526066204**

2 November 2015

This is to confirm that I have edited the dissertation, “Perceptions of Professional Service Staff on the Effects of Outsourcing of Courier Services: University of KwaZulu-Natal” by Nkechi Dorothy Neboh, student number 210501299.

Yours sincerely,

A handwritten signature in blue ink that reads "D Collins".

(Ms) Deanne Collins (MA)

Professional Editor

APPENDIX E

Ethical Clearance



13 July 2015

Mrs Nkechi D Neboh (210501299)
School of Management, IT & Governance
Westville Campus

Dear Mrs Neboh,

Protocol reference number: HSS/0886/015M

Project title: Perceptions of professional service staff on the effects of outsourcing of courier services: University of KwaZulu-Natal

Full Approval – Expedited Application

In response to your application received on 10 June 2015, the Humanities & Social Sciences Research Ethics Committee has considered the abovementioned application and the protocol have been granted **FULL APPROVAL**.

Any alteration/s to the approved research protocol i.e. Questionnaire/Interview Schedule, Informed Consent Form, Title of the Project, Location of the Study, Research Approach and Methods must be reviewed and approved through the amendment/modification prior to its implementation. In case you have further queries, please quote the above reference number.

PLEASE NOTE: Research data should be securely stored in the discipline/department for a period of 5 years.

The ethical clearance certificate is only valid for a period of 3 years from the date of issue. Thereafter Recertification must be applied for on an annual basis.

I take this opportunity of wishing you everything of the best with your study.

Yours faithfully

Dr Shenuka Singh (Chair)

/ms

Cc Supervisor: Dr PT Mbhele
Cc Academic Leader Research: Professor Brian McArthur
Cc School Administrator: Ms Angela Pearce

Humanities & Social Sciences Research Ethics Committee

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Founding Campuses: Edgewood Howard College Medical School Pietermaritzburg Westville