The impact of office automation on service delivery: A case of uMshwathi Municipality

by

Yiphathe Michael Mkhize

Student number: 20809317

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Durban University of Technology
Durban, South Africa.

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Supervisor: Dr M Ngibe

Co-Supervisor: Dr R Govender

DECLARATION

I, Yiphathe Michael Mkhize hereby declare that the dissertation entitled: **The impact of office automation on service delivery: A case of uMshwathi Municipality** is submitted in fulfilment of the requirements for the Master of Management Sciences in Administration and Information Management in the Department of Information and Corporate and Management, Faculty of Accounting and Informatics, Durban University of Technology, Durban, South Africa is based on my own research, and that I have not submitted this dissertation to any other institution of higher education to obtain an academic qualification. I further declare that all sources were cited, referenced, and acknowledged as highlighted in the references.

Student name: Mr YM Mkhize Date: 27 January 2022

Student number: 20809317

Supervisor: Dr M Ngibe Date: 27 January 2022

Co-Supervisor: Dr R Govender Date: 27 January 2022

ABSTRACT

The adoption of automation at the uMshwathi Municipality has been often associated with reform programmes aimed at reducing the inefficiencies generated by the administrative load. The uMshwathi Municipality's mission is to promote social and economic development through sustainable, effective and efficient use of resources and dependable delivery of basic services in line with the constitutional mandate, and to continually strive to remain a green municipality. The purpose of this quantitative study is to ascertain the effectiveness of automated systems towards the improvement of service delivery within the uMshwathi Municipality and reveal the challenges and opportunities of automation within the uMshwathi Municipality. Based on the empirical findings, automation facilitated the workflow, thereby improving work performance at uMshwathi Municipality, which impacted the service delivery. This study found that computer programmes were most commonly used in the automation process. This was followed by other tools and programmes including the scanner, intranet, self-service, digital signature and filing system. The study concluded that automation improves the process of service delivery within the uMshwathi Municipality. This study therefore recommends that uMshwathi Municipal management should consistently maintain its strong reputation of quality service to regularly meet customer service expectations and also keep a good administrative environment that has a compatible automation system that will assist in enhancing employee work satisfaction. The study also recommended that the uMshwathi Municipality should provide a comprehensive training for employees on how to use automation effectively and efficiently as well as how to fix possible automation errors. Furthermore, the study recommends that the uMshwathi Municipality to use remote technical support whereby a technician can resolve computer problems without being physically present in the area where the computers are located. Municipal management should improve the work environment by providing adequate equipment such as work equipment and modernised automation to personnel in order for them to perform their jobs more effectively and efficiently. Automation advancements such as an updated website can facilitate the development of an intranet system and interactive software could encourage more communication between municipal employees and the citizens. Continuous training of

administrative employees is also very important as it helps all the municipal departments to improve quality service delivery to its citizens.

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DEFINITION OF TERMS USED IN THIS STUDY

Office automation: Automation usually aims at automating certain tasks rather than whole occupations since occupations usually consist of performing a bundle of tasks, not all of which may be easily automatable (Autor 2014: 345). Work-life quality and the complex interaction system components work with tasks, invoices and organisational factors, and the environment, tools, and technology serve as a quality of work-life that is a comprehensive programme dedicated to promoting employee satisfaction.

Bureaucracy: is an organisation which is made up of many departments and divisions that are administered by lots of people, it also related to a system of controlling and managing a company that is operated by a large number of officials.

Culture: The term culture can be defined as the values, preferences beliefs, assumptions, ritual skills, behaviours and knowledge that are shared within a social group.

TAM: TAM (Technology Acceptance Model) is a theory of information systems that represents a true reflection of a user's approval and technology implementation. TAM reveals how technology is received and operated by users.

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CHAPTER ONE

1.1 INTRODUCTION

The study is based at the local municipal which is uMshwathi Municipality. The service delivery rendered by local government has always been identified as a crucial aspect of the process of democratisation and strengthening of mass participation in the decision making process. Local government serves a twofold purpose: firstly, an administrative purpose of supplying goods and services towards the citizens and secondly to represent and involve citizens in identifying specific local public needs and determining how these local needs can be met.

Local municipalities now have developed and adopted a modernised office automated procedures to render rapid quality administrative services, apparently office automation is very crucial for every organization and local municipalities, without the existence of proper office automation within the organisation may lead to a great possibility of hindrances, specifically on service delivery. Several organisations all over the world will come to a standstill if they don't embrace a good office automation system.

Office automation controls the whole organization and without the presence of an office automation in an organization, the management cannot properly manage the affairs of the organization. When an organization or municipality is well -controlled, then it can develop and become successful and render a satisfactory quality service delivery to its customers.

This research study was conducted to ascertain how administrative automation processes impact services rendered by the uMshwathi Municipality, as anecdotal evidence indicate that the majority of the uMshwathi Municipality citizens have revealed their dissatisfaction with the service delivery offered by the uMshwathi Municipality. Subsequently, these citizens don't utilise the services provided by their local municipalities and prefer to the services of municipalities located close by.

Majid, Samad, Tazilah, Sudarmoyo and Hanaysha (2019) indicated that the major causes of poor service delivery at local Municipality is precisely political manipulation, failure to manage change, poor human resource policy and corruption. Therefore, the overall study objectives were precisely to identify the current automation processes being used, to investigate the effectiveness of automation for the improvement of administrative processes and to determine the challenges and opportunities in adopting automation on service delivery within the uMshwathi Municipality. Seemingly, automation is effective in improving service delivery within the uMshwathi Municipality. Detailed findings of this study are elucidated in Chapter Four.

1.2 BACKGROUND

The uMshwathi Municipality is located in the uMgungundlovu District, KwaZulu-Natal northeast of the province's capital, in the Mduduzi Municipality. The uMshwathi Municipality covers a land area of approximately 1811 square kilometres. The uMshwathi Municipality is named after the river that flows through the municipal area. During the 1850s, German preachers and immigrants resided in the uMshwathi municipal area with their relatives. Consequently, the uMshwathi Municipality comprises townships bearing German names, like Wartburg, Harburg, Kirchdorf, New Hanover, Schroeders and Hermannsburg (Orlikowski 2016:98).

Before the introduction of technological systems in 1980, the uMshwathi Municipality used manual administrative systems for service delivery. According to Lazim and (2018), a manual system is less costly and easy to maintain and set up; a manual system embraces minimum risk of data corruption and loss since data are stored in a lockable, fire-proof cabinet, and issues of copy duplication are obviated.

As highlighted by Durrhein (2015), the introduction of automation within organisations has entirely mutated the administrative environment; it also changed administrative staff perceptions of their routine tasks. However, the success of administrative service distribution in all organisations is more reliant on office automation (Parasuraman 2016). This means that in order to effectively and efficiently use technological systems, a certain level of knowledge and skill is required. Webber and Yang (2013) share the

same sentiments, stating that acquisition and skills enhancements are necessary to exploit the benefits of using technological systems.

1.3 CONTEXT OF THE STUDY

According to Kasim (2018: 18), a manual system needs more space for storing files in filing cabinets as data cannot be used by more than one employee at any given time, which might have a negative impact on the productivity of an organisation. Hidayat (2018: 19) adds that a manual system requires more human effort to track documents with the intention of retrieving the stored information. Therefore, if the manual system is not systematically kept in place, it might compromise the organisation when reports need to be compiled, as information will not be readily available and accessible.

Innovation is considered to be key to the growth of any entity (Martin and Namusonge 2014: 10; Noreen and Junaid 2015: 188). The uMshwathi Municipality has recently adopted automation systems to improve its operations and administrative processes to better serve the needs of the public. Heeager (2016:78) defines office automation as a tool that utilises a computer device to enhance business efficiency. Amagoh (2013: 67) and Mouton (2016: 142), agree that computer systems are adopted by several companies with the intention of maximising processes and efficiency to keep up with the needs of the companies and to reduce paper-work (Hsieh and Yuan 2010: 54). The rewards from automation are more efficient and fewer administrative workloads on employees (Onifade 2010: 97).

Gronlund (2010) understood e-government as the use of automation by local municipalities in its relationship with citizens and the processes of public administration. Damian (2015: 279) claims that automation is more related to the provision of electronic services and administrative efficiency, but more recently, and even in non-academic publications, it incorporated the support of digital means into democratic practice (Rampelotto 2019: 274). Lobler (2016: 29) indicates that the development of automation infrastructure, especially the inclusion of the Internet has

a positive effect on the development and growth of e-government. Singh (2013: 290) states that e-government actions make use of the infrastructure and the collection of government information to provide transparency and e-services to the citizens. When automation infrastructure is deficient, e-government development is inhibited and it limits the proportion of citizens that can be served (Das 2017: 452), therefore local municipalities should consider automation as a significant instrument to reach the goals of developing quality service delivery offered by local municipalities (Collier, Deng, Kanjere and Deng 2016). However, Ngulube (2017: 93) argues that in Africa, it has been observed that the lack of automation infrastructure severely restricts the use of the Internet and the adoption of e-government, therefore the increasing of e-government depends on institutional development, information infrastructure, legal and regulatory adequacy, and the important role central government must play in supporting its implementation (Rahman 2010: 79).

1.4 RATIONALE FOR THE STUDY

In South Africa, the automation of local municipalities has obtained vital ground and numerous steps to advance service distribution and accountability reinforcement and transparency in the local municipalities. Singh (2018: 36) reported that the e-government literature has addressed some of the causes of automation system challenges in South Africa. Furthermore Singh (2018: 36) found that automation system challenges may be due to the scrappy nature of the government administration, the problem with communication, technological complexities, automation design and constant change in the management. For any local municipality to match performance with the growth and expectations of its citizens, it must significantly increase its economic ability of revenue collection without incurring costly recurring overheads that will eventually destroy the whole municipality. The study was conducted precisely with the intention of ascertaining the effectiveness of the automated systems adopted by the uMshwati Municipality in supporting and improving service delivery within the municipality. This research study further intended to identify automation challenges which had an influence on service delivery within the uMshwathi Municipality. Therefore, the uMshwathi Municipality and its citizens will

benefit from the study findings solely if they effectively adhere to the practicable recommendations which the researcher has proposed. Furthermore, the study findings and recommendations might aid the municipality in developing its standards of service distribution which will satisfy the citizens.

The gaps and challenges on automation effectiveness identified in this study will possibly provide effective solutions for the municipality to consistently provide stable and reliable service delivery to its citizens. The study is also intended to contribute to research on automation challenges facing local municipalities operating within South Africa.

1.5 PROBLEM STATEMENT

An office automation is adopted by local Municipalities with the very same aim of providing an effective and satisfactory service delivery from administrative department. However, a study by Mtshali (2016) reveals that the citizens are dissatisfied the uMshwathi Municipality's service delivery. This dissatisfaction of citizens is highly perplexing since automation has been introduced and implemented within municipality to improve the effectiveness of administrative procedures. Mtshali (2016: 56) indicates that citizens of the uMshwathi Municipality wait for lengthy periods to receive service from the municipal departments, and the service being offered is of an inferior quality.

Due to poor administrative service delivery, the citizens of the uMshwathi Municipality often quit their municipality and attempt to obtain services from municipalities located close by (Jali 2017). The vital factor of adopting automation within complex systems is minimising human mistakes through the alleviation of operators' excessive mental work burden, automation can be problematic to users in the introductory phase when they are adapting and accumulating relevant skills (Molloy and Parasuraman 2016).

1.6 RESEARCH AIM, OBJECTIVE AND DESIGN

This study aims to ascertain the effectiveness of automated systems towards the improvement of service delivery within the uMshwathi Municipality. The study intends to reveal the challenges and opportunities of automation within the uMshwathi Municipality.

1.6.1 OBJECTIVES

The following objectives were considered to achieve the predetermined aim:

- To identify current automation processes being used within uMshwathi Municipality;
- To explore automation effectiveness on service delivery within the uMshwathi Municipality; and
- To determine the challenges and opportunities in adopting automation processes within the uMshwathi Municipality.

1.6.2 CRITICAL QUESTIONS

- What are the automation processes that are currently being used by uMshwathi Municipality?
- How effective is automation for the improvement of service delivery within the uMshwathi Municipality?
- What are critical challenges and opportunities arising from the adoption of the automation system within the uMshwathi Municipality?

1.6.3 RESEARCH DESIGN

A research design, according to Andrew (2018), is a combination of approaches and procedures used in gathering and analysing data of specified variables of the research problem. Research design is considered as a plan to guide research that is applied to answer research questions. Hence, the research design provides a chain of decisions of how best to answer research questions (Krause, Luzzini and Lawson 2018). The

study was conducted through the census research method whereby the study included all administrative staff within the uMshwathi Municipality to ensure that the data collected is valid and comprehensive. This research approach places a premium on the objectivity and reliability of findings and encourages replication (Gantsho and Sukdeo 2018). The study adopted a quantitative method where data were gathered through questionnaires. The Statistical Package for the Social Sciences (SPSS) data analysis tool was adopted to analyse collected data.

1.7 OVERVIEW OF CHAPTERS

The study is comprised of five chapters.

Chapter One: Introduction

Chapter One provides the introduction, background and rationale of the study. This chapter indicates the aims and objectives of a study.

Chapter Two: Literature Review

Chapter Two provides a comprehensive review of the literature related to the study; as well as expanding and elucidating key concepts further. Different literature sources are used to comprehend what has been found by different authors regarding the effectiveness of the automated system and service delivery on the administrative environment.

Chapter Three: Research Methodology

Chapter Three discusses the research design and methodology adopted in the study. The discussion includes the research design, target population, sampling techniques, ethical considerations, data collection instruments and the process of dissemination of the questionnaires. The reliability and validity of this study are also discussed.

Chapter Four: Findings and Discussions

Chapter Four provides the information in a graphic form and presents an analysis and discussion with regards to the study results.

Chapter Five: Conclusions and Recommendations

This is the final chapter of the study and presents the recommendations and conclusions of the study. The chapter also encompasses recommendations for additional research and the restrictions of the study are also delineated.

1.8 CONCLUSION

Chapter One provided a summary regarding the study context and focussed on the problem statement, aim, research questions and objectives of the study. The next chapter will discuss primary and secondary literature sources on the effectiveness of automated systems and service delivery and the theoretical framework that this study uses.

CHAPTER TWO

LITERATURE REVIEW

2.1 INTRODUCTION

The previous chapter provided a summary of the research context and focused on the problem statement, aims, objectives and the research questions of the study. In this chapter, the researcher presents a discussion of the literature regarding the effectiveness of automated systems and its impact on the improvement of service delivery. Automation systems is indeed a simple tool that is straightforward for the improvement of organisational productivity (Kallinikos 2015: 129). Automation encompasses assets that allow employees to border the causal assembly of the administrative practices and procedures they facilitate (Luhmann 2015). Automation offers a better opportunity to execute pending organisational events and innovative means to initiate a couple of well-defined reasonable actions of classifications that plot organisational measures and practices which they anticipate facilitating (Luhmann, 2015: 49). Automation offers expertise in organisational performance, consideration towards employee attributes and job satisfaction and increases employee efficiency within the organisation (Mirzapour 2010).

According to Kallinikos (2015), automation constructs modern structured sequences and interdependences which control the performance of the procedures and processes of the organisation. Consequently, automation carries some better regulations which the organisation has to adhere to with regards to the ordering of organisational properties, offering stable and consistent ways of social interaction (Bovens, Legotlo, Maaga and Sebego 2002: 118). Automation chooses extracts from social world arrangements of procedures to be done to accomplish a definite outcome that satisfies the routine administrative needs of the citizens. (Abbaspour 2013: 36).

2.2 THE INFLUENCE OF AUTOMATED SYSTEMS IN AN ADMINISTRATIVE WORK ENVIRONMENT

Fagan (2017) states that software and systems of office automation are the best examples of technology-mediated resolutions which were designed to enhance the efficiency and effectiveness of bureaucratic organisations by merely integrating the automation systems and software with numerous controlled and standardised levels of organisational service delivery. Furthermore, effective, efficient and translucent supervising and monitoring of mechanisms can certainly verify a valued resolution for the proposal and implementation of additional functions of organisational administrative procedures, increasing the similarity and probability of organisational service delivery (Tempini 2015). e-Government projects could provide a better service by introducing an innovative inter-organisational bureaucratic management (Kallinikos 2015). According to Berg (2012); Kallinikos (2013) and Mintzbergs (2013), automation can empower roles that are required in organisations to achieve routine tasks. Automation also develops the flexibility and speed of a company when responding to the fluctuating working environment to overcome the data handling challenges allied with the increasing domain of communal intervention. Cordella (2015) claims that organisations that can exploit automation to support the administrative procedures to overcome difficulties are the best examples of e-governments. An e-administrative system is, therefore, suggested as an e-government strategy that assists in the improvement of usefulness and proficiency of a community administration (Ghassemi 2013).

Zouridis (2012) indicates that once organisational service delivery procedures and rules are altered into automation functional measures, they are likely to be unique compared to the original administrative setting. Furthermore, technical implementations of procedures and rules are becoming extremely regulated over automated prescriptions, and profiles of expertise and job requirements are altered through automation (Kallinikos 2014).

Raza (2012) identifies productivity as a major advantage of office automation. This is because office automation was proven to save time, increase the efficiency of administrators and diminish human error, while the manual system consumes more time to accomplish administrative routine tasks (Boyd 2015:35). Furthermore, several organisations have applauded and outlined the success of implementing computerised systems on the procedures of administration, such as assisting in tracking budgets and increasing administrative productivity (Boyd 2015; Kordzadze 2014). As cautioned by Jung, Saunders, Dane, Tekleab and Shin (2016), a paper-based system can be a big risk as there is no automatic backup and, if records are misplaced or lost in a fire or burglary, some information may not be recoverable. Therefore, a paperless work environment is desirable, and its benefits could be achieved via the adoption of automation (Babbie and Mouton 2009).

2.3 CRITICAL CHALLENGES IN ADOPTING AUTOMATION IN THE ORGANISATION

Automated systems cost a minimum of R80 000 which impacts the organisation's ability to implement automation (Ordu 2014: 25). Autor and Handel (2013: 234) indicate that the greatest modification to previous computerisations happened through shifting task structures within professions rather than altering employment shares among professions. Some failures have produced vindicated disapprovals to community sector administrations and its aptitude to fulfil its commitment to efficient service delivery (Heeks 2012: 241). These disapprovals are created and accepted by the bureaucracies' failures to deliver community services (Tempini 2016: 221).

Mihir (2019: 93) expresses the concern that automation could lead to the uncertainty of routine administrative task performances due to the introduction of new technologies hindering productivity and efficiency within an administrative environment. Breuer (2018: 26) states that it is completely necessary and beneficial for companies to upskill and reskill the existing employees with regards to the adopted office automation. Furthermore, Kumar (2015) indicates that organisational

management supports with the challenge of ensuring that the adopted automation system does not alter the organisational culture. The introduction of automation in the administrative environment may lead to task uncertainty, subsequently hampering productivity and efficiency within the administration of the organisation (Shukla 2020). Automation is not exactly about modern technology; it is all about the varying administrative culture which necessitates the engagement of employees that stimulates the commitment and transparency where the organisation is profitable and in what way automation plays a vital role (Carter 2018: 109). It is said to be difficult to encourage durable and self-motivated thinking which allows the administration to quickly respond to the change formed through the adoption of automation (Nichol 2016). Bajracharya (2019: 251) elucidates that every administrative employee needs to embrace a growth mind-set that emphasises flexible thinking needed to thrive in a constantly changing environment.

Sulaiman, Cob and Ali (2015) states that executing automation process strategies requires personnel who are well-informed and ready for any possible changes in how they normally perform their work; training employees on how automation value and determination could be of great significance on the automation list. Oliver (2021) argues that employees could get excited about the idea of new automation and relish testing the ways to improve their everyday work performance. Nevertheless, when new automation gets over-complicated employees do not understand its benefits (Hinai 2018: 192). Brewer and Neubauer (2016) state that community administrators have to take a major role in redesigning and applying e-government schemes to instil independent values and certify that democratic procedures and results are appreciated.

Norman (2020) argues that it is awkward if procedures in normal operations are done inappropriately; however, adequate responses and collaboration with the employees must regulate the entire task. If the situation exceeds the automation equipment aptitudes, the inadequate responses afterwards lead to complications in the

operations designed for employees, (Eze and Mohammed 2016: 132) also suggests that automation serves as a midway level of intellect, strong enough to control what should be done by employees but not powerful enough to handle all abnormalities. Furthermore, its level of cleverness is inadequate to deliver frequent, suitable responses which occur naturally amongst employee operations (Rutgers 2016: 112).

Wortzel (2013: 73) concludes that automated systems have had their fair share of problems such as technical malfunction, employees not properly trained to operate them and the cost of adopting these systems, which have depleted the municipality's budget (Shindler 2016: 56).

2.4 OPPORTUNITIES IN ADOPTING AUTOMATION WITHIN THE ORGANISATION.

According to Zahra (2016: 1226), the usage and processes of office automation systems in recent years have been prevalent in South Africa with many organisations utilising and investing huge amounts of money for the formation and practice of automation systems. However, there was a concerns revival based on automation and digitalisation which may subsequently result in the shortage of jobs in the future (Frey and Osborne 2013: 2). The authors further indicate that the potential of automation is seemingly a danger that might eventually foster technological joblessness. Loubser (2014: 78) states that the adoption and application of the automation systems are increasing within South African municipalities.

In the public sector automation systems are arranged to follow a gathering of philosophies and practices that suggest using private sector and business approaches in the public sector (Bonina 2012: 280), to improve organisational efficiency and effectiveness hence lessen the administrative load. Cordella and Willcocks (2012: 67) illustrates automation as a tool that simplifies and supports a vital organisational

function of management and control administrative service delivery. Automation also includes functions associated with legal-normative that set up the rules designed to standardise the delivery of public services. Automation could lead the bureaucratic organisations to be appreciated more on the delivery of community services “Contract State” (Cordella and Willcocks 2012: 94).

Bashir and Azeem (2017) indicate that office automation could make it possible for local municipalities to increase productivity and enhance existing office measures that save time, money and human energies. Office automation embraces cultured and complex tasks like integrating front office and back-end systems to make municipalities operate smoothly (Banwet and Datta 2018). Office automation offers a privilege like simplifying the management of stored information. Bellou (2019:241) claims that office automation facilitates data exchange and manipulate data to make it more convenient for each member within the organisation to share files and exchange information in real- time using electronic transmission application or any network connectivity that might enhance efficiency. Bitzer (2017: 37) states that automation provides management software that assists in building, assigning, revising, and evaluating the tasks that compel employers to supervise workplace activities that assist in keeping the whole process on track. Furthermore, Blanchard and Thacker (2018) articulate that automation allows managers to simply track the improvement during each phase of aim achievement and render an instant reinforcement or training to retain performance and time limit on track. Automation software used in public administration work improves efficiency, reduces process costs and provide better service for citizens (Bhattacherjee 2019). Houy, Hamberg and Fettke (2019) state that automation support more efficient execution of administrative processes by automatically stating the next task in a process or forwarding tasks to the organisational unit which is supposed to further work on a case to minimise waiting times. Furthermore, Brookes (2018: 68) argues that automation embraces the potential of decreasing errors and improves product superiority as well as service delivery; the improved accuracy of production and organisational processes merely reflect that products and services are distributed constantly. According to Stoltz

(2016), automation facilitates the legal compliance to rules and regulations that govern the organisation; automated systems and procedures might be driven and managed with further lucidity that will probably facilitate easier compliance and transparency.

2.5 TRAINING OF EMPLOYEES TO OPERATE AUTOMATION SYSTEMS

Deckop (2016: 69) indicates that training and development in the administrative area where technology alters frequently are vital; training is then a prerequisite for every single organisation to persist in the universal market. Organisations cannot depend only on conventional specialisms to participate in the future; therefore, it is crucial for an organisation to advance its employee's abilities since it is the century of production and superiority (Sahinidis 2018: 325). Training is designed to enhance the level of individual job performance to fulfil organisational objectives (Chiaburu and Tekleab 2015: 29). Stewart and Waddell (2013: 389) state that the organisation with poor training negatively affects the quality of service and execution through poor training. Elgamal (2017: 271) agrees that any organisation deserves training to survive and should be prepared with the features of compliance, flexibility and permanence. Training is basically practical education where information, skills and practice grow, and inadequacies are overwhelmed (Frank 2014: 241).

Seifert and Chung (2016: 256) agree that poor training may cause employees to be ignorant of precisely what needs to be done in the work environment. Training helps to resolve job performance-related problems by explaining the job description in detail, so training lessens unnecessary effort duplication, time spent correcting mistakes and problem solving necessary to correct bad performances within the workplace (Hood 2017: 148). Layne (2018: 431) outlines the fact that the work might not reach the quality standard if those standards are not properly addressed with employees, likewise, workers might never work properly and be productive if training is not provided.

Bannister (2017: 47) states that the result of incomplete training is employees eventually being charged with negligence, underperformance, ineffectiveness and delinquency, and the trust and relationship between employer and employees become intolerable and is irretrievably broken down (Bekkers 2016: 97). Homburg (2017: 374) concludes that employees who do not receive adequate training find it difficult to meet performance standards, while other workers become inspired and learn how to perform the tasks that are assigned to them better, other employees might not embrace such initiatives (Shareef 2014: 132). Furthermore, workers may eventually learn up by imitating their colleagues' changing levels of capability.

Weerakkody (2015: 127) states that the procedures of newly appointed employees are money consuming where there is no assurance that a new employee would better suit the business while numerous businesses offer training chances to expand probabilities of being able to encourage workers from within. According to Rodriguez and Walters (2017: 206) if a business does not invest in worker development, the existing workers might not advance skills that are essential for supervisory positions, managerial roles, or superior technical tasks. Then, the business wastes a lot of money attempting to attract external talent, while the current workforce becomes redundant. Failure to provide the necessary training for workers does not affect individual employees but causes difficulties for the whole company. Errors created by employees may lead to lawsuits and negligence penalties (Sibarani and Sinamo 2021).

2.6 AUTOMATED ADMINISTRATIVE SYSTEM AS A TOOL TO IMPROVE ADMINISTRATIVE PRODUCTIVITY

Automation is made up of formal and informal electronic systems related more to processing and communicating data to people internally and externally of the company (Rahimi 2010: 1226) and plays a critical role in expanding productivity as well as administrative jobs (Jahanbakhsi 2009: 1226). An information automation system

could assist workers to reach their designated goals (Ranji and Sheikh 2012: 1226), also examines the results of the efficiency of an automated office in their research. Subsequently the outcomes revealed that office automation positively impacted time usage, accuracy and efficiency in the execution of tasks when serving customers. (Sarafizadeh and Alipour 2014: 34).

This is further supported by Sharifzadeh (2014: 34) who analysed the relationship between office automation and administrative efficiency. The results indicate that if the extent of office automation increases then the efficiency of service distribution progresses (Sarafizadeh and Alipour 2014). The application of office automation on issues like efficiency and productivity in the administrative field has a direct effect on the extent of efficiency and impressiveness

According to Dehnavi (2013: 56) and Mirzapour (2010: 35), automation is an effective factor that promotes growth within an organisation and offers great substantive approaches to increase employee efficiency (Armaghan and Garson 2018: 125). The municipal sector’s automation schemes are normally associated with organisational revolutions planned to boost efficiency and policy usefulness (Bellamy and Taylor 2013: 279). Cordella and Tempini (2015: 279) state that automation compels the public sector to be more efficient and effective merely by providing administrative coordination support. Maggitti (2017: 34) states that acceptance of automation within the public sector is frequently driven by a shallow view that favours non-bureaucratic organisational arrangements rather than asking whether automation could advance the ability of community administrations to bring efficient and effective services by leveraging the bureaucracies' aptitude to achieve their mandate of satisfying the greater aims of impartiality, equality and fairness, along with efficient and effective organisational arrangements (Kallinikos 2014: 89).

Perrow (2013: 43) claims that the implementation of automated administrative systems could efficiently and effectively improve the administrative processes without shifting its supporting clarity (Nohria and Berkley 2012: 94). Harry and Dane (2014: 412) assert that automated systems play a critical role, especially in increasing organisational productivity, affecting individuals' attitudes toward their work, improving the efficiency of communication between company consumers/citizens and all office employees, reducing barriers to communication across departments and minimising the amount of face-to-face contact, sharing of recent updates and increasing the level of transparency to customers or citizens.

Ogbonna (2013: 74) emphasise that the functioning and usefulness of organisational office automation needs to be in line with employees' competency and technical support for it to be a success. The predetermined results of office automation adoption are all about the increase of organisational productivity and administrative procedures and revamping office effort rather than increasing efficiency (Naidoo 2014: 121). Pedro, Subosa, Rivas and Valverde (2019), specify the essential aims for presenting automation in challenging organisations is all about multitasking and minimising opportunities of employees' mistakes through decreasing operators' intellectual work burden. However, this is not continuously happening. Nevertheless, workers are mandated to choose whether they use automation when their workload is perceived to be exorbitant (Winroth and Sahre 2017: 39). Dobele, Rundle-Thiele and Kopanidis (2011: 1) advise that municipalities should adopt the usage of technology efficiently in to multitask office procedures within municipalities.

2.7 FACTORS AFFECTING THE USAGE OF AUTOMATED SYSTEMS BY ADMINISTRATIVE EMPLOYEES IN THE PUBLIC SECTOR

The practice of automation technology by businesses is a product of a series of miscellaneous decisions that most frequently come from comparisons of the outcomes of automation introduction (Ariss 2010). Most of the hypothetical frameworks and models are supported by several researchers to examine the practice of new technologies involving automation (Woodside and LaPlaca 2014: 78). El-Gohary

(2012) points out that the decisions to use new automation are affected by the costs of automation and staff competency pertaining to the automation. In the previous years, there was rising concern with regards to the relationship between organisational culture and automation outcomes. Furthermore, organisational culture serves as a barrier towards the acceptance and the use of office automation technology (Zammuto and Connor 2015: 56).

According to Verreyne (2016), organisational culture is merely a personality of the organisation joined with the essential values and ethics that support organisational procedures. Thankur and Panghal (2021) concludes that automation equips and develops employees to perform the tasks that are assigned to them well and improves employee confidence which ultimately contributes to organisational culture. Erdurmazli (2020) elucidates automation systems as influencing the organisational culture through introducing new methods, processes and organisational structure. Furthermore, the organisational structures could be mechanical or organic impacting the creation of varied cultural values within the organisations. Consequently, the anticipated cultural values in mechanical organisations are relatively different from those existing in organic structures. Naile and Plessis (2016: 25) suggests that organisation management should be consistent with automation and make it a significant educating staff of the modern automation system in order to attain a clear understanding and to simply be familiar with the organisational culture.

Organisational technological modernisation is considered to disturb the practice of technologies and it is perceived to be a crucial factor in businesses to revamp and accept the deviations within the working environment (Tabrizi 2016: 98). Several companies use innovation as the major factor to remain competitive and survive longer in the market environment (Eisenhardt and Tabrizi 2015: 56). Garsombke (2017: 39) specifies that supervisors feeling a high sense of satisfaction and safety are identified to create obstacles towards the using automation. Ariss (2010: 100) indicates that “traditional” managers are perceived to be afraid of using modernized technologies that lead to problematic adoption of automation technologies. Furthermore,

management viewpoints regarding automation technologies affect the decisions of using innovative technologies.

An additional factor affecting the usage of technology is that managers do not have enough time to learn the updated technologies (Arab 2015: 346). Deficiency of information and confusion about the benefits of the updated technologies particularly from unpredictable sources lead to reduced satisfaction of and enthusiasm for automation. Therefore, Ariss (2015: 162) argues that as supervisors become more conscious and exposed more to automation technologies, it highly predictable that the implementation of updated technologies might increase. Furthermore, an apparent explanation and well-understood business goals might result in the relevant adoption of technologies (Nambisan and Baron 2019). This is supported by several authors who have argued that having clearly defined and well-understood goals is the most important factors when using the adopted technologies within the organisation (Mendoza, Westjet and Edward 2010). According to Gartenstein (2019: 47), clear organisational goals assist employees to be more enthusiastic, and brave enough in their work when they know precisely what is expected of them. Tacit organisational goals also assist in identifying the success and failures of an organisation and its employees' performances (Ganguly, Talukdar and Chatterjee 2019). Anwar, Mahmood, Yusliza, Ramayah Faezah and Khalid (2020) argues that the approach of the superior management and their behaviour towards the technology, which is proposed in the organisation, has a massive impact upon the standard at which the technologies will be utilised in future. Then, top management should provide an apparent organisational vision regarding organisation processes, training of employees and how employees are expected to use the adopted automation. Organisation size which comprises finance and its market has a great impact on the practice of the adopted automation within the organisation (Hall and Khan 2013: 39). Specific consideration has to be granted to floor workers of the organisation as they work directly with the automation technologies (Burggaf *et al.* 2019). In the case of adopting modern technology, employees' abilities are utilised more within the working environment. Technical support is required more by operators for the specific

automation system to function effectively, or else the cost of training the workers is incurred (Kaber 2018: 7), automation necessitates a certain standard of educating workers to be extra effective while operating the adopted automation system. The possibility of updated automation in the organisation grows if the management shows self-confidence in the capability of the employees Puig and Mohseni (2018) indicates that factors like rapid and convenient access to information, establishing consistency in all matters, swift task performance and accuracy of procedures have a substantial influence on the workers' service delivery. Subsequently, automation has a huge impact on increasing employee performance (Mohseni 2013: 1227).

2.8 TECHNOLOGY ACCEPTANCE MODEL (TAM)

Figure 2.1 is an illustration of the technology acceptance model, which is the conceptual model on which this study is based.

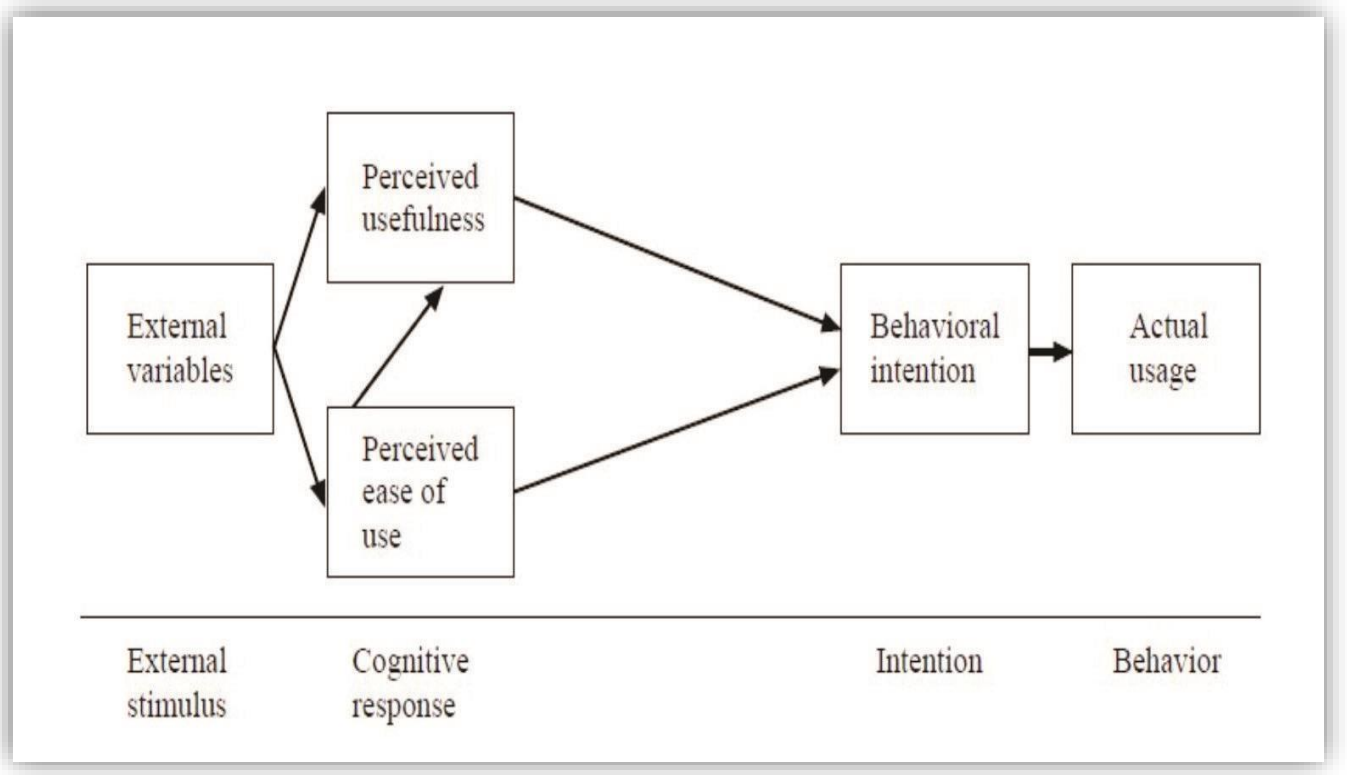

FIGURE 2. 1 TECHNOLOGY ACCEPTANCE MODEL (TAM)

Source: Adapted from Davis and Venkatesh (1996: 20)

Davis and Venkatesh (1996: 20) identify TAM as information systems theory which represents a true reflection of a user's approval and technology implementation. TAM reveals how technology is received and operated by users. The perceived usefulness (PU) and perceived ease of use (PEOU) factors define the exact user attitude concerning the use of technology (Richad, Vivensius, Sfenrianto and Kaburuan 2019: 1270). TAM illustrates that perceived usefulness has an influence on the user's behaviour. Venkatesh (1989: 321) states that arrogance controls the user's behaviour that affects the real acceptance of the TAM model.

Perceived usefulness and perceived ease of use are the perceptions based on users' views that they have regarding the system (Dillon and Morris 2014: 345). (Taufik and Hanafiah 2019) perceived usefulness as a degree whereby a person thinks that using any automated system will increase the performance of the individual, and perceived ease of use as a degree where an individual thinks that using a certain system will exercise less effort.

Arachchilage (2015: 58) state that the TAM creates a highly flexible interactive ICT system to facilitate decision making if a problem is not properly structured, facilitating decision creation deserves important strength and analysis. Tarhini (2015: 59) states that the TAM enables the creation of information sharing within an environment and employees can simply access each other through different departments without interruption. The application of technology encompasses the creation of networks and communication systems among different areas and individuals within an organisation (Beier, Ullrich, Reibig and Habich 2020), companies adopt automation at different phases to enhance service delivery procedure and to upgrade the quality of a product. Shahzad, Xiu, Khan, Shahbaz, Riaz and Abbas (2020) states that the TAM is a cost effective and efficient model that motivates development, promotes growth, supports innovation and improves service delivery. Technologies advance and improve service delivery to clients (Larsson and Lidstrom 2019). Therefore, a TAM has been considered as an apt conceptual model for this study. The TAM was adopted by the study to explore mutual connectivity between external and internal variables that affect the acceptance of automation by the uMshwathi Municipality users and factors which

affect actual behaviour. The model hypothesises an affiliation amongst external variables and both perceived usefulness and ease of use. Furthermore, TAM was used in the study to develop a better idea of why users accept or reject a given automation and how automation can be improved through technology design.

2.9 ADMINISTRATIVE STAFF TRAINING AND TECHNOLOGY COMPETENCIES

Patel (2015: 312) believes that properly trained staff in an administrative environment puts a business in a good position in various ways. Thoroughly trained personnel are highly valued in the business and add value to the entire business. Personnel satisfaction is a vital aspect within an organisation; satisfied employees possess the potential to deal with their assigned tasks effectively, and morale is always at an optimal level, which ultimately increases work production (Ringe, Morales, Chen, Fields, Jaramillo, Hahn and Chan 2020: 11). Training improves personnel confidence and morale when performing tasks. It is imperative to retain staff confidence and provide equitable training for all the members (Sanghi 2016: 74). According Mendling, Decker, Hull, Reijers and Weber (2018: 19), better training in automation for administrative tasks impacts efficient processes positively. Administrative activities could be swiftly achieved only if employees are clearly aware of what is expected of them, and the quality of administrative work will improve. Errors that might delay systems are unlikely to occur if employees are properly trained on automation (Rasmussen 2017: 69). Surr, Gates, Irving, Oyebode, Smith, Parveen, Drury and Dennison (2015) maintains well- trained staff are likely to be able to identify where improvements could be made, thereby resulting in improved productivity. Chatterjee, Chaudhuri, Vrontis, Thrassou and Ghosh (2020) argues that if staff members are not well trained in any adopted ICT system, it is more likely that the system will not be utilised to its full capacity; ultimately this shortcoming will result in slow, stagnant productivity amongst employees. Furthermore, Korner, Muller, Lunau, Dragano, Angerer, and Buchner (2019: 187) claims that employees cannot be relied on to work individually without making faults or decelerating the procedures. Therefore, in order for administrative staff to embrace the adoption of administrative systems, technology

competency is undoubtedly needed; and this can be achieved through training and workshops. Agustina and Kristiawan (2021) argue that if administrative personnel are fully competent in their tasks, then morale increases significantly, which increases the organisation's work output. Nugent (2019) states that Duties could be done rapidly only when the workers are fully competent and aware of exactly what needs to be done. The work outcomes will possibly increase, and administrative errors are less likely to occur. Ogundipe, Ogunde, Olaniran, Ajao, Ogunbayo and Ogundipe (2018) argues that employees lacking in knowledge and skills are likely to have accidents in the workplace, therefore competency assists in eliminating unnecessary accidents in the work environment. Minimum supervision required when the staff know exactly what they need to be doing, therefore, fully competent administrative personnel can be trusted to operate independently without making mistakes or weakening the administrative process (Chiwira 2019: 172). Megan (2016) argues that daily administrative tasks prevent managers from performing the more significant strategic roles. However, modernised technology might lessen the processes within the human resource management department as there are numerous electronic data systems and strategies which could be utilised for those intentions. A massive unemployment rate and a deprived economic situation also affects the local government (Omoleke, Alabi, Shuaib, Braka, Tegegne, Umeh, Ticha, Onimisin, Nsubuga, and Adamu 2018). Information technologies are expected to be an important competency in the development of organisational agility, technology competencies shape organisational agility and firm performance and are expected to directly enhance entrepreneurial and adaptive organisational agility (Bushe 2016: 96).

2.10 SERVICE DELIVERY AT LOCAL MUNICIPALITIES

Thomas (2019) explains service delivery as a common effective and efficient distribution of basic resources to citizens or customers of a specific organisation. Furthermore, service delivery consists of a variety of philosophies and constraints which have to be utilised to control the processes of the service delivery by the provider with an understanding of rendering a reliable service to customers (Zeithaml 2017: 79). Stauss (2015) says that services are not exactly about physical

resources but are about the economic communications where money is exchanged. Prentice, Dominique and Wang (2020) also interprets services as an intangible aid that is performed by machines or employees with the intention of generating the value of perceptions between customers.

Fourie and Malan (2020) states that local South African municipalities were found to provide incorrect information on service delivery and there is a limited social capacity for the improvement of programmes. Gumede (2019: 194) argues that the challenges of controlling municipalities include separation, institutional weaknesses, service delivery backlogs as well as a shortage of finance. Furthermore, local municipalities should provide additional encouragement based on the culture of the community as well as more apparent and responsible governance (Mees, Uittenbroek and Hegger 2019: 198). Sapkota, Dhungana, Poudyal, Chapagain and Gritten (2020) argues that local municipalities should develop the capacity to reply to the needs of communities in their vicinity of authority. Local municipalities should perform a crucial role in ensuring a democracy in the entire level (Jesuit and Synch 2017).

Lima, Chinelli, Guedes, Vazquez, Hammad, Haddad and Soares (2020: 1025) outlines that citizens are the core of every municipality and should always be the top priority. According to the study conducted by McKinsey (2019), in order to provide excellent customer service, local municipalities should firstly understand the needs, experiences and discomfort points of the citizens. Hutchinson (2020) adds that local municipalities need to ensure that they provide citizens with multiple ways to share their feedback, for instance, through telephone surveys or feedback forms sent via emails, and municipalities should also establish a complaint system that will better enable customers to raise their issues.

According to Sbragia (2019: 67) several municipalities are perceived as incapable of offering services of quality to their immediate residents which could happen as a result of a shortage of finances or absence of the ability to deliver the best service at a reasonable price. Such municipalities have to obtain some alternative procedures ensure that the services are upgraded and satisfy the recipient’s needs (Nielsen 2018:

19). Olsen (2015: 98) reveals that the most significant factor to be taken into consideration by municipalities is the standard at which the service is delivered, where the choice of the level of a certain service is affected by reliability and community needs. Therefore, municipalities should develop a decision regarding the standard of services and consider the length of term viability when providing a service at that standard (Noonan, Nugent and Scales 2018). The municipal skills and connection between the municipality and its citizens could aid the board to precisely determine the desires of the public and whether they are being achieved. Sweeny (2019) elucidates that effective service in organisations are guided by a comprehensible strategy that aligns service initiatives to overall corporate goals and objectives whereby the strategy describes how service operations contribute to the attainment of specific corporate objectives. Local municipalities should have some surveys to investigate the level of service initiatives on customers with active feedback mechanisms to assure the accomplishment of corporate objectives (Schmidthuber, Piller, Bogers and Hilgers 2019: 343). Lyons and Ingersoll (2018) identify these South African municipalities located in Sisonke, Zululand, uMkhanyakude and Umzinyathi as being unable to deliver adequate service to their respective inhabitants, this might be the result of poor capacity to deliver efficient services at reasonable prices. Lama (2016) argues that underperforming municipalities must acquire alternative ways to ensure that services are well developed to suit the needs of people. It is conceivable that for the municipality to progress and increase the distribution of services by improving their capabilities, a developed skill might allow municipalities to offer effective and efficient service distribution. (Mudambi 2016). Better communication between the municipality and citizens could assist in finding the best possible ways to use available funds. Better technical skills will improve the delivery of municipal services (Steiner, Kaiser, Tapscott and Navarro 2015).

Makanyeza, Kwandayi and Ikobe (2013) indicate that the key approaches to expanding service delivery are to increase residents' participation in the activities of the local municipalities and cooperation with the public pertaining to service delivery, a flexible reply to service operator grievances, rendering value for money and certifying that service recipients pay their bills timeously. Service distribution of superior quality is essential for service providers who pursue rendering valued service

consistently to their regular customers. However, through the provision of superior service quality, companies could reach great customer satisfaction, loyalty, and consequently, sustained profitability.

Hadi, Aslam and Gulzar (2017: 2408) reveals that service distribution of superior quality is essential for service providers who pursue rendering valued service consistently to their regular customers. However, through the provision of superior service quality, companies could reach great customer satisfaction, loyalty, and consequently, sustained profitability (Dandis, Wright, Wallace, Mukattash, Haj and Cai 2021). Ghobakhloo and Fathi (2019) indicate that to deliver a service of superior quality the organisation has to properly plan how they will effectively distribute the service to their customers and ensure the successful application of the real plan. Therefore, the best preparation and effective application of advanced delivery plans are crucial features of the service distribution system.

According to Leslie (2019) effectiveness is more in relation with the degree to which the system's purposes have been attained and an active service distribution system is exactly the one that is capable of offering the results for which it was initially intended and established. Service distribution systems should frequently be able to create numerous optimistic outcomes, ranging from abridged charges, increased accessibility of efficient operations, upgraded service quality and optimal client practice (Mansell 2020).

Gartner (2013: 145) indicates that improvements and acceptance of automation have revamped service delivery in an impressive manner and has positively impacted self-service preferences and service support. Companies adopted automation at different phases to enhance service delivery procedure and to upgrade the quality of a product (Mangiaracina, Perego, Seghezzi and Tumino 2019). Zinn (2016: 56) states that TAM is a costly and effective model that is motivating development, promoting growth, supporting innovation and improving service delivery. Technologies advance and improve efficient and effective service transfer to clients (Larsson and Lidstrom 2019).

Service delivery in local municipalities in South Africa remains a big challenge seemingly perceived as lacking in infrastructure, resources and maintenance, they

are unable to provide communities with quality service delivery in fast turnaround time (Olojede, Agbola, and Samuel 2019). Mubangizi (2021) claims that poor service delivery in municipalities is caused by numerous factors, for instance, municipalities are not financially self-sufficient and lack the necessary infrastructure and resources to carry out their duties to the larger public. Laubscher (2012) identified that local municipalities lacked expertise, an inability to collect arrear debt, there was extensive corruption, and employers earned exorbitant salaries and bonuses. Lunga, Lubbe and Meyer (2019) stated that uMshwathi Municipality is struggling with the challenges of infrastructure backlogs and administration, uMshwathi Municipality also face an insufficient procurement plan which leads to poor customer service that reduces the number of customers interacting with the municipality. Ariatti (2013) outlined that the challenge in respect of the uMshwathi local Municipality is to attempt to promote the utilisation of natural resources merely to generate more income which will assist to strengthen and develop Municipal infrastructure to render quality of service delivery. Weaver, Hamer, O'Keeffe and Palmer (2017) identified clean water, job opportunities and free basic services as the main service delivery challenges facing municipalities in South Africa, political interference in the administration of municipalities is also a further challenge. Poor service delivery and general poor government services lead to the decline of resources, zero job opportunities, job losses and overall poor living conditions.

Hofstetter, Bolding and Koppen (2020) argues that service delivery in South Africa remains a big challenge for municipalities, by lacking in infrastructure, resources and maintenance, they are unable to provide communities with quality service delivery in fast turnaround time. Effective and reliable service delivery is one of the biggest challenges South Africa faces, this is largely due to the municipalities across the country not having the required resources to fulfil the delivery of basic services to communities (Mawela, Ochara and Twinomurinzi 2017).

2.11 CONCLUSION

This chapter has provided appropriate literature on automation effectiveness, challenges and opportunities in adopting automation processes in the workplace. This chapter also discussed TAM which is the theoretical framework adopted by the study

to explore the common relationship between external and internal variables that affects the adoption of automation in the workplace. The chapter provided a short introduction on local municipalities recent hindrances and the detailed difficulties encountered by the local municipalities within the South Africa. The next chapter will discuss the research methodology that was adopted to conduct this study.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 INTRODUCTION

This chapter outlines and explains the research methodology used in this case study. According to Saluveer, Raun,Tiru, Altin, Kroon, Snitsarenko, Aasa and Silm (2020) research methodology is a methodical gathering of information with the intention of gaining data from it to resolve the research problems. In this chapter the research design, population, case study, sampling, data collection instruments ,pilot study, the administration of questionnaires, ethical considerations and validity and reliability are discussed.

3.2 RESEARCH DESIGN

According to Andrew (2018: 45), a research design is a combination of approaches and procedures used in gathering and analysing data of specified variables of the research problem. Gall and Borg (2018: 78) consider research design as a strategy of guiding research that is applied to answer research questions. Greenland (2014: 167) further states that a research design is an inclusive strategy that is selected to integrate the diverse components of research into a comprehensible and reasonable way, confirming the research to successfully address the research problem. It establishes the plan for the gathering, measurement and analysis of accumulated data. Schulz (2016: 175) indicates that the role of a research design is to certify that evidence gained allows a researcher to effectively address the research problem reasonably and as explicitly as possible**.** Hence, the research design offers a chain of choices of how best to answer the research questions

This study was conducted through a census research method whereby the study included all administrative staff employed by the uMshwathi Municipality to ensure that

the data collected is valid and comprehensive. This research approach places quality on the objectivity and reliability of conclusions and boosts repetition (Drew and Hill 2014: 121). The study adopted a quantitative method where data were gathered through questionnaires where the entire participants set had an equal chance to participate in the study. SPSS data analysis tool was adopted to analyse collected data.

3.3 QUANTITATIVE RESEARCH APPROACH

This research adopted a quantitative approach. Leedy and Ormrod (2015: 28) claim that the quantitative research approach includes the association between two or more phenomena. Quantitative research can be in an experimental or a descriptive form. Quantitative research explains the aims of measuring the social world objectives and testing hypotheses to predict employees' behaviour (Mohajan 2020). Furthermore, it is based on numerical illustration and management of interpretations. According to Noriey and Javanmiri (2021), positivist research is comprised of arithmetic measurement and numerical data which evaluates the quantities by scrutinising social phenomena. Positivist research includes the involvement of vast representative samples, which are equally structured in terms of data collection processes (Tesch 2015: 1).

Leedy and Ormond (2016: 46) state that the quantitative method is a research method that is used to provide relevant answers to questions related to measured variables to explain, predict and control phenomena. A quantitative research approach can be called an experimental or a positivist research approach. Gunbayi (2020), reveal that positivist research is commonly quantitative and includes the practice of numerical measurement and statistical analyses of measurements to scrutinise social phenomena. It views certainty as comprising of phenomena that could be observed and measured and relies strongly on observations, preliminary investigation, quantitative questionnaires and focuses more on the gathering and analysis of statistical data (Creswell 2012). Quantitative research is a process whereby evidence is evaluated, theories and hypotheses are refined, and technical advances are made

to validate and increase the reliability of data gathered. (Welman, Kruger and Mitchell 2014: 98).

Durden (2017: 521) states that the main goal of a quantitative study is the delivery of a comprehensive, detailed explanation of the research theme, it is frequently more investigative in nature. Witz (2018: 79) agrees that quantitative research focuses further on counting and categorising features and creating statistical models and figures to describe the precise occurrence which was observed. A skillful objective of testing and experimentation eventually either provides the strengths or casts off the hypotheses, each phase is consistent to lessen bias when gathering and analysing data and it produces outcomes that are useable, consistent and generalisable to a huge population (Rodda 2019: 271).

3.4 POSITIVIST APPROACH

This research study explored the critical challenges in automation technology systems for efficient service delivery within the uMshwathi Municipality and is located within the positivist paradigm. According to Tomlinson (2017: 159), positivism is normally conducted to describe the type of study approach of an organisation. It depends on scientific evidence, like experiments and statistics. It discloses the true nature of organisational operations (Wilson 2010: 23). Wilson (2010: 72) claims that in positivism studies, the researcher's character is restricted to data gathering and providing explanations which are in line with the prescribed objectives. This means that positivist research maintains that only accurate data is gathered from questionnaires (Lancaster 2016).The research findings under this research method are commonly observable and quantifiable.

3.5 POPULATION

According to Denscombe (2010: 23), a population is the total number of participants, individuals or units who qualify on the basis of the selection criteria of the group that

is entitled to be studied; a representative sample serves to conduct a thorough inspection. The overall population is known as the universe. Therefore, a population is a complete collection of units that a researcher uses to create certain conclusions (Welman, Kruger and Mitchell 2010: 52). For this study, the entire administrative personnel employed by the uMshwathi Municipality was targeted for the study because they are based in an administrative environment where they often interact directly and indirectly with citizens and are first-hand users of any adopted administrative systems in the organisation.

3.6 SAMPLING

Lemmer (2011) and Sekaran and Bougie (2013) describe sampling as the process used to select a portion of the population for a study. Kruger (2012) defines sampling as a method of choosing an adequate number of relevant elements from a population; therefore, the sample properties and its characteristics assist to create possible properties and characteristics of population elements. Sampling is a method used to choose a minor group that represents the characteristics of the whole population (Mehrabi, Morstatter, Saxena, Lerman and Galstyan, 2021).

According to Gilchrist (2015: 79), the research is commonly comprised of two forms of sampling techniques, namely, probability sampling and non-probability sampling. According to Sekaran and Bougie (2013: 245), probability sampling is where participants in the acknowledged population have a known chance, which is termed as a “nonzero” chance, of being selected in the sample for data collection. Leslie (2021) explains that non-probability sampling is a non-random sampling technique where members of the population have no equal chance to participate in a study, whereas, in probability sampling, each participant has a known opportunity of being a part of the study. Due to the nature of this research study census method was identified as the appropriate method.

Suryanarayan (2021) indicates that the census method uses a complete enumeration of a universe. Census is also identified as a comprehensive enumeration technique or 100 percent enumeration method. Under the census method, each element or component creating the universe is chosen for data collection. A census method provides accurate and valid information (Leandro 2013: 353). Rubin and Tyson (2019) indicates that census and sampling are the methods of data collection from a population which are used by several researchers, census is related more to quantitative research whereby the entire members of the population are enumerated, whereas sampling is a commonly used technique in statistical testing, in which a data set is chosen from the huge population which represents the whole group**.**

According to Kjoss and Litvaitis (2016: 52), a census is a very time-consuming method of survey and ultimately provides quality and accurate data, whereas in the case of sampling the survey period does take a long time and it might eventually provide inaccurate data. The results received by conducting a census is accurate and consistent while there are probabilities of faults in the results drawn from the sample (Chen, Wang and Zhou 2018). Cvent (2019: 20) argues that adopting a census frequently results in adequate respondents to have a significant degree of statistical self-assurance in the survey results. If the population is less than 1 000 individuals, then every individual has to be surveyed to achieve statistical confidence. The census method used in this study reduced the monetary cost and the time spent in data collection.

3.7 CASE STUDY

Zineldin (2017: 162) describes a case study as a method that provides facts to the study, it also turns opinion into information that can be verified as a fact because there is a proven path of positive or negative development. It provides in-depth details about the path of development which gives extra credibility to the objective observer. Bradshaw, Atkinson and Doody (2017) agrees that a case study allows the researcher

to stay actively engaged in the data collection process and participants are able to further their knowledge; it also forces people to make a decision about the question being studied and defend the participants' position through the use of the facts. The case study method puts data into a usable format for those who read the data and note its outcomes. It designed to limit the influence of bias by collecting fact-based data, Grassel and Schirmer (2006) also indicate that case study research reports of past studies allow the exploration and understanding of complex issues. It can be considered a robust research method particularly when a holistic in-depth investigation is required.

A case study is a research methodology that has been commonly used in social sciences. Ebneyamini and Sadeghi Moghadam (2018: 16) argue that a case study is a research strategy and an empirical inquiry that investigates a phenomenon within its real-life context. A case study is a descriptive and exploratory analysis of a person, group or event. Moser and Korstjens (2018) states that case studies allow a lot of detail to be collected from a small group that would not normally be easily obtained by other research designs. The data collected is normally a lot richer and of greater depth than can be found through other experimental designs. The case study allows a much more detailed study that would not be possible with a large sample (Gilbert 2008: 36). It is characterised by a very flexible and open-ended technique of data collection and analysis.

According to Winston (2012: 34), compared to other methods of research, the case study method is rather inexpensive. The costs associated with this method involve accessing data, which can often be done for free and also puts data into a usable format for those who read the data and note its outcome, therefore due to the small size of administrative staff employed by the uMshwathi Municipality the census was perceived more appropriate to collect data from the participants. A case study was selected to assist in bringing deep understanding with regards to the effectiveness of the automation system at the uMshwathi Municipality.

3.8 DATA COLLECTION INSTRUMENTS

Sekaran and Bougie (2010: 180) define primary data as first-hand information gathered by the researcher, whereas secondary data include information collected directly from existing sources. Primary data were gathered from the uMshwathi Municipality administrative personnel through questionnaires. Primary data were collected from participants to eloquently provide quality and viable answers on the effectiveness of automated systems towards the improvement of service delivery within the uMshwathi Municipality. Primary data were also used to acquire the latest and updated data about the quality of service delivery offered by the uMshwathi Municipality. Thereafter, the data were manipulated, coded, captured and analysed by SPSS (version 26.0) for descriptive and frequency data analysis. Tibshirani (2014: 168) reports that primary data are pure and original. This study collected secondary data from journal articles, books and the Internet. This means that the study comprised data that has already been collected by some other researchers or investigators in the past and is available in published form. Secondary data collection was adopted because it is quicker and cheaper while primary data are original and relevant to the topic of the research study, so the degree of accuracy is at an optimum level (Shivakumar 2017: 140). Data collection instruments comprise interviews, observation and questionnaires. Observation is normally conducted by means of description, methodical observation, recording, interpretation and analysis of participants' behaviour. Results are considered favourable because the researcher is able to collect deep and accurate information via observation regarding phenomena (Duong 2014: 23). Interviews deal with the collection of data that are more descriptive in research, like surveys. Interviews collect data that are more valid and reliable in certain types of research. Interviews commonly depend on open-ended questions. The study used questionnaires as the data collection method. Robinson and Leonard (2018) describe a questionnaire as a tool used to gather data using a standardised sequence of questions pertaining to research questions, and respondents answer questions in writing. Questionnaires are quick and easy to collect results with mobile tools from a large audience and allow easy analysis of results; furthermore, they allow for complete invisibility, which guarantees the anonymity of the respondents (Lovelock *et al.* 2016: 359). Questionnaires makes it easier to obtain responses from a large number of

people, and the data gathered may therefore be seen to generate findings that are more generalisable (Ahmad, Wasim, Gogoi, Srivastava and Farheen 2019: 2). Urban (2017) describes questionnaires as instruments used to gather equivalent information from participating members, who answer the same questions, Open-ended questions express the true reflection about participants' feelings about an issue, and about people's behaviour. Luu (2019) advise that enquiries included on a questionnaire must provide individuals with the potential to contribute collectively to data gathering, which is essential for the successful achievement of the research objectives. Kovach (2017: 98) states that questionnaires allow for the collection of data from a large audience; the questionnaire is naturally quantitative and provides a convenient analysis of results. Olsen (2015: 345) believes that questionnaires possess unlimited potential if they are used correctly. Evans (2015: 313) claims that an online survey can lead to bias, low response rates and a host of other potential issues. Scholl (2016: 341) states that in online surveys some people may be frustrated and exit a survey without finishing the entire questionnaire. There is usually no human contact in online surveys which can limit the ability to for probe in-depth responses (Evans 2015: 217). Occasionally online surveys may be interrupted by technical problems that affect the user experience and subsequently the quality of entire online surveys (Llieva 2016: 241), therefore this study did not adopt an online survey.

Lovelock et al. (2016: 361) purport that the drop-off approach of the questionnaire may generate significantly higher response rates than standard mail deliveries, thus potentially reducing the nonresponse bias. An advantage of the personal delivery approach is that survey takers may be better able to encourage participation and to counter possible objection than a mere covering letter (Rodríguez 2017). Questionnaires used for the collection of information in this study consisted of closed- and open-ended questions. The questionnaires were distributed physically to the target sample and collected from them after completion. The researcher was available to explain any part of the questionnaires that were not understood by the participants to promote the participants' capability to provide relevant and exclusive responses.

3.9 PILOT STUDY

Fink (2010: 184) defines a pilot study as the purpose of increasing the reliability of questionnaires. A pilot study is a significant and imperative part of the research, particularly if questionnaires are used properly to gather data. Sekaran and Bougie (2013) believe that 10 percent of the sample size is appropriate for checking the reliability and validity of the research questionnaire. Guido (2017: 70) states that a pilot study prevents falsified work from being accepted within an area of study and provides valuable feedback so that a researcher can revise and improve the standard of the questionnaires. A pilot study presents particular issues that may potentially have an antagonistic impact on the survey results; it also tests the correctness of the instructions to be measured and whether all the respondents in the pilot sample are able to follow the directions as indicated (Rantanen, Portegijs, Kokko, Rantakokko, Tormakangas and Saajanaho 2019). A pilot study was randomly conducted on 10 administrative staff at the uMshwathi Municipality to improve the questionnaire, and those individuals were not included in the actual study. The questionnaires were also sent to a research expert within the administration field and to the statistician to improve the quality of the instrument and ensure that there was no ambiguity. The researcher was accessible to the pilot group to provide clarity on any of the questions. Subsequently, no ambiguity and errors were identified and as a result, no amendments were made to the questionnaires.

3.10 ADMINISTRATION OF QUESTIONNAIRES

Questionnaires were checked and approved by the supervisors to ensure that the questions were clear and unambiguous. The questionnaires were distributed by hand to all the participants within the uMshwathi Municipality with a clear cover letter describing the aim of the study. The researcher distributed questionnaires to the entire municipal administrative personnel and in other departments managers and supervisors provided assistance to distribute and motivate employees to complete the questionnaires. Employees also personally volunteered to distribute the

questionnaires to their colleagues who were at the workplace during the questionnaire distribution period. It took the researcher almost two weeks to receive all the completed questionnaires.

3.11 RELIABILITY AND VALIDITY

Duking, Fuss, Holmberg and Sperlich (2018) indicates that validity is foremost in the mind of those developing measures and that genuine scientific measurement is foremost in the minds of those who seek valid outcomes from the assessment. Validity is the core of any form of assessment that is trustworthy and accurate (Dunking *et al.* 2018). Validity according to Mohajan (2017) always refers to the degree to which empirical evidence and theoretical rationales support the adequacy and appropriateness of interpretations and actions based on test scores.

Reliability is an investigation or a tool that is seen as being reliable when it can be used by a number of different researchers under stable conditions with consistent results (Wallen 2016: 7). Reliability reflects consistency and replicability over time, reliability is seen as the degree to which an investigation is free from measurement errors (Martín, Loturco, Hunter, Rodríguez and Munguia 2017). Therefore, appropriate methods were chosen and implemented carefully and used consistently. Measurement techniques were of a high quality in order to produce valid and accurate data to ensure reliability and validity of the research. A pilot study was conducted by the researcher to ensure the reliability of the study; therefore, the questionnaires were distributed among ten administrative workers employed by the uMshwathi Municipality who were excluded from the main study. This ensured that the research instrument was reliable, and the pilot study showed that the questions were found to be simple and easily understood by the piloted participants. The pilot study assisted in recognising minor grammatical errors prior to the administration of the tool.

Tavakol and Dennick (2011: 53) indicate that it is conceivable to accurately measure the reliability of the tool and Cronbach’s alpha is commonly utilised to objectively

measure the reliability. Furthermore, improper use of Cronbach's alpha could lead to circumstances in which a test or scale could be incorrectly discarded which might result in a test being criticised for not producing trustworthy results. Therefore, in this research, a qualified statistician applied the Cronbach's alpha.

3.12 ETHICAL CONSIDERATION

The researcher must always protect the identities and confidentiality of respondents who are involved in the study. It is important for a researcher to consider the ethics of research. The researcher should avoid including information that might cause discomfort to respondents during the research process, and be transparent about any possible risk, profit and the aim of the study (Resnik 2011: 98). The research must be properly planned to obviate confusing outcomes that might have a negative impact on the study. The researcher is obliged to ensure the safety and dignity of the research subjects (Harriss, MacSween and Atkinson 2017). Tripathi, Khatri and Mamde (2020) emphasises that the researcher should adhere to the predetermined guidelines and authority prior to the initiation of the study. It is the duty of the researcher to rectify any erroneous data from the findings. Ethical consideration serves as a norm and standard of conduct, which regulates the selection and behaviour of the researcher to the study respondent (Cooper and Shindler 2009: 116). The researcher should refrain from any possible bias by adhering to ethical standards in the research design. Ethics play a vital role in the exclusion of dishonesty. Ethical consideration confirms confidentiality and anonymity of data gathered from respondents (Burles and Bally 2018).

All respondents were kept anonymous; no names or surnames were required. Individuals were informed that data collected is to be stored for five years in a lockable cupboard and only the researcher and the supervisors will have access to the data.

A gatekeeper's letter (Appendix A) was also obtained from the uMshwathi Municipality. This was imperative to ensure that permission is granted to conduct research at uMshwati Municipality. A letter of information and a consent form were attached to the questionnaire (refer to Appendix: C) providing a brief introduction and purpose of the study, and an explanation of the procedures of the study. The researcher guaranteed the respondents that the provided data are to be retained anonymous and private. The information letter provided a brief outline with regards to the study and the terms as well as conditions of participation in this research study.

3.13 CONCLUSION

This chapter presented the research design and methodology of the study. The reasons for selecting the questionnaires to collect quantitative data to address the research objectives were elucidated. Questionnaires were laterally discussed with an administration expert and statistician before conducting the pilot study to ensure validity and reliability of the data collection instruments. This chapter of the research methodology provided information pertaining to the whole procedure that was used to collect data, aiding the researcher to effectively respond to research questions, and to provide the necessary recommendations from information obtained from the targeted respondents

CHAPTER FOUR

STATEMENT OF FINDINGS, INTERPRETATION AND DISCUSSION OF THE DATA

4.1 INTRODUCTION

Chapter Three provided comprehensive descriptive information with regards to the research design and methodology which includes the quantitative research approach, population, case study, information collection instruments, pilot study, ethical consideration as well as analysis of data. This chapter presents the results and discusses the findings obtained from the research instrument utilised in this study. A questionnaire was the primary tool that was used to collect data and was distributed to all the employees of the uMshwathi Municipality. The data collected from the responses were analysed using the Statistical Package for the Social Sciences (SPSS) version 26.0. The results are discussed and presented in the form of graphs, cross-tabulations and other figures. Inferential techniques include the use of correlations and chi-square test values.

4.1.2 THE RESEARCH INSTRUMENT

The research instrument consisted of 36 items, with a level of measurement at a nominal or an ordinal level. The questionnaire was divided into two sections with closed- and open-ended questions.

4.1.3 RELIABILITY STATISTICS

The two most important aspects of precision are reliability and validity. Reliability is computed by taking several measurements on the same subjects. A reliability coefficient of 0.70 or higher is considered as “acceptable”.

The table below reflects the Cronbach's alpha score for all the items that constituted the questionnaire.

TABLE 4. 1 RELIABILITY SCORE

Number	Section	Number of Items	Cronbach's Alpha
1	Challenges in adopting an automated system (processes) within the uMshwathi Municipality.	8	0.837
2	The effectiveness of automation on service delivery within the uMshwathi Municipality.	8	0.862
3	The current automation processes being used within the uMshwathi Municipality.	6	0.864
4	How effective is automation for the improvement of service delivery within the uMshwathi Municipality?	1	N/A
5	What are the critical challenges and opportunities arising in adopting the automation system within the uMshwathi Municipality?	1	N/A
6	What recommendations can you provide to improve office automation on administrative procedures in the office environment of the uMshwathi Municipality?	1	N/A

The reliability scores for all the sections, namely, challenges in adopting automated systems (processes) within the uMshwathi Municipality, the effectiveness of automation on service delivery within the uMshwathi Municipality and the current automation processes being used within the uMshwathi Municipality exceed the

recommended Cronbach’s alpha value which was tested at 0.70. This indicates a degree of acceptability and consistent scoring for these sections of the research.

4.1.4 FACTOR ANALYSIS

Factor analysis is a statistical technique whose main goal is data reduction. A typical use of factor analysis is in survey research, where a researcher wishes to represent a number of questions with a small number of hypothetical factors. For example, as part of a national survey on political opinions, participants may answer three separate questions regarding environmental policy, reflecting issues at the local, state and national level. Each question, by itself, would be an inadequate measure of attitude towards environmental policy, but together they may provide a better measure of the attitude. Factor analysis can be used to establish whether the three measures do, in fact, measure the same thing. If so, they can then be combined to create a new variable, a factor score variable that contains a score for each respondent on the factor. Factor techniques are applicable to a variety of situations. A researcher may want to know if the skills required to be a decathlete are as varied as the ten events, or if a small number of core skills are needed to be successful in a decathlon. You need not believe that factors exist to perform a factor analysis, but in practice, the factors are usually interpreted, given names, and spoken of as real things. Factor analysis was used in the study with the intention of reducing the large number of variables into fewer factors, in order to extract maximum common variance from all variables and put them into a common score which impacts a linear data relationship. Factor analysis also includes relevant variables into analysis which concentrates the study on a true correlation among variables and factors. Factor analysis provided simplicity and clarity on the results of this study.

The matrix tables are preceded by a summarised table that reflects the results of KMO and Bartlett's Test. The requirement is that Kaiser-Meyer-Olkin Measure of Sampling Adequacy should be greater than 0.50 and Bartlett's Test of Sphericity less than 0.05.

In all instances, the conditions were satisfied which allowed for the factor analysis procedure. Therefore, the research amalgamated inclusive questionnaires based on the effectiveness of automation at the uMshwathi Municipality. Subsequently, the questionnaires were encoded and captured on a predetermined sequence, then questionnaires were finally analysed through SPSS version 26.0 and then the reduced and cleansed data were represented via tables and graphs.

4.1.5 KMO AND BARTLETT'S TEST

As indicated in the table below, all the conditions were satisfactory for factor analysis. That is, the Kaiser-Meyer-Olkin Measure of Sampling Adequacy value should be greater than 0.50 and Bartlett's Test of Sphericity sig. value should be less than 0.05.

TABLE 4. 2 KAISER-MEYER-OLKIN AND BARTLETT'S TEST

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.824
Bartlett's Test of Sphericity	Approx. Chi-Square	1696.709
	Df	231
	Sig.	0.000

4.1.1 THE SAMPLE

As indicated in Chapter Three, 150 questionnaires were disseminated and collected from the participants. This yielded a 100% response rate. The study was conducted through a census research method whereby the researcher physically distributed questionnaires to each municipal employee, in some departments, managers and supervisors provided assistance to distribute and motivate employees to complete the questionnaires, Employees also volunteered to distribute the questionnaires to their colleagues who were not at the workplace during the questionnaire distribution period.

This research study adopted a quantitative method whereby information was collected via open- and closed-ended questions. SPSS (version 26.0), a data analysis tool, was adopted to analyse the data collected from the participants.

4.1.6 DESCRIPTIVE ANALYSIS

Anastas (2013: 433) outlines a descriptive analysis as summarising and simplifying information, which is given by the sets of numbers, however, inferential statistical analysis emphasises simplification from illustrations to inhabitants and responding to the questions as to how specific variables might relate to each other.

Privitera (2015: 05) defines a descriptive statistic as procedures that are used to summarise, organise and make a sense of the set of the scores and observations, and frequently provide graphical information and in a table form. Raykov and Marcoulldes (2013: 07) further elucidate that descriptive statistics embrace approaches that complete numerous graphical displays offering valuable insights into the science or utilise arithmetical data descriptions through summary indexes that might encompass vital information regarding the research questions.

Descriptive statistics is regarded as a practical guide that produces numerous categories of statistics that form a foundation of quantitative research utilising tables, charts and graphs. Graphic tools could advance the preparedness of research reports (McNabb 2015). Furthermore, descriptive statistics recap and define the sample of data, which could be generalised to the population. Descriptive statistical analysis is demarcated as science intended to assist a researcher to gather, arrange and analyse realistic data (Vieira 2017: 07).

4.1.7 INFERENTIAL STATISTICS AND CHI-SQUARE

Privitera (2013: 04) outlines that inferential statistics commonly aids the analysis and evaluation of data collected from targeted participants. The chi-square can be demarcated as the totality of a squared variance as well as expected frequencies which are separated by expected frequencies (Calmorn 2010:183). Inferential statistics are used to make assumptions for inferences about a population from the measurement taken of sample units drawn from the population (Krishnaswami and Satyaprasad 2010:161). There are three inferential statistical tests, namely, the z-test, t-test and the chi-square. The z-test and the t-test are parametric tests that require us to make certain assumptions about estimates of population characteristics, or parameters. The chi-square test (also known as the nonparametric test) is a test that does not involve the use of any population parameters, and the underlying distribution does not have to be normal (Jackson, 2012: 190). The reason for using inferential statistics is to attempt to reach conclusions as to what the population might expect and perceive from the adopted automation. Basically, the study adopted inferential techniques for the correlations as well as chi-square test standards.

4.2 SECTION A: BIOGRAPHICAL DATA

This section summarises the biographical characteristics of the respondents.

4.2.1 GENDER DISTRIBUTION BY AGE

TABLE 4. 3 GENDER DISTRIBUTION BY AGE.

		Gender		Total
Age group		Male	Female	
16-25	Count	8	7	15
	% within Age group	53.3%	46.7%	100.0%
	% within Gender	9.6%	10.4%	10.0%
	% of Total	5.3%	4.7%	10.0%
26-35	Count	25	21	46
	% within Age group	54.3%	45.7%	100.0%
	% within Gender	30.1%	31.3%	30.7%
	% of Total	16.7%	14.0%	30.7%
36-45	Count	29	20	49
	% within Age group	59.2%	40.8%	100.0%
	% within Gender	34.9%	29.9%	32.7%
	% of Total	19.3%	13.3%	32.7%
46-55	Count	19	15	34
	% within Age group	55.9%	44.1%	100.0%
	% within Gender	22.9%	22.4%	22.7%
	% of Total	12.7%	10.0%	22.7%
56-65	Count	2	4	6
	% within Age group	33.3%	66.7%	100.0%
	% within Gender	2.4%	6.0%	4.0%
	% of Total	1.3%	2.7%	4.0%
Total	Count	83	67	150
	% within Age group	55.3%	44.7%	100.0%
	% within Gender	100.0%	100.0%	100.0%
	% of Total	55.3%	44.7%	100.0%

Overall, the ratio of males to females is approximately 5:4 (55.3%: 44.7%) ($p = 0.191$).

Within the age category of 36 to 45 years, 59.2% were male. Within the category of males (only), 34.9% were between the ages of 36 to 45 years which formed 19.3% of the total sample.

The age distributions are not similar as there are more respondents younger than 45 years ($p < 0.001$). These findings revealed that there were more male than female participants in this research study.

4.2.2 YEARS OF SERVICE WITHIN THE MUNICIPALITY

Figure 4.1 below indicates the length of service of the respondents.

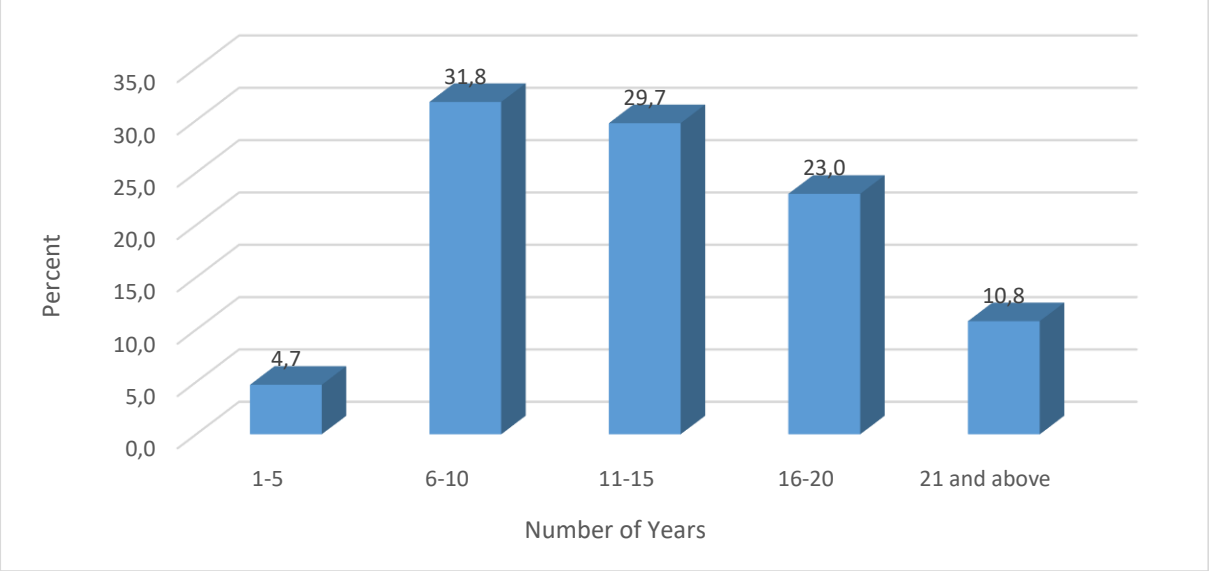

FIGURE 4. 1 YEARS OF SERVICE

As reflected in Figure 4.1, approximately 95% of the respondents had been in employment for more than 5 years ($p < 0.001$) within the uMshwati Municipality. This implies that respondents had been employed for a while and this is a useful fact as it indicates that the responses came from experienced workers who were capable of providing the necessary data and information needed to answer the objectives of this study.

4.2.3 DEPARTMENTS

The table below indicates the departments to which the respondents belonged.

TABLE 4. 4 DEPARTMENTS IN THE UMSHWATHI MUNICIPALITY

Departments	Frequency	Percent
Water Supply	27	18.0
Electricity and Gas Supply	18	12.0
Sewage Collection and Disposal	12	8.0
Parks and Recreation	9	6.0
Street Lighting	6	4.0
Roads and Storm Water Drainage	5	3.3
Refusal Removal	4	2.7
Health Services	3	2.0
Other	66	44.0
Total	150	100.0

Table 4.4 above reflects that most respondents (44.0%) belonged to departments not listed as an option such as Fire fighters, home affairs, Social Development, Traffic Department, Library and Licencing department. The two other departments that had high numbers of respondents were Water Supply (18.0%) and Electricity and Gas Supply (12.0%) ($p < 0.001$). The data presented by the table above indicate the percentage of employees within departments where the data were gathered from, whereas water supply and electricity departments embrace a bulk of employees within the municipality.

4.3. ANALYSES OF SCORING PATTERNS OF THE RESPONDENTS

The section that follows analyses the scoring patterns of the respondents per variable per section. The results are first presented using summarised percentages for the variables that constitute each section. Results are then further analysed according to the importance of the statements.

4.3.1. COMPUTER PROGRAMMES

This section is realistically demonstrating the usage level of the variety of computer programmes which is frequently used within the uMshwathi Municipality to render service delivery to the citizens

4.3.1.1. DIGITAL SYSTEMS/DEVICES

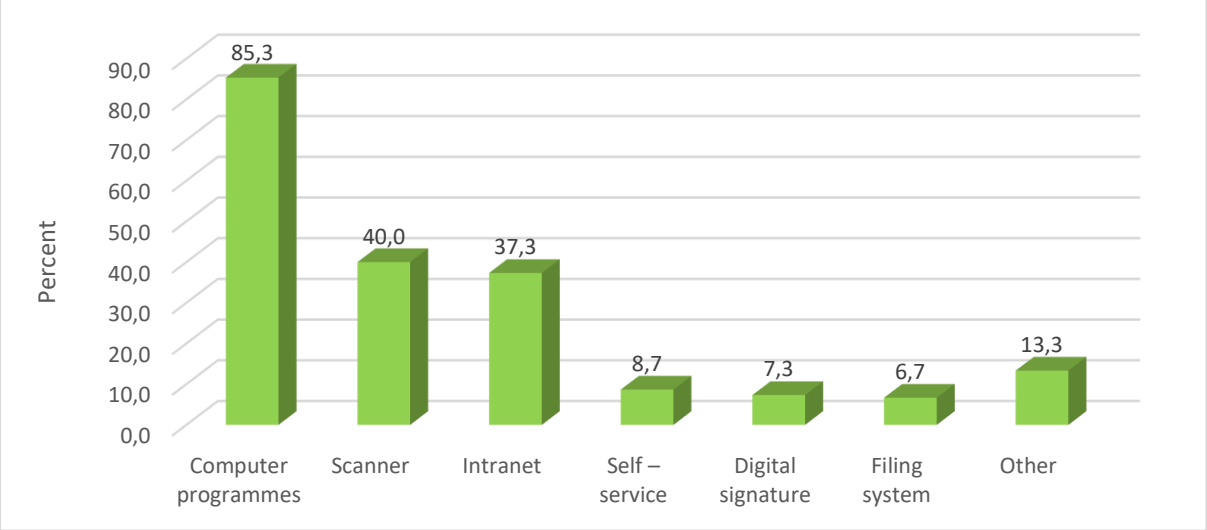

FIGURE 4. 2 DIGITAL SYSTEMS/DEVICES

As reflected in Figure 4.2, the majority of the respondents (85.3%) indicated that computer programmes were the most commonly used automation process. The other options that had significantly lower usage ($p < 0.001$) were self-service, digital signature and filing system. The findings reveal that the automation system was utilised at the optimum level hence the findings outlined the high usage of computer

programmes. It then places a challenge on the uMshwathi Municipality management to train and encourage administrative staff to effectively and equally utilise all devices including those that were found to be on lower usage which were self-service, digital signature and filing system.

4.4. OBJECTIVES OF THE STUDY

4.4.1 THE CHALLENGES IN ADOPTING AN AUTOMATED SYSTEM (PROCESSES) WITHIN THE UMSHWATHI MUNICIPALITY.

This section below focuses on the challenges in an adopting automated system at the uMshwathi Municipality.

4.4.1.1 FIXING AUTOMATION ERRORS IN THE WORK ENVIRONMENT.

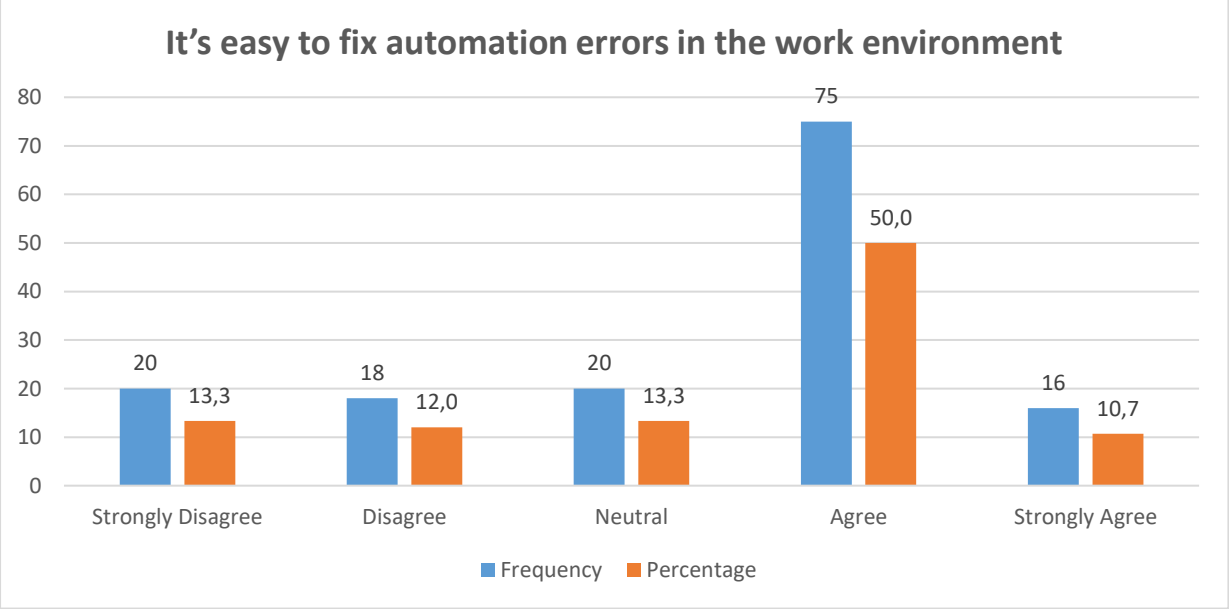

FIGURE 4. 3 FIXING AUTOMATION ERRORS IN THE NETWORK

This figure illustrates that 60.7 percent of the respondents either agreed or strongly agreed with the statement that it was easy to fix automation errors in the work environment. 20 (13.3 percent) remained neutral and only 25.3 percent disagreed or strongly disagreed. The conclusions stipulate that not all municipal employees can

easily fix automation errors in the work environment. Unresolved automation errors adversely affect employee's performance which may contribute to poor service delivery. The uMshwathi Municipality has the challenge of training almost 40 percent of the employees to fix automation errors that may hinder their progress at work. Salas and Eduardo (2015: 39) believe that developed performance retains the best outcomes of information exchange in an office environment and facilitates a manager`s decision making and service delivery. Deckop (2016: 69) indicates that training and development in areas of administration are vital where technology changes frequently. Training becomes a prerequisite for every organisation that wishes to remain in the global market.

4.4.1.2 COMPETENCY USING THE AUTOMATION SYSTEM.

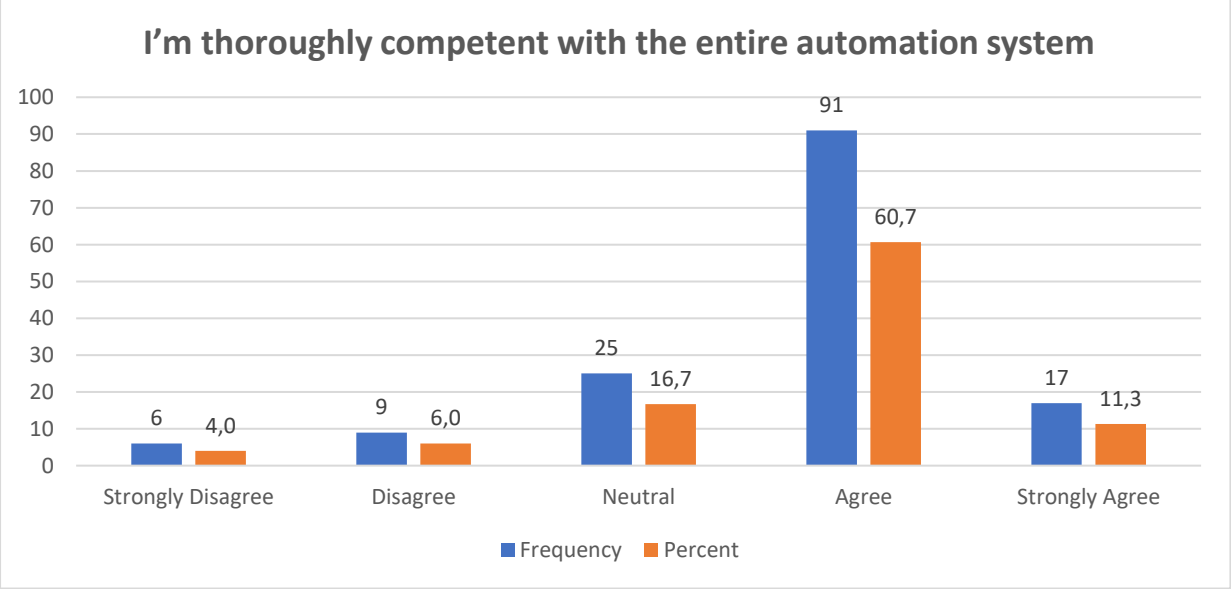

FIGURE 4. 4 COMPETENCY USING THE ENTIRE AUTOMATION SYSTEM

Figure 4.4 depicts that the majority of the respondents of up to 72 percent agreed or strongly agreed that they are thoroughly competent with the entire automation system, however, 25 (16.7 percent) remained neutral and 10 percent of the respondents either strongly disagreed or disagreed with the statement. The findings revealed the fact that administrative personnel are competent in the adopted automation system at the

uMshwathi Municipality. Therefore, these findings reflect that automation at the uMshwathi Municipality is indeed effective and advances the administrative procedures to provide service delivery that is of an acceptable standard. According to Ward (2017: 91), it is essential that employees possess adequate competencies to successfully perform critical work functions or tasks in a defined work setting. Pedro *et al.* (2019: 57) agrees that competencies often serve as the basis for skill standards that specify the level of knowledge, skills, and abilities required for success in the workplace. Therefore, the study revealed that the uMshwathi Municipality has employees who possess adequate automation abilities. These skills are essential, especially, since working environments have adopted and integrated the usage of technology and digitalisation.

4.4.1.3 THE AUTOMATION SYSTEM IS ALWAYS ONLINE.

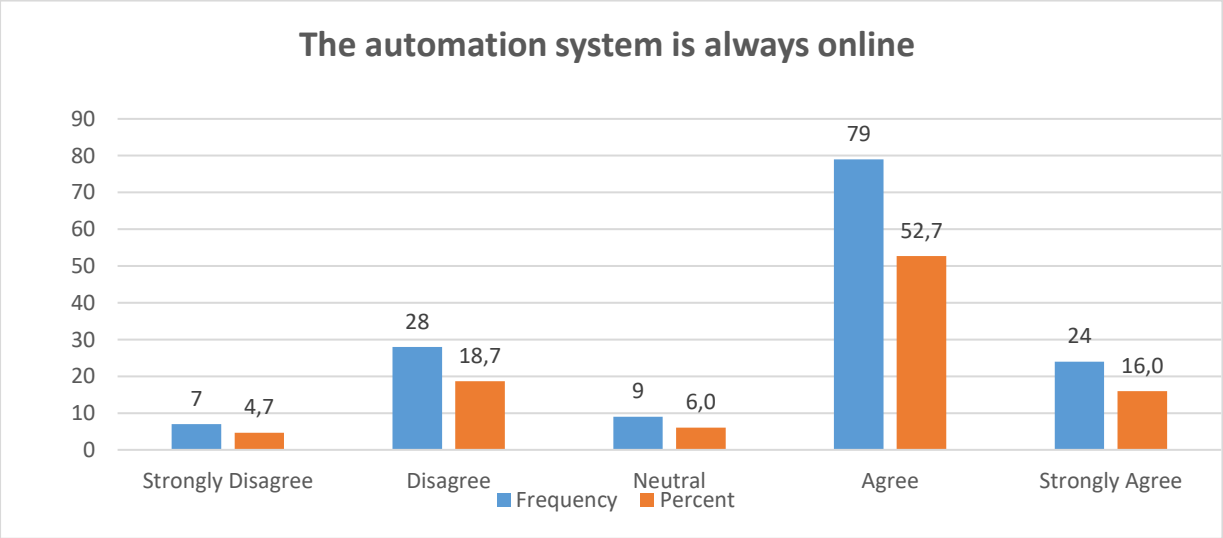

FIGURE 4. 5 THE AUTOMATION SYSTEM IS ALWAYS ONLINE

Figure 4.5 clearly illustrates that most respondents, 68.7 percent strongly agreed or agreed with the statement that automation system is always online. However, 9 (6 percent) remained neutral, while 28 (18.7 percent) and 7 (4.7 percent) of the respondents disagreed and strongly disagreed with the statement respectively. The

findings express the fact that the automation system used by the uMshwathi Municipality is not entirely satisfactory. Christian, Garza and Slaughter (2011: 93) outlined that a system offline period, interruption or outage could place the municipality at risk of losing production or information, which may impact current and potential customers who may be unable to contact or obtain service from the municipal departments.

4.4.1.4 TRAINING ON THE AUTOMATION SYSTEM.

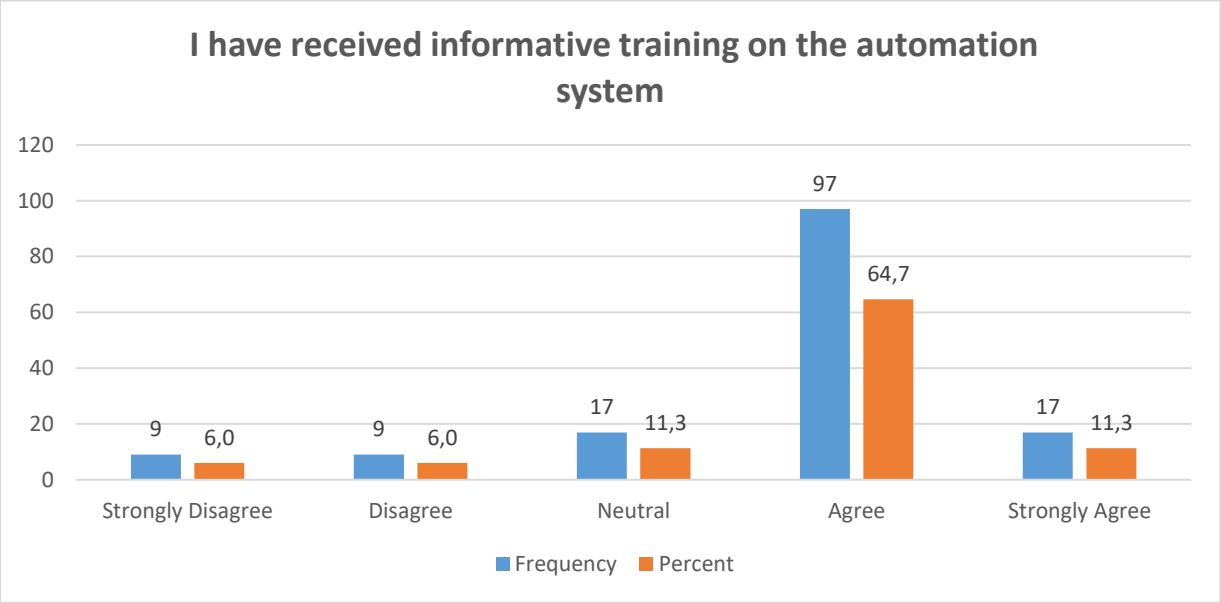

FIGURE 4. 6 TRAINING ON THE AUTOMATION SYSTEM

Figure 4.6 indicates that most respondents, 67 percent strongly agreed and agreed that they received informative training on the automation system. However, 17 (11.3 percent) remained neutral, whereas 9 (6.0 percent) disagreed with the statement and 9 (60 percent) strongly disagreed with the statement. The findings reveal that informative training is offered to municipal employees; however, 12 percent of the respondents indicated that no informative training was offered. Zilli and Trunk-Sirca (2019: 181) demonstrated that poor training in the workplace has several adverse effects and the organisation can rapidly lose success due to poor staff training. This is

because poorly trained staff do not project a professional image and are less likely to deliver impressive results (Oviawe and Uwameiye 2017: 8). Seifert and Chung (2016: 256) agree that poor training may cause employees to be ignorant of what they are supposed to do, how to do their respective tasks or why they need to work in a certain way.

4.4.1.5 ABILITY TO ADAPT TO THE AUTOMATION SYSTEM.

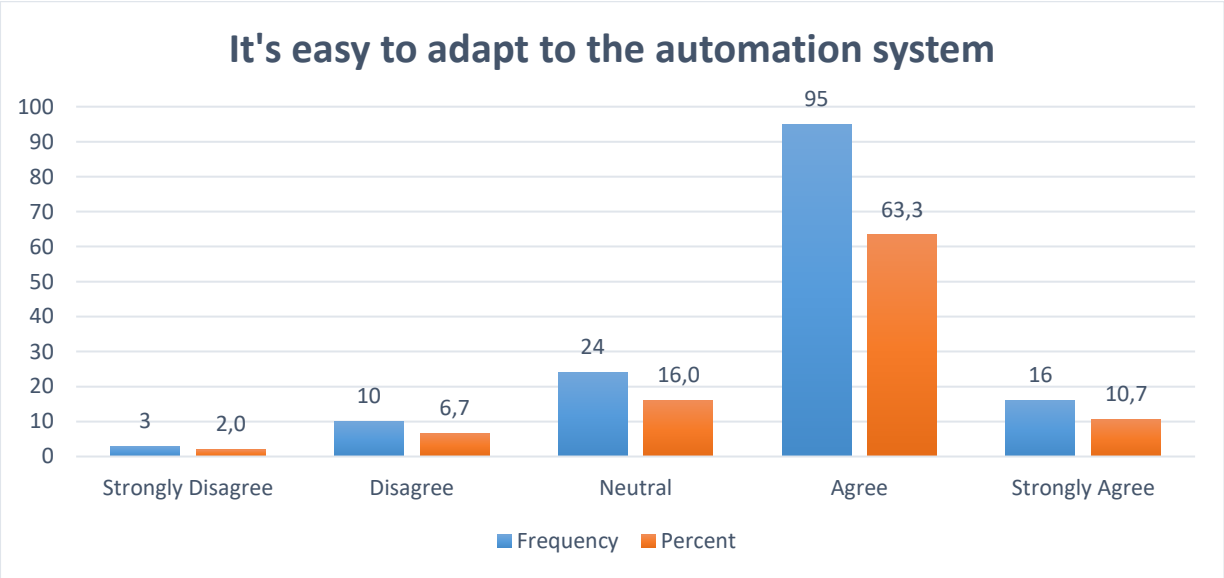

FIGURE 4. 7 ABILITY TO ADAPT TO THE AUTOMATION SYSTEM

Figure 4.7 depicts that the majority of the respondents, 74 percent strongly disagreed or agreed that it is easy to adapt to the automation system, while 24 (16.0 percent) remained neutral, however, 10 (6.7 percent) disagreed with the statement and 3 (2.0 percent) strongly disagreed that it is easy to adapt to the automation system. Findings exhibit that the uMshwathi Municipality employees easily adapt to the automation systems they have in their respective departments. These results support the findings in Figure 4.7, as training of the uMshwati Municipality employees allowed the employees to easily adapt to automation systems used in the workplace. This means that employees can use the adopted systems efficiently and effectively to perform the assigned work at an optimal level. These findings are further supported by Kallinikos

(2015: 89) and Luhmann (2015: 49) indicate that the ability of employees to easily adapt to automation systems offer superior help in developing the routine organisational activities.

4.4.1.6 COMPUTERS SUPPORT THE ADOPTED AUTOMATION PROCESS

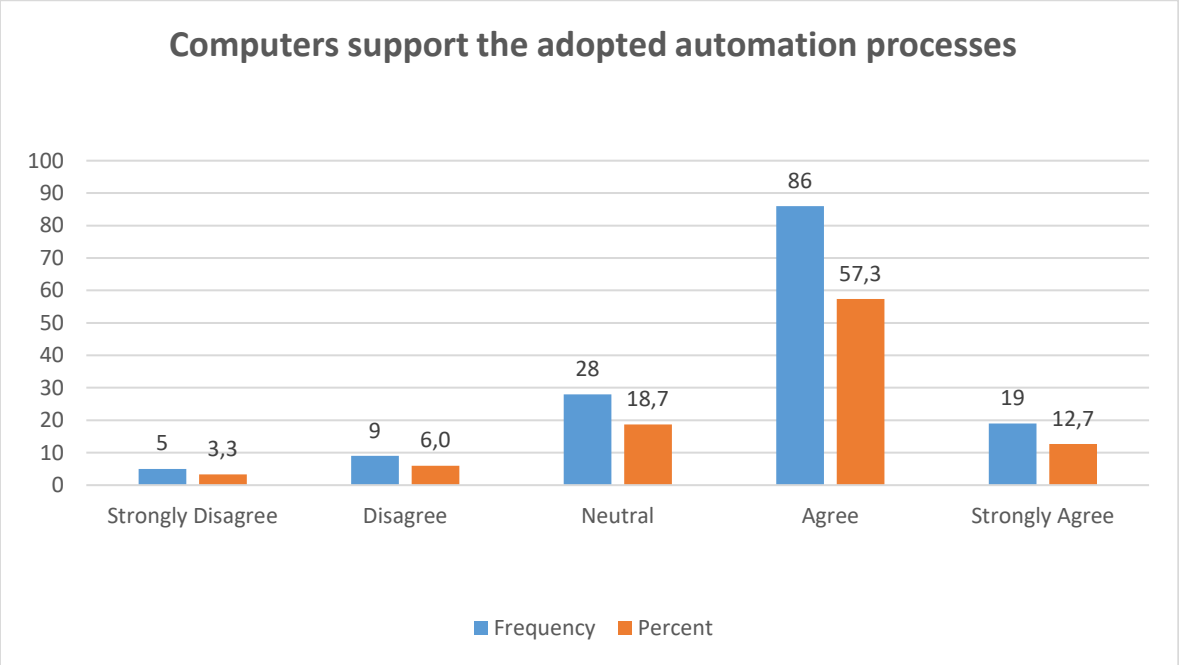

FIGURE 4. 8 COMPUTERS SUPPORT THE ADOPTED AUTOMATION PROCESS

The figure above indicates that the majority of the respondents, 70 percent either agreed or strongly agreed that computers supported the adopted automation process, however, 28 (18.7 percent) respondents remained neutral on the statement, whereas 9 (6.0 percent) respondents disagreed and only 5 (3.3 percent) respondents strongly disagreed with the statement. The findings exhibited that computers do support the adopted automation process within the uMshwathi Municipality. The results reveal that although computers support the adopted automation process, there are minor gaps pending where 9.3 percent of the respondents indicated that computers do not support the adopted automation processes and 18.7 percent of the respondents were uncertain whether computers supported the adopted automation process. Therefore, these gaps might be due to outdated computers and poor network connectivity, hence

some participants outlined that internet connection is very poor in some the uMshwathi Municipality departments.

These findings are supported by Johnson (2013) who agrees that upgraded and compatible computers can help in decreasing everyday business time wastage while employees wait for their computers to boot up and programmes to do what the workers want them to do. Improved computers can reduce downtime and increase staff productivity. It may be necessary to upgrade the computers to meet the programme system requirements.

4.4.1.7 MAINTENANCE OF THE AUTOMATED SYSTEM.

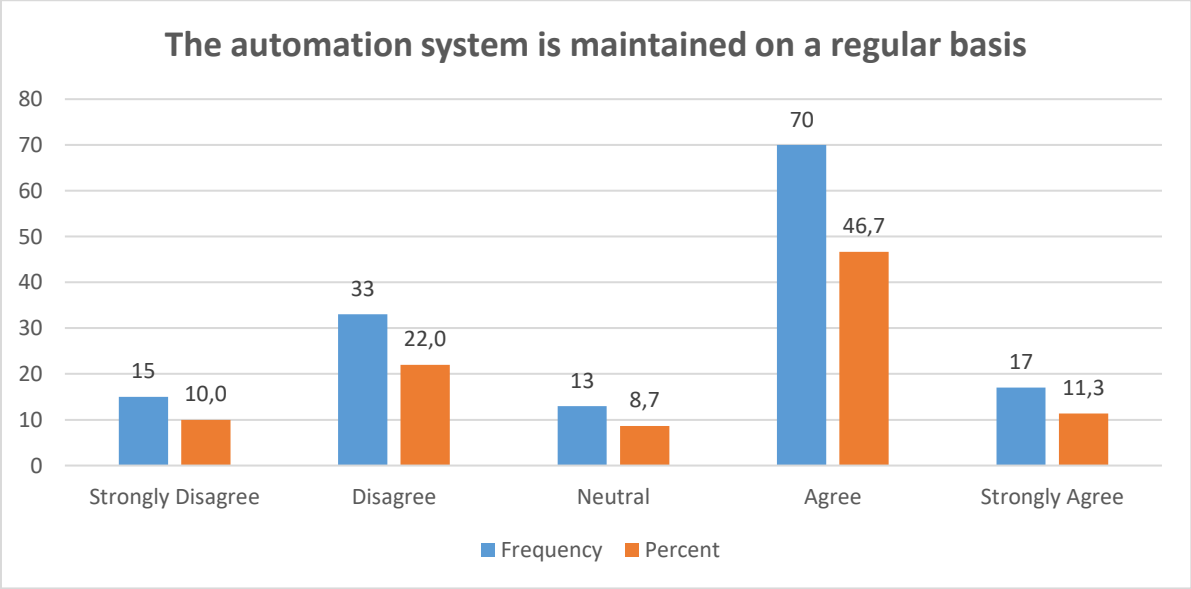

FIGURE 4. 9 MAINTENANCE OF THE AUTOMATION SYSTEM

Ghaffar (2018: 93) indicates that a poorly maintained system increases the chances of errors and lessen the employees' performances. The results in Figure 4.9 illustrate that 58 percent of the respondents either strongly agreed or agreed that the automation system is maintained on a regular basis, however, 13 (8.7 percent) respondents remained neutral and 32 percent of the respondents either disagreed or strongly disagreed that automation systems are maintained on a regular basis. The

findings exhibit that the present automation system adopted by the uMshwathi Municipality is not maintained on a regular basis, which may have an impact on services rendered by all the municipal departments to its citizens.

4.4.1.8 AVAILABILITY OF TECHNICAL SUPPORT

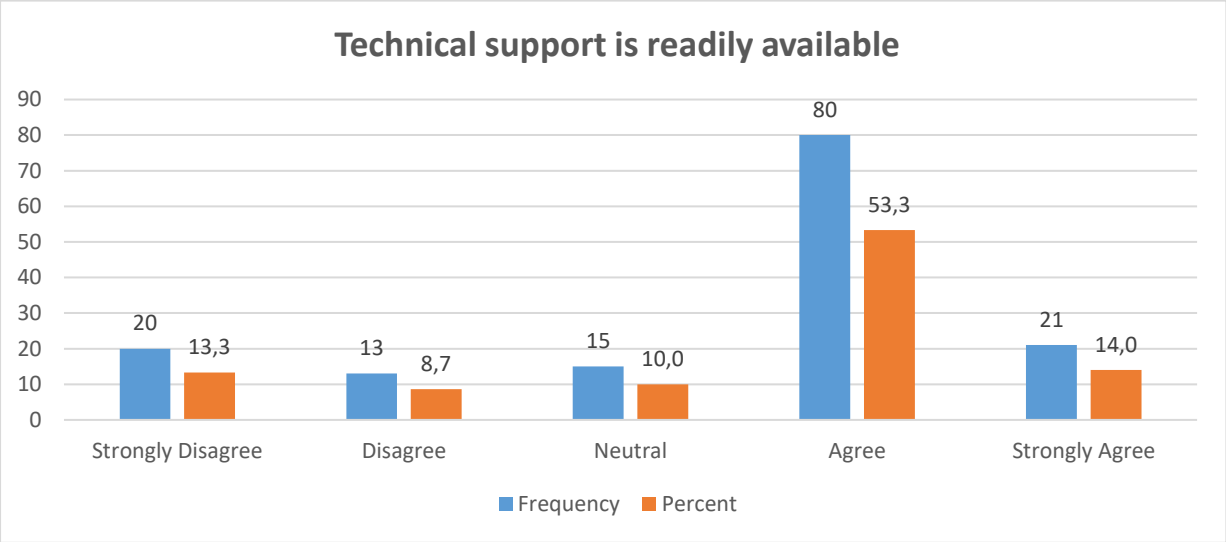

FIGURE 4. 10 AVAILABILITY OF TECHNICAL SUPPORT

Figure 4.10 indicates that most of the respondents, 67.3 percent, either strongly agreed or agreed that technical support is readily available, while 15 (10.0 percent) were neutral, however, 13 (8.7 percent) respondents disagreed and only 20 (13,3 percent) strongly disagreed with the statement. The findings reveal that though technical support is readily available, technical problems arise repeatedly, which might be due to the small number of technicians employed within the municipal departments, whereas 22 percent of the respondents outlined that technical support is not readily available. As highlighted by Ogbonna (2013: 73), organisations with poor technical support usually encounter system failures, poor networks connections, application problems, hardware and software faults that hampers service delivery.

4.4.2 THE EFFECTIVENESS OF AUTOMATION ON SERVICE DELIVERY WITHIN THE UMSHWATHI MUNICIPALITY.

The following subheadings discuss the effectiveness of automation on service delivery within the uMshwathi Municipality further.

4.4.2.1 AUTOMATION ENHANCES SERVICE DELIVERY WITHIN THE UMSHWATHI MUNICIPALITY.

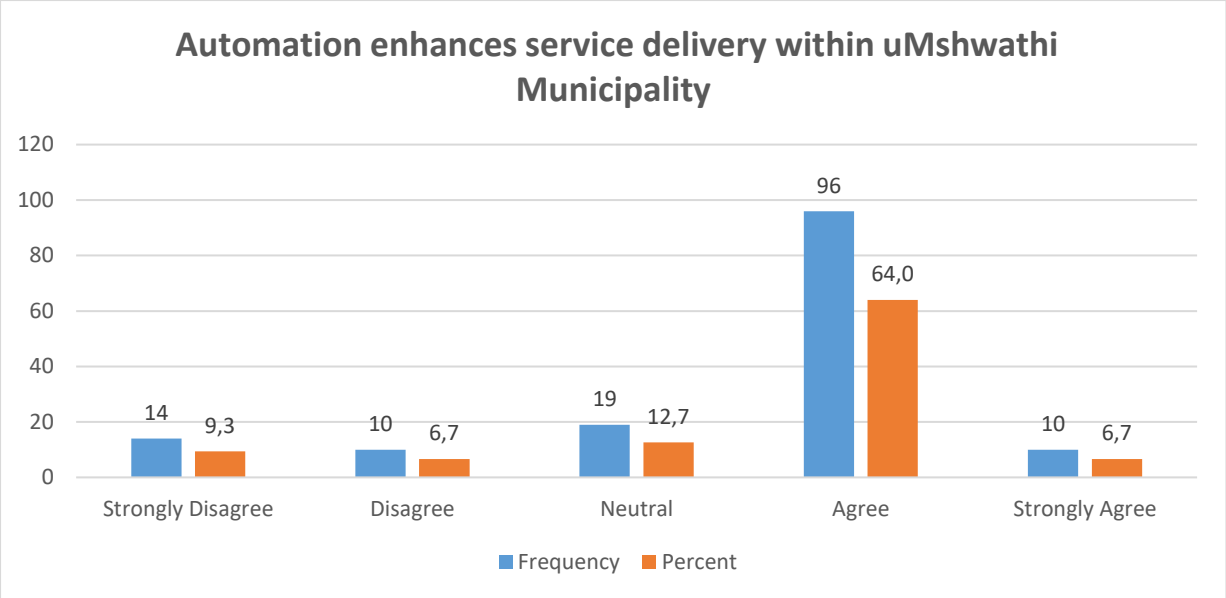

FIGURE 4. 11 AUTOMATION ENHANCES SERVICE DELIVERY WITHIN UMSHWATHI MUNICIPALITY

The results in Figure 4.11 show that the majority of the respondents, 70.7 percent strongly agreed or agreed that automation enhances service delivery within the uMshwathi Municipality whereas 19 (12.7 percent) were neutral on the statement. Hence 10 (6.7 percent) disagreed with the statement and only 14 (9.3 percent) strongly disagreed that automation enhances service delivery within the uMshwathi Municipality. The findings show that the uMshwathi Municipality's employees perceived automation as an essential element that supports and enhances service delivery to the community it serves. These findings are supported by Mohseni (2013: 1227) who highlighted that automation leads to increase employee performance and service delivery.

4.4.2.2 AUTOMATION PROCESSES ARE IN LINE WITH ADMINISTRATIVE PROCEDURES AT THE UMSHWATHI MUNICIPALITY.

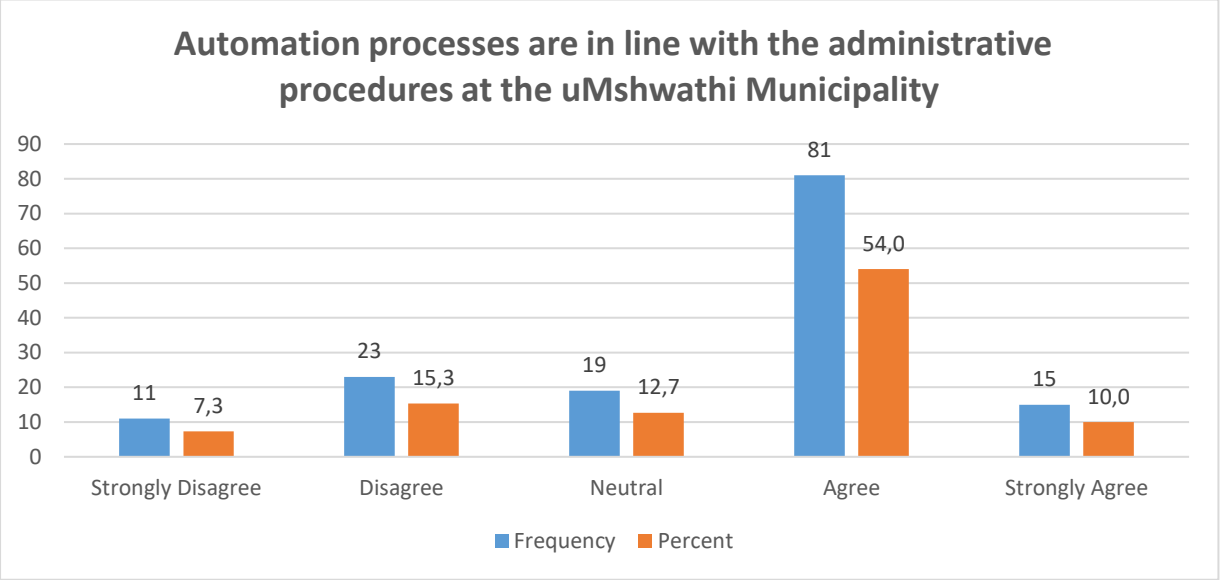

FIGURE 4. 12 AUTOMATION PROCESSES ARE IN LINE WITH ADMINISTRATIVE PROCEDURES AT THE UMSHWATHI MUNICIPALITY

Figure 4.12 above shows that most of the respondents, 64 percent, either strongly agreed or agreed that automation processes are in line with administrative procedures at the uMshwathi Municipality. However, 19 (12.7 percent) remained neutral, while 23 (15.3 percent) disagreed and only 11 (7.3 percent) strongly disagreed with the statement. The findings reveal that automation processes are partially in line with administrative procedures while 35.3 percent of participants were either uncertain or disagreed with automation compliance with administrative procedures at the uMshwathi Municipality. Even though the uMshwathi Municipality's automation processes are in line with administrative procedures, the findings of this study also reflect that the municipality needs to integrate their administrative procedures to comply with the adopted automation systems. If this is strategically incorporated, it will reduce work redundancy and improve employee performance. Gardner (2016: 371) argues that automation compatibility enhances consistency of high-quality service delivery which impacts service delivery to the inheriting customers satisfactorily. When the administrative procedures are fully supported by the adopted automation system

it facilitates employee's performance and assist in the alleviation of the bulk of the tasks that have to be done manually (Hornibrook 2017: 567).

4.4.2.3 AUTOMATION INCREASE DATA ACCURACY WITHIN THE UMSHWATHI MUNICIPALITY.

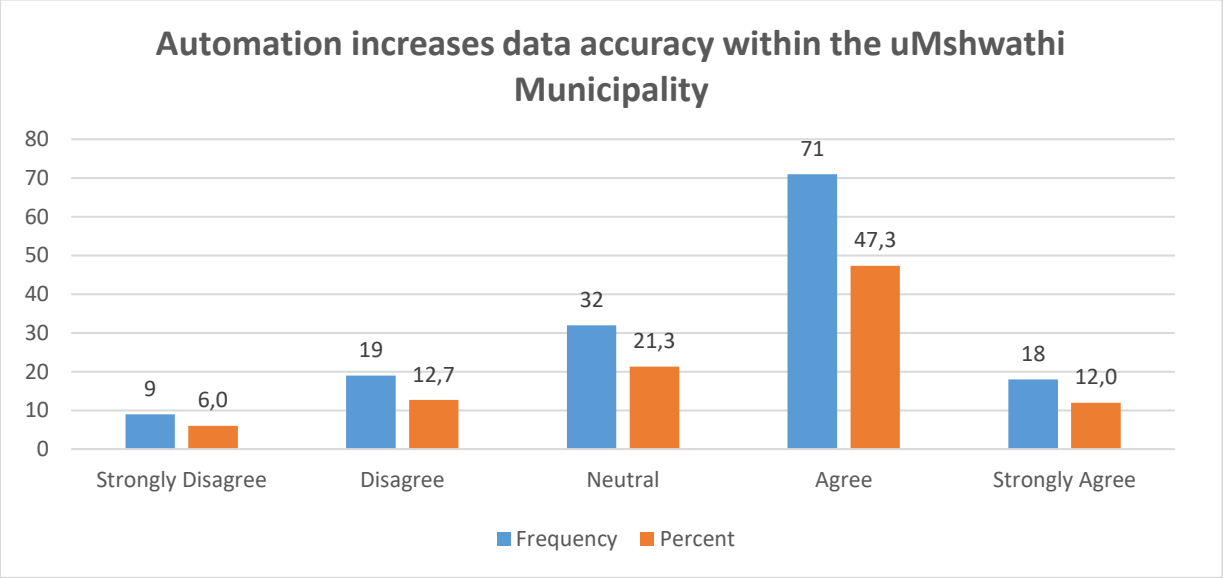

FIGURE 4. 13 AUTOMATION INCREASE DATA ACCURACY WITHIN THE UMSHWATHI MUNICIPALITY

Figure 4.13 shows that most of the respondents, 59.3 percent, strongly agreed or agreed that automation increases data accuracy within the uMshwathi Municipality, whereas 32 (21.3 percent) respondents remained neutral, while 19 (12.7 percent) respondents disagreed and only 9 (6.0 percent) respondents strongly disagreed with the statement. The findings divulged that respondents partially perceive automation as ease to use and useful hence 40 percent of the respondents were uncertain and disagreed that automation increase data accuracy within the uMshwathi Municipality. Manser (2016) and Francis (2016) cautions that data quality is becoming increasingly important and should be a priority at every organisation as poor and incomplete data collection can lead to a loss of revenue, lower customer satisfaction, lower productivity, higher consumption of resources, lower productivity and invalid reports.

4.4.2.4 AUTOMATION IMPROVES THE PROCESS OF SERVICE DELIVERY WITHIN UMSHWATHI MUNICIPALITY.

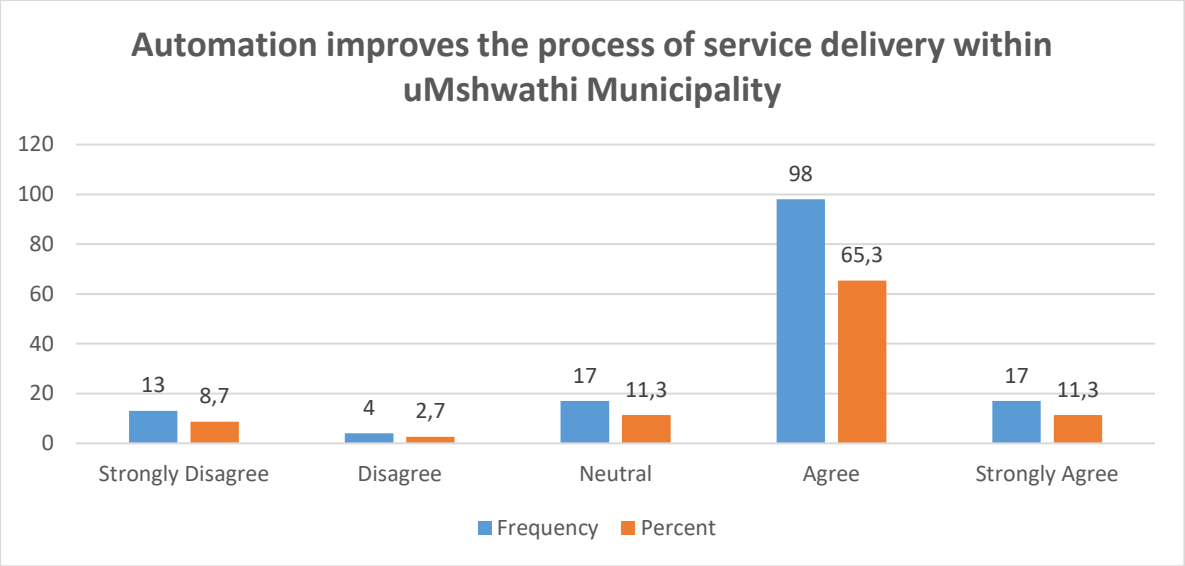

FIGURE 4. 14 AUTOMATION IMPROVES THE PROCESS OF SERVICE DELIVERY WITHIN UMSHWATHI MUNICIPALITY

The results above reveal that the majority of the respondents 76. 6 percent strongly agreed or agreed that automation improves the process of service delivery within the uMshwathi Municipality, while 17 (11.3 percent) remained neutral on the statement, whereas 4 (2.7 percent) disagreed with the statement and only 13 (8.7 percent) strongly disagreed with the statement. The findings indicate that the automation systems adopted by the uMshwathi Municipality were perceived by the administrative personnel as a key component that improved service delivery and provided support to the administrative processes within the organisation. These findings are supported by Fernandez and Aman (2018: 129) who indicated that automation improves the process of service delivery if automation is thoroughly maintained and utilised to its optimal functioning.

4.4.2.5 AUTOMATION REMOVES THE RISK OF HUMAN ERROR.

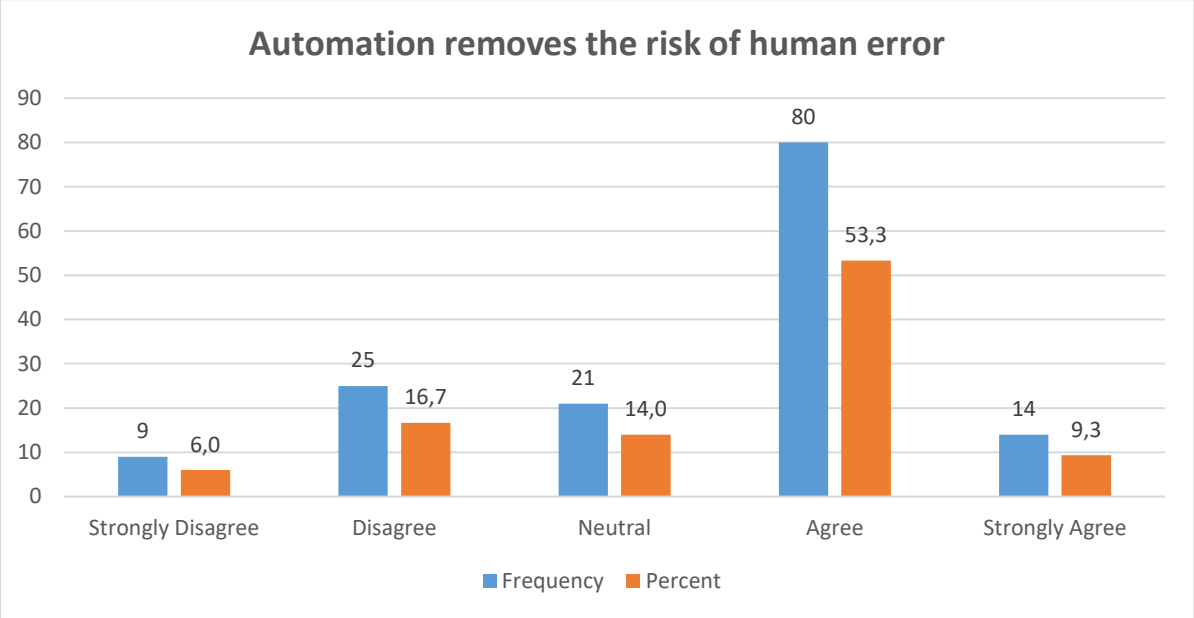

FIGURE 4. 15 AUTOMATION REMOVES THE RISK OF HUMAN ERROR

The results indicate that most of the respondents, 62.6 percent, either strongly agreed or agreed that automation removes the risk of human error, whereas 21 (14.0 percent) of the respondents remained neutral, while 25 (16.7 percent) disagreed and 9 (6.0 percent) strongly disagreed with the statement. The conclusions demonstrated that most of the respondents believed that automation removes the risk of human error. These findings are supported by a study conducted by Boyd (2015: 35) in which he discovered that office automation saves time, which subsequently increases the efficiency of administrators and diminishes human error, while the manual system consumes too much time to accomplish administrative routine tasks. Additionally, office automation has an impact on the efficient use of time response to the customers and accuracy in task performance and results to increasing efficiency (Sheikh 2012: 235; Sarafizadeh and Alipour 2014: 34).

4.4.2.6 AUTOMATION AND COMMUNICATION IMPROVEMENT AMONGST UMSHWATHI AND ITS CUSTOMERS.

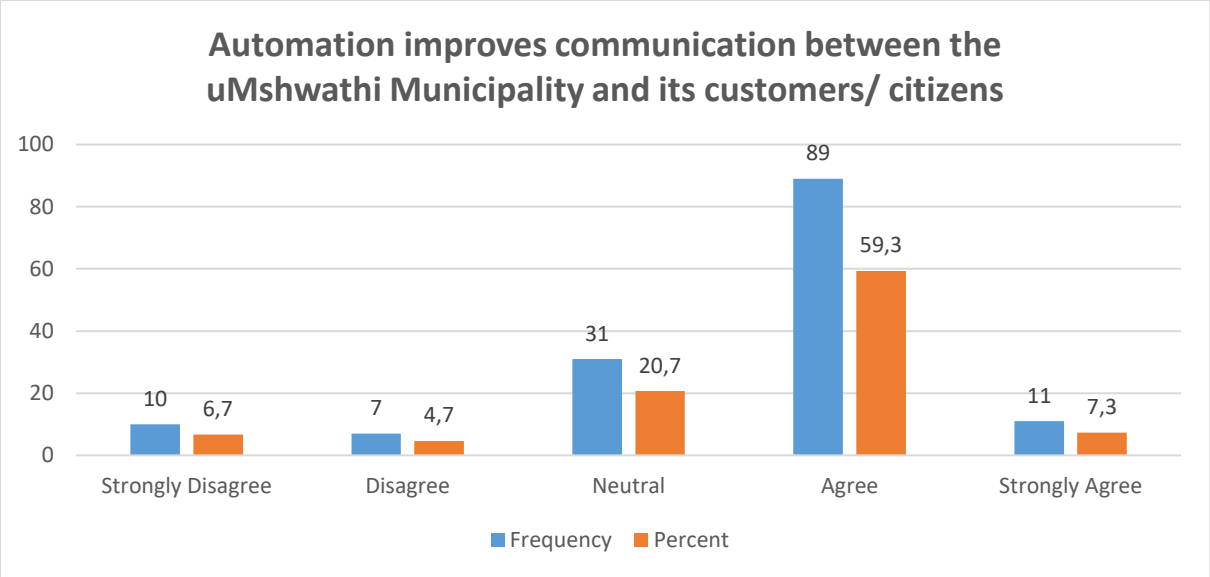

FIGURE 4. 16 AUTOMATION AND COMMUNICATION IMPROVEMENT AMONGST UMSHWATHI AND ITS CUSTOMERS

Figure 4.16 shows that most respondents, 66.6 percent strongly agreed or agreed that automation improves communication between the uMshwathi Municipality and its customers, whereas 31 (20.7 percent) remained neutral on the statement. However, 7 (47 percent) disagreed and only 10 (67 percent) strongly disagreed that automation improves communication between the uMshwathi Municipality. The findings clearly expressed that automation has developed a viable effective relationship at the uMshwathi Municipality by merely creating smooth communication between the municipality and its citizens. Leigh (2019) outlined that clear communication can help citizens to manage their expectations about service issues or even about how best to interact with the organisation. Walton (2019) agrees that trust and loyalty are key factors in any relationship, and both are boosted by communication that is focused on meeting individual needs and conveying important information.

4.4.2.7 ACCESS TO MUNICIPAL INFORMATION THROUGH AUTOMATION

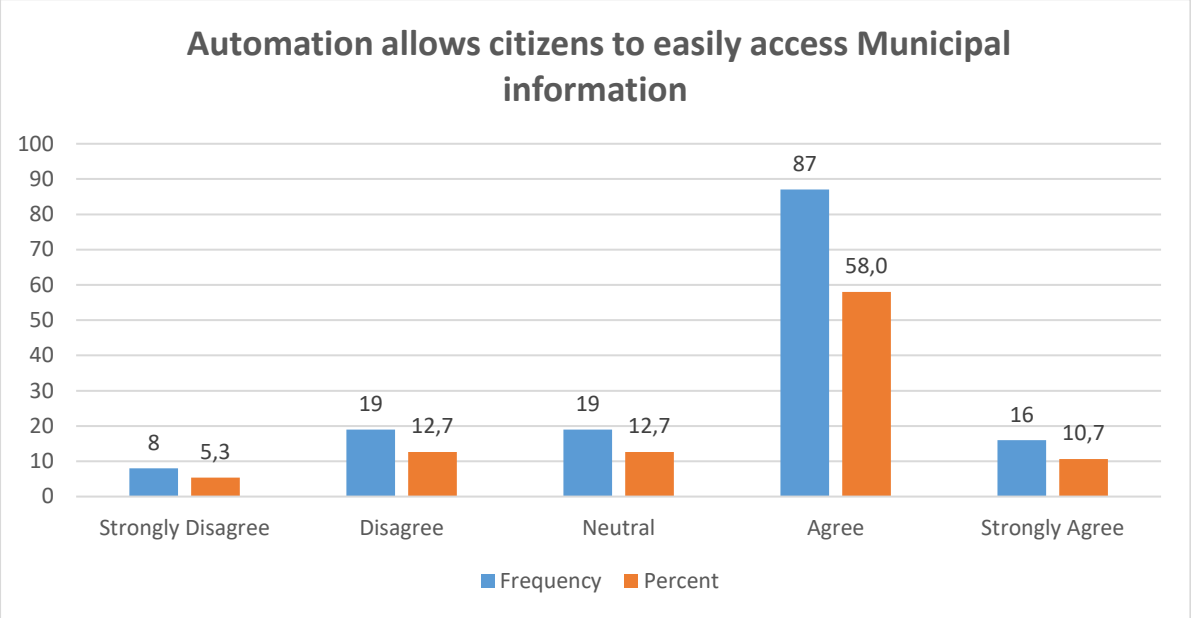

FIGURE 4. 17 ACCESS TO MUNICIPAL INFORMATION THROUGH AUTOMATION.

The results illustrate that most respondents, 68.7 percent, either strongly agreed or agreed that automation allows citizens to easily access municipal information. However, 19 (12.7 percent) respondents remained neutral, while 19 (12.7 percent) disagreed and only 8 (5.3 percent) strongly disagreed with the statement. Based on these findings, respondents perceived automation as useful and allowed citizens to easily access municipal information which assists the municipality to divulge its procedures that might be of great assistance to the citizens. The municipality should utilise automated platforms like sound-based systems and the extranet to populate new procedures as to what relevant documents are to be brought by citizens to receive inclusive service and further explain as to how long a person should wait to receive certain services, particularly at the departments of licencing and home affairs as they sometimes issue tangible services. Tarhini (2015: 59) states that automation enables the creation of information sharing between an organisation and its customers which develops easy access to organisational information. The application of technology encompasses the creation of networks and communication systems among different areas and individuals within an organisation (Chang 2014: 13).

Hence, the study declares that most respondents are in favour of information access through automation; therefore, the uMshwathi Municipality should embrace the potential of providing the best services externally and internally.

4.4.2.8 AUTOMATION IS CONVENIENT AND EASY TO USE FOR EMPLOYEE.

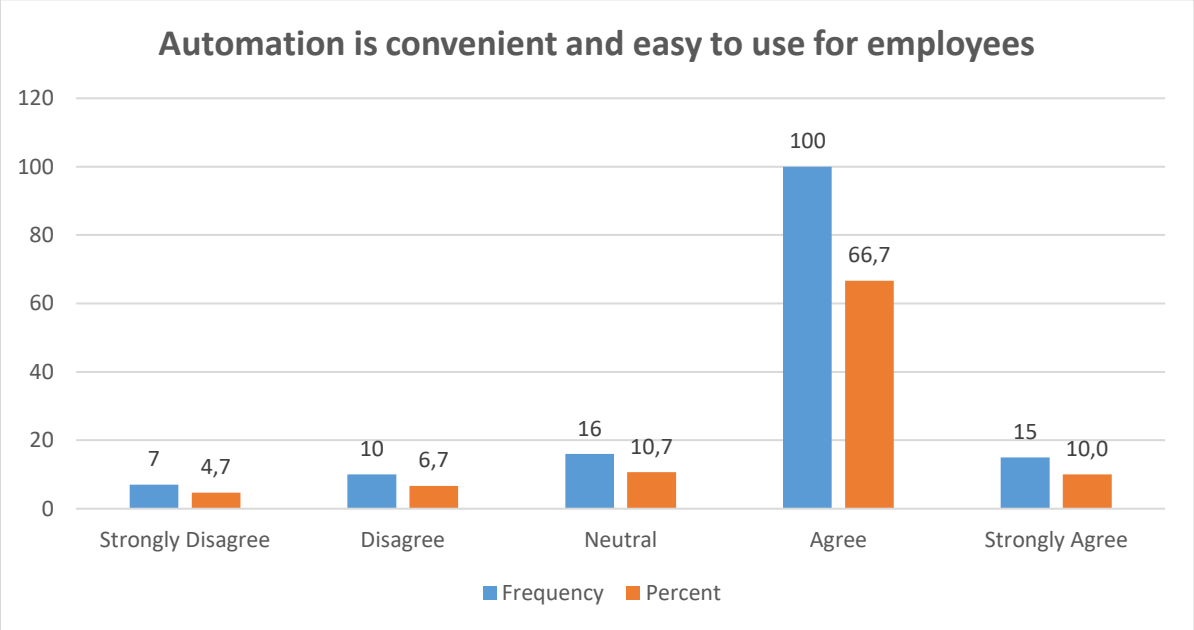

FIGURE 4. 18 AUTOMATION IS CONVENIENT AND EASY TO USE FOR EMPLOYEE

The results above indicate that the majority of the respondents, 76, 7 percent, strongly agreed and agreed that automation is convenient and easy to use, while 16 (10.7 percent) respondents remained neutral. Fewer respondents 10 (6.7 percent) and only 7 (4.7 percent) strongly disagreed with the statement. The findings revealed that the adopted automation within the uMshwathi Municipality is convenient and easy to use for employees. The findings further reveal that the majority of the employees at the uMshwathi Municipality are capable of utilising automation to perform the assigned routine administrative tasks and render effective service delivery to uMshwathi citizens. These findings are supported by a study that was conducted by Aman (2018:

95) where the study discovered that convenient office automation makes it possible for a business to improve productivity and opimise existing office procedures which saves time, money and employees effort and complex tasks are easily operated by every employee to make the organisation run more smoothly.

4.4.3 THE CURRENT AUTOMATION PROCESSES BEING USED WITHIN UMSHWATHI MUNICIPALITY.

4.4.3.1 AUTOMATION AND IMPROVED QUALITY SERVICE DELIVERY.

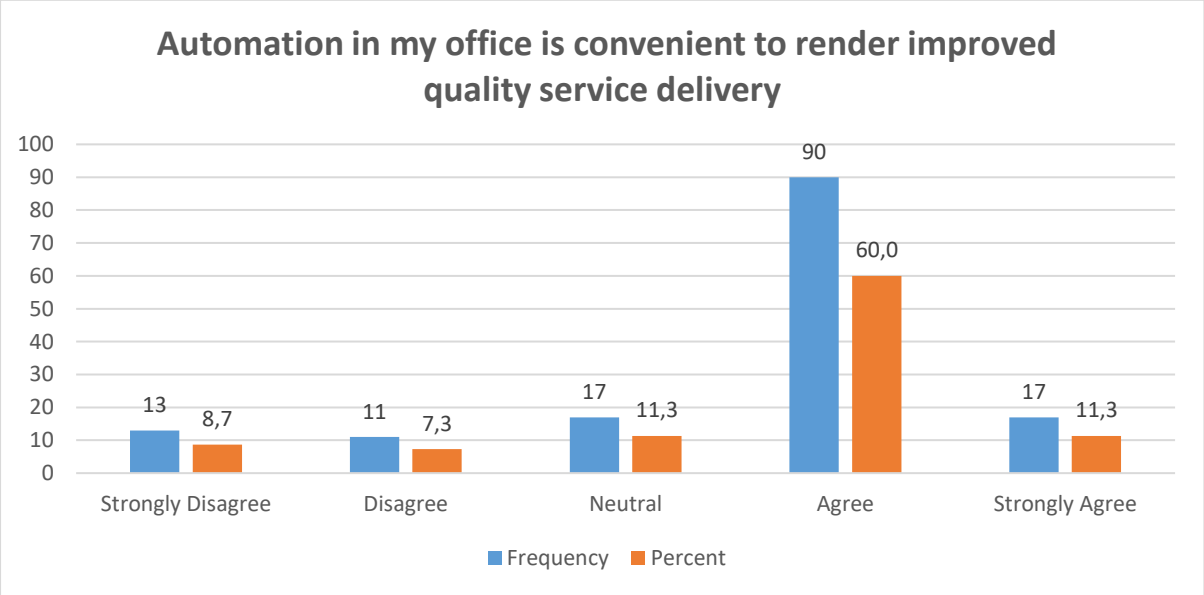

FIGURE 4. 19 AUTOMATION AND IMPROVED QUALITY SERVICE DELIVERY

Figure 4.19 indicates that the majority of the respondents, 71.3 percent, either strongly agreed or agreed that automation in the office is convenient to render improved quality service delivery. However, 17 (11.3 percent) remained neutral, while 11 (7.3 percent) disagreed and 13 (8.7 percent) strongly disagreed with office automation is responsible for improved quality service delivery. The findings depict that the majority of the respondents perceive office automation as convenient to offer progressive and

quality service delivery for the municipal citizens. However, 27.3 percent of the respondents were either uncertain or disagreed that automation in the office is convenient to render improved quality service delivery. Cordella (2012: 67) illustrates automation as a tool that facilitates and supports vital organisational functions of coordination and control of organisational service delivery. Automation also includes functions associated with legal-normative that set up the rules designed to standardise the delivery of public services (Willcocks 2012: 45). Automation can make bureaucratic organisations more valuable for the delivery of public services (Cordella and Willcocks 2012: 94).

4.4.3.2 AUTOMATION IS FLEXIBLE AND ALLOWS FOR MULTITASKING.

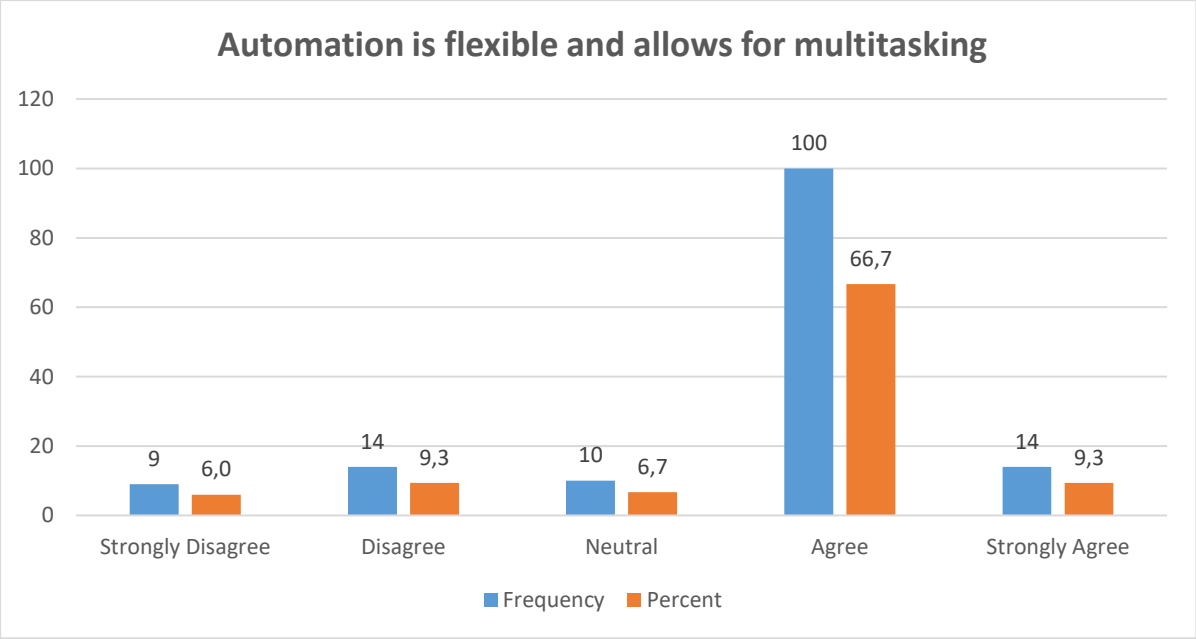

FIGURE 4. 20 AUTOMATION IS FLEXIBLE AND ALLOWS FOR MULTITASKING

The majority of the respondents, 76 percent, strongly agreed and agreed that automation is flexible and allows for multitasking. However, 10 (6.7 percent) respondents remained neutral. Nevertheless, 14 (9.3 percent) disagreed, while 9 (6.0 percent) respondents strongly disagreed. The study discovered that the majority of the respondents within uMshwathi Municipal can be flexible and multitask the assigned

tasks effectively through the adopted automation system, hence respondents indicated that they could multitask; this provides a hint that there is a pending work burden which compels employees to multitask that might cause unnecessary service retardation. Pedro *et al.* (2019) specify the essential aims for presenting automation in challenging organisations is all about multitasking and minimising opportunities of employees' mistakes through decreasing operators' intellectual work burden. However, this does not happen continuously. Nevertheless, workers are mandated to choose whether they use automation when their workload is perceived to be exorbitant (Winroth and Sahre 2017: 39). Dobele, Rundle-Thiele and Kopanidis (2011: 1) advise that municipalities should adopt the usage of technology efficiently in order to multitask office procedures within the municipalities to improve overall employee work performance which provides the ability to complete tasks quickly and the ability to retain information when focusing on one task at a time. However, Singh (2017) reveals that multitasking may make employees feel like they are being more productive while lowering the quality of work. Medina (2018) discovered that individuals who multitask drop in productivity and take longer to accomplish a single task whilst making more errors than workers who focus on a single task at a time.

4.4.3.3 AUTOMATION AND WORK SATISFACTION

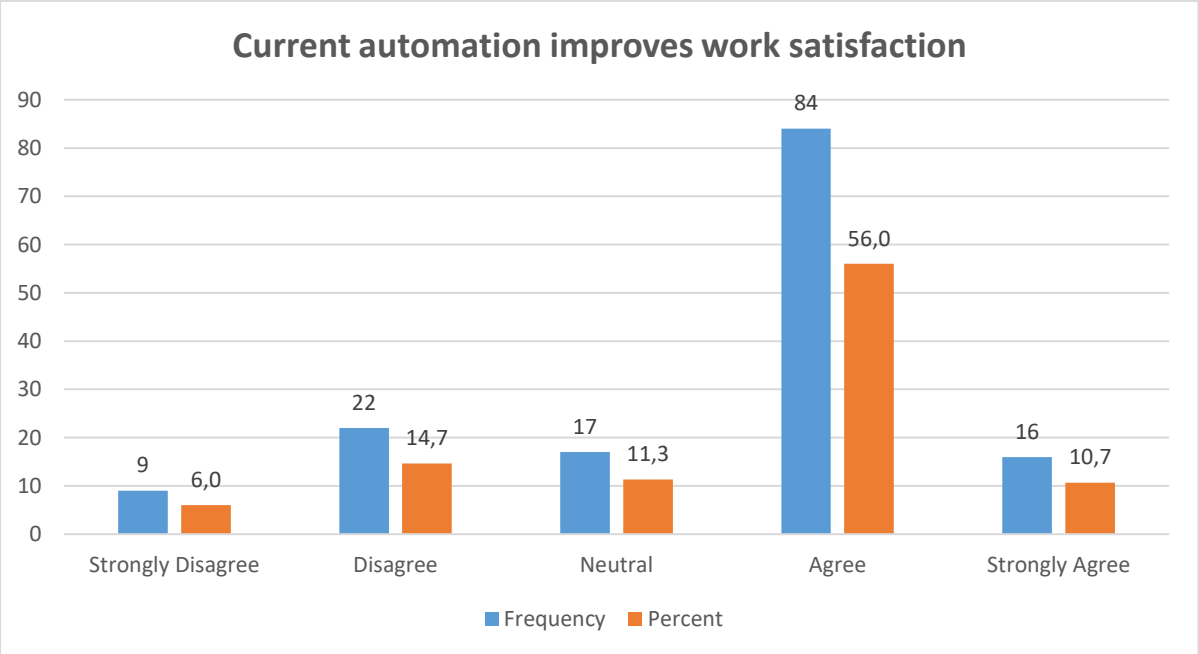

FIGURE 4. 21 AUTOMATION AND WORK SATISFACTION.

Figure 4.21 shows that most of the respondents, 66.7 percent, strongly agreed or agreed that the current automation improves work satisfaction. While 17 (11.3 percent) remained neutral with regards to the statement. However, 22 (14.7 percent) disagreed and only 9 (6.0 percent) strongly disagreed that current automation within the uMshwathi Municipal improves work satisfaction. The findings show that the current automation partially improves work satisfaction, while 32 percent of the respondents indicated that they either disagree or are unsure that their work satisfaction has improved with the current automation which was adopted by the uMshwathi Municipality; therefore, the results illustrate that there are some departments within the uMshwathi Municipality whose work never improve the satisfaction of employees. Automation executes the existing organisational activities more effectively and also offers new possibilities to develop employees' job satisfaction. Ciborra 2016: 193) (Luhmann 2015: 49) pre-defined reasonable sequences of actions plotting organisational measures and practices they aimed to mediate.

Automation develops organisational performance and focus attention on employees' characteristics and satisfaction to take actions for increasing efficiency (Mirzapour 2010: 78).

4.4.3.4 CURRENT AUTOMATION DECREASES WORK OVERLOAD.

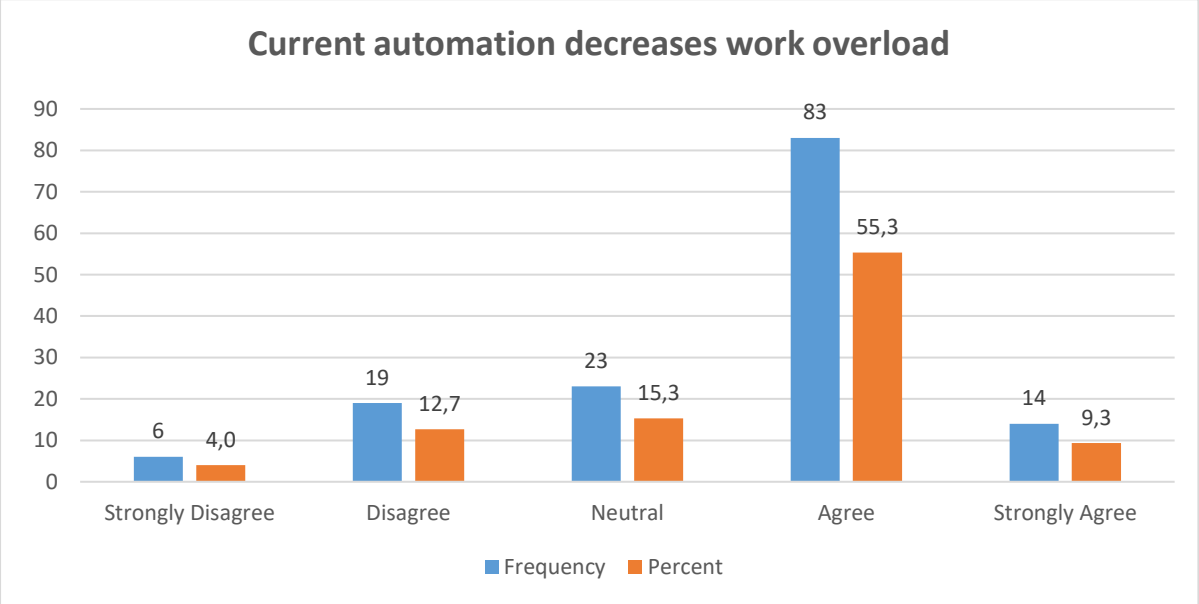

FIGURE 4. 22 CURRENT AUTOMATION DECREASES WORK OVERLOAD.

The results in Figure 4.22 above illustrate that most of the respondents, 64.6 percent, either strongly agreed or agreed that current automation decreases work overload. Therefore 23 (15.3 percent) respondents remained neutral, while 19 (12.7 percent) disagreed and 6 (4.0 percent) strongly disagreed with the statement. The results reveal that current automation at the uMshwathi Municipality decreases work overload, however, 32 percent of the respondents disagreed and are uncertain pertaining to the decrease of work overload by the current automation, so there is a pending gap of work overload at the uMshwathi Municipality that might cause delays on service delivery to the municipal citizens.

The adoption of automation in the municipal sector organisations has been often linked with restructuring programmes targeting at dropping the inefficiencies created by administrative burden (Tempini 2015: 279). Mohammed (2016: 52) expresses the opinion that absence of administrative interest on automatised software application and poor management of administrative responsibilities might contribute to poor distribution of administrative facilities and increase work overload.

4.4.3.5 AUTOMATION EXPEDITES ADMINISTRATIVE PROCESSES.

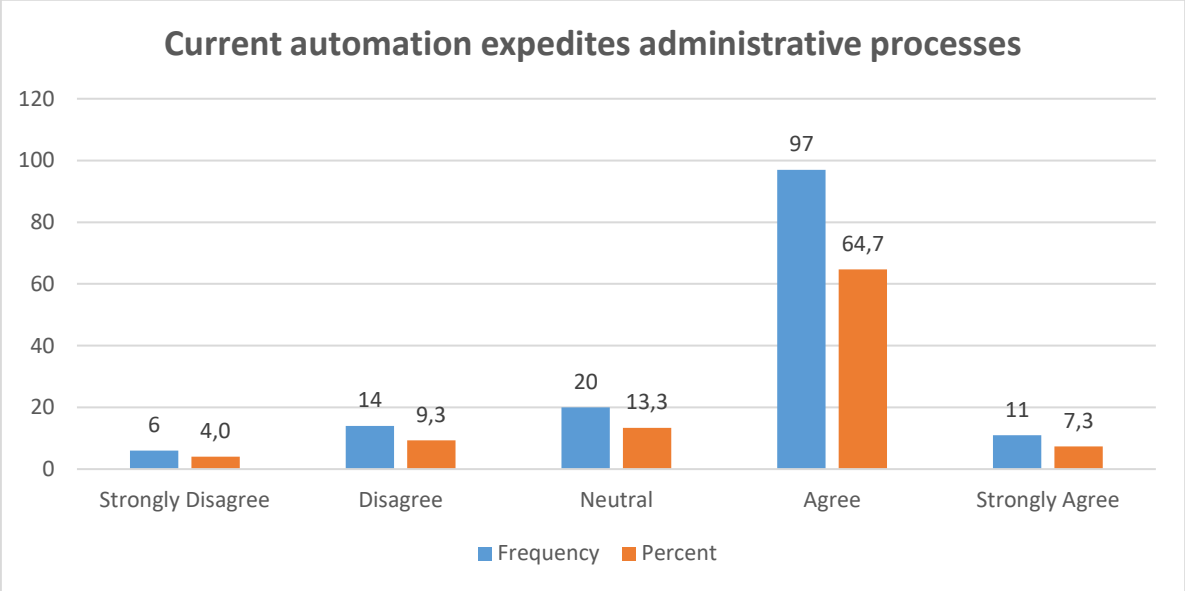

FIGURE 4. 23 AUTOMATION EXPEDITES ADMINISTRATIVE PROCESSES

Figure 4.23 shows that the majority of the respondents, 72 percent, strongly agreed and agreed that current automation expedites administrative process. While 20 (13.3 percent) remained neutral, with only 14 (9.3 percent) and 6 (4.0 percent) disagreeing and strongly agreeing with the statement. The results show that the respondents perceive the current automation as useful, and it has accelerated the administrative processes within Municipal departments. This might be a true reflection of the informative training that was given to most of the employees at the uMshwathi Municipality, furthermore good automation compliance might be accelerated by the skills and experience of employed personnel. These findings are supported by a study conducted by Mohamed (2018: 48) where he outlines that expedited administrative processes can improve workflow, decrease response time, reduce organisational expenditures, develop consistent delivery of high quality products and results in happier customers. Garza (2019: 92) supports the study by indicating that the acceleration of automation administrative processes helps in the alleviation of several

tasks that employees would otherwise need to do manually, it also allows for more innovation and increases employees' level of motivation.

4.4.3.6 AUTOMATION SYSTEM AT THE UMSHWATHI MUNICIPALITY INNOVATE ADMINISTRATIVE PROCESSES.

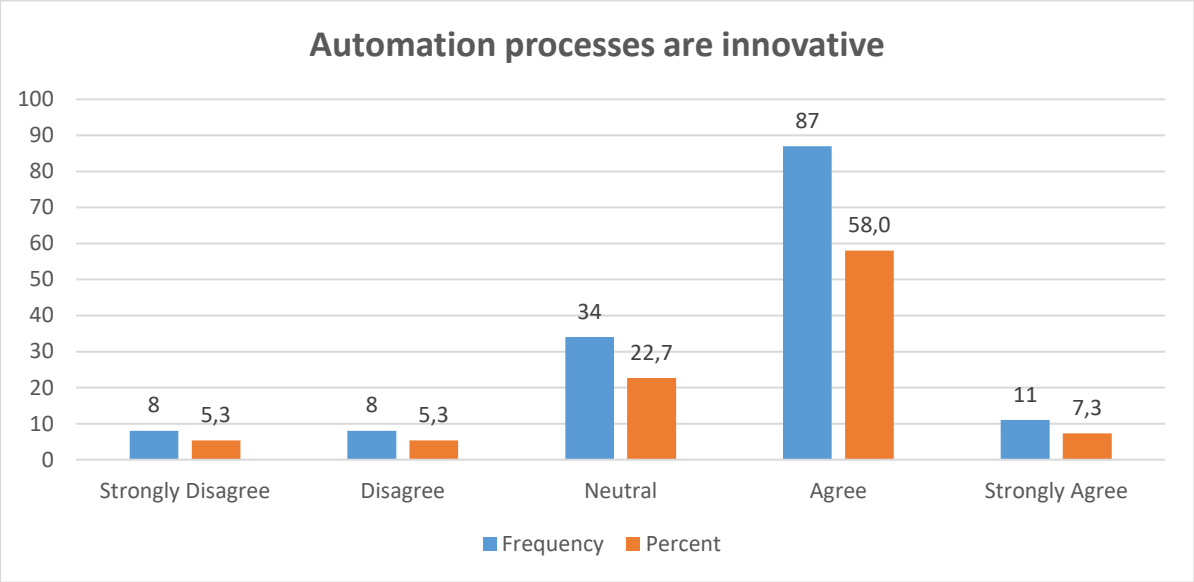

FIGURE 4. 24 AUTOMATION SYSTEM AT THE UMSHWATHI MUNICIPALITY INNOVATE ADMINISTRATIVE PROCESSES

Figure 4.24 above reflects that 65.3 percent of the respondents either strongly agreed or agreed that automation processes within the municipality are innovative. While 34 (22.7 percent) remained neutral with only 8 (5.3 percent) disagreeing and 8 (5.3 percent) strongly disagreeing with the statement. The results show that automation processes are partially innovative within the municipal departments, although 33.3 percent of the respondents were unsure and disagreed that automation has brought innovative processes within the municipal departments. Tabrizi (2017: 94) suggests that innovation is the factor that could affect the usage of technology, and in companies, it has been deemed as a key factor to renew and adopt to changes in the environment. Eisenhardt (2015: 56) states that innovation is the key factor that

companies could use to survive and remain competitive in a dynamic market environment.

4.5 CONCLUSION

This chapter interpreted and discussed the empirical findings of this study. Based on the results, most of the respondents were in agreement that the adoption of automation systems was key to improved service delivery. Some respondents responded negatively on the following aspects: data accuracy, fixing automation errors in the work environment, regular online automation systems, maintenance of automation on a regular basis. Others also reported negatively on the availability and readiness of technical support, the compliance of automation processes with the administrative procedures, improvement of automation communication within uMshwathi Municipality, convenient accessibility of municipal information, improvement of work satisfaction, and the reduction of work overload and integration of procedures within the municipality. These aspects which have been identified at the uMshwathi Municipality will be further discussed in detail in the recommendations section.

CHAPTER FIVE

CONCLUSION AND RECOMMENDATIONS

5.1 INTRODUCTION

The previous chapter provided the findings of this study as interpreted from the analysis of the quantitative data collected from administrative staff employed by the uMshwathi Municipality. This chapter will discuss whether the research objectives were achieved and provide recommendations on the adoption of automation to improve service delivery at the uMshwati Municipality based on the findings. This chapter concludes with recommendations.

The aim of the study is to ascertain effectiveness of automated systems towards the improvement of service delivery within the uMshwathi Municipality.

The focus of this study was on the three research objectives as follows:

- To identify current automation processes being used within the uMshwathi Municipality.
- To investigate the effectiveness of automation on service delivery within the uMshwathi Municipality.
- To determine the challenges and opportunities in adopting automation processes within the uMshwathi Municipality.

5.2 KEY FINDINGS

The key findings of the study are presented below in accordance with the aim and research objectives. The presentation of the discussions will be divided according to key findings.

5.2.1 OBJECTIVE ONE: TO IDENTIFY CURRENT AUTOMATION PROCESSES BEING USED WITHIN THE UMSHWATHI MUNICIPALITY

The first section deals with identifying the current automation processes being used in the uMshwathi Municipality, and to establish the effectiveness of the automation processes on the improvement of administrative tasks. This section also provided recommendations to assist the uMshwathi Municipality to resolve pending problems related to the automation processes being used by administrative personnel.

5.2.1.1 AUTOMATION IMPROVES SERVICE DELIVERY

The findings divulged that the uMshwathi Municipality has done very well on the convenience of rendering improved office automation quality service delivery, which was proved by 71.3 percent of the respondents who were in agreement. Employees perceived automation as easy to use and it requires minimum effort to perform office work, therefore, this will assist the uMshwathi Municipality in increased productivity, more efficient use of materials, better service delivery and consistent service quality. This is in line with Bagozzi (2016) who notes that automation helps to enhance communication between the administrators and consumers and increases productivity. If employees experience excellent service quality on the inside, they are more likely to be motivated to deliver excellent quality on the outside of the organisation. Therefore, a strong service climate leads to service quality. The uMshwathi Municipality should consistently embrace and maintain its strong reputation of quality service to regularly meet customer service expectations. One of the respondents raised the issue of the ongoing problems with the new photocopying machines within the uMshwathi Municipality that interferes with the smooth flow and completion of routine tasks. It is further recommended that the uMshwathi Municipality urgently address the issue of problematic photocopying machines within its departments or rather organise a technician to repair and service the machines regularly.

5.2.1.2 AUTOMATION IS FLEXIBLE AND ALLOWS FOR MULTITASKING

The findings of this study have revealed that the automation adopted at the uMshwathi Municipality is flexible and allows for multitasking as indicated by 76 percent of the participants. This finding correlates with the mission statement of the municipality which are to improve performance, to promote social and economic development through sustainable, effective, efficient and dependable basic service delivery in line with the constitutional mandate, and to continually strive to remain a green Municipality. Multitasking has been indicated as one of the best ways to get ahead at work, multitasking will enable the employees of the uMshwathi Municipality to save time and allow the municipality to combine tasks and swiftly get everything done simultaneously. Multitasking is less likely to cause procrastination amongst the employees and will motivate them because it will give them a sense of accomplishment. The uMshwathi Municipality should develop its employees' multitasking capabilities because it has numerous benefits for municipality as a whole and it also reduces the need for hiring new employees thus reducing the cost to the municipality.

5.2.1.3 CURRENT AUTOMATION IMPROVES WORK SATISFACTION

The uMshwathi Municipality has adopted a variety of automated systems which include computer programmes, scanners, the intranet, self-service options, digital signatures and filing systems, these current automation processes at the uMshwathi Municipality are perceived to be increasing work satisfaction and this is reflected by 66.7 percent of the respondents who agreed, whereas 32 percent of the respondents disagreed, nevertheless the municipality is challenged with closing the work satisfaction gap which was revealed by a minority of the respondents. Most of the employees at the uMshwathi Municipality are satisfied with the adopted automation system, therefore, this will possibly bring about work satisfaction to the administrative staff at the uMshwathi Municipality. Gunawan and Sondakh (2019) indicate that providing an efficient and compatible automation system within the administrative environment undoubtedly improves the employees' work satisfaction and yields

maximum organisational outputs. Consequently, the organisation's customers inherit quality service delivery. Therefore, it is recommended that the uMshwathi Municipality should maintain a good administrative environment that has a compatible automation system, which will assist in enhancing employee work satisfaction.

5.2.1.4 CURRENT AUTOMATION DECREASES WORK OVERLOAD

The findings have demonstrated that 64.6 percent of the respondents agreed that the current automation decreases work overload, whereas 32 percent of the respondents disagreed and were uncertain regarding the decrease of work overload by the current automation. The findings indicate that although most respondents perceive automation as key in decreasing workload, the uMshwathi Municipality remains with a problematic case of work overload. The study findings revealed that the uMshwathi Municipality is not reaping the full benefits of automation as it has not reduced the workload of its employees which is one of the main purposes of automation.

Therefore, it is strongly recommended that the uMshwathi Municipality carefully delegate some responsibilities to other competent administrative personnel in other departments within the municipality, or it should offer in-service training programmes for administrative students. This programme might alleviate the work burden on the administrative unit. The benefits of automation are not always linear, therefore, the uMshwathi Municipality should manage the timing of automation improvements to reduce role burden and enhance efforts to use automation effectively.

5.2.1.5 CURRENT AUTOMATION EXPEDITES ADMINISTRATIVE PROCESSES

The municipality's primary objective in adopting automation is to improve administrative workflow, decrease response time and save organisational expenditures. It also strives to develop consistency in the delivery of high quality service and the alleviation of several tasks that employees would otherwise need to

do manually. The findings in this study reveal that the current automation at the uMshwathi Municipality expedites administrative processes, which was supported by 72 percent of the respondents who strongly agreed and agreed. The findings depict that the entire administrative department within the uMshwathi Municipality is capable of providing swift service delivery meeting the needs of its citizens and fulfilling its primary objective. The findings also show that automation also allows for more innovation and increases the employees' level of motivation.

5.2.1.6. AUTOMATION SYSTEM AT THE UMSHWATHI MUNICIPALITY INNOVATE ADMINISTRATIVE PROCESSES

The majority of the respondents (85.3percent) indicated that computer programmes were the most commonly used automation process and 65.3 percent of the respondents perceived automation processes as innovative. The other processes which had significantly lower usage are self-service, digital signature and filing system. Mauricio (2016) revealed that automated self-service permits most consumers direct access to the answers they seek, assisting the organisation in meeting customer expectations and facilitating management activities within the organisation, therefore, it is further recommended that the uMshwathi Municipality encourage its departments to familiarise consumers to effectively utilise its automated self-services.

This study has revealed that there is a lower usage of the digital signature, therefore, the uMshwathi Municipality should use digital signatures to reduce the risk of duplication or alteration of the document and ensures that signatures are verified within all municipal departments. There is also lower usage of the filing system at the uMshwathi Municipality. A well-maintained automated filing system allows crucial data to be retrieved rapidly and saves money by saving time (Marquette 2018) Furthermore, the uMshwathi Municipality should establish a favourable company culture, use outside sources of ideas effectively, dedicate additional resources for innovation and provide incentives and rewards for innovation.

5.2.2 OBJECTIVE TWO: TO INVESTIGATE THE EFFECTIVENESS OF AUTOMATION ON SERVICE DELIVERY WITHIN THE UMSHWATHI MUNICIPALITY

This section focuses on the effectiveness of automation on service delivery within the uMshwati Municipality to support and speed up the administrative duties. Also, a possible recommendation will be made available to the municipality to resolve the pending identified service delivery gaps.

5.2.2.1 AUTOMATION ENHANCES SERVICE DELIVERY WITHIN THE UMSHWATHI MUNICIPALITY

The findings have divulged that 70.7 percent of the respondents perceived automation as enhancing service delivery within the uMshwathi Municipality. Delivering high-quality services is more crucial for municipalities that seek to create and provide valuable service to their customers (Gronroos and Ravald 2011). Through the provision of high levels of service quality, Municipalities can increase customer satisfaction, loyalty and long-term profitability (Zeithaml and Bitner 2010). Participants have indicated that automation enhanced service delivery which will, in turn, offer by uMshwathi Municipality satisfactory service to its citizens. The municipality should maintain the automation infrastructure on a regular basis and teach and motivate employees to take care of the automation tools and keep updated with the latest automation developments. This will assist the municipality in the effectiveness of their automation and will assist them in achieving the municipality's short and long term goals.

5.2.2.2 AUTOMATION PROCESS IS IN LINE WITH THE ADMINISTRATIVE PROCEDURES AT THE UMSHWATHI MUNICIPALITY

The study discovered that 64 percent of the respondents perceived automation processes as corresponding with administrative procedures, while 35.3 percent of participants were either uncertain or disagreed with automation compliance with administrative procedures at the uMshwathi Municipality. The findings also revealed

that some computer packages have lower usage, namely, self-service, digital signature and automated filing systems, which places challenges on the uMshwathi Municipality to accommodate and increase the usage of all computer packages within the entire municipality. The compliance of the automation system could assist the uMshwathi administrative staff in the timely finishing of activity documentation that would assist senior management for rapid decision making.

Therefore, the study recommends that the uMshwathi Municipality upgrade its automation processes to be precisely in line with administrative procedures that will ultimately boost compliance with the adopted automation. The uMshwathi Municipality should also offer modern computers that are more compatible with new software and applications. This might reduce unnecessary technological complications and facilitate employee performance.

5.2.2.3 AUTOMATION INCREASES DATA ACCURACY WITHIN THE UMSHWATHI MUNICIPALITY

This study has revealed that 59.3 percent of the respondents agreed that automation does increase data accuracy at the uMshwathi Municipality whilst 40 percent of the respondents were uncertain and disagreed. This is clearly a challenge for the municipality to respond to. It is essential for the uMshwathi Municipality to regularly review and double-check the data being recorded or hire a team of quality assurance professionals who can review the data and help in reducing the data errors to a large extent. It is further recommended that the uMshwathi Municipality should set a realistic goal to improve data quality and top management needs to identify and resolve the problems which are hampering the data accuracy. It also could be more advantageous for the uMshwathi Municipality to make updated data available to the entire department merely to obviate unnecessary delays during report compilations.

5.2.2.4 AUTOMATION IMPROVES THE PROCESS OF SERVICE DELIVERY WITHIN THE UMSHWATHI MUNICIPALITY

Automation improves the process of service delivery within the uMshwathi Municipality as indicated by 76.6 percent of the respondents. Respondents revealed that automation is easy to use, and it was found to increase work performance. Therefore, the findings revealed that automation at the uMshwathi Municipality is effective, especially towards the improvement of the processes of service delivery. The majority of the respondents (85.3%) indicated that the most commonly used automation process was computer programmes followed by programmes like scanners, the intranet, self-service options, digital signatures, and filing systems. The uMshwathi Municipality should introduce more advanced automation systems to be used within municipal departments. It could be advantageous for the uMshwathi Municipality as a local municipality to benchmark its automation processes with other more advanced district and metropolitan municipalities to develop a homogeneous set of processes and pinpoint performance gaps.

5.2.2.5 AUTOMATION REMOVES THE RISK OF HUMAN ERROR

The UMshwathi Municipality has come a long way to eliminate the risk of human error, though it has not reached the optimum level in removing human error within its departments. Almost 36.7 percent of the respondents declared that automation is perceived as not removing the risk of human error in the administrative environment within the uMshwathi Municipality. Therefore, it is essential for the uMshwathi Municipal management to conduct informative workshops or training merely to equip its employees with applicable automation skills. Automation skills will surely assist in the alleviation of human error in the administrative environment. It is also recommended that the uMshwathi Municipality should create a structured risk management programme to ensure that the Municipality is able to properly manage risks of human error in the workplace. All municipality employees should be exposed to the concept of human error and to what danger it poses to them and the municipality as a whole. Training is also further recommended to be specifically tailored to suit all employees in the different departments. It will be advantageous for the uMshwathi

Municipality to introduce checklists and procedures to ensure that employees follow all the necessary steps when handling specific tasks, and this will reduce the risks of omissions.

5.2.2.6 AUTOMATION IMPROVES COMMUNICATION BETWEEN THE UMSHWATHI MUNICIPALITY AND ITS CUSTOMERS/CITIZENS

Improvement of communication was one of the major reasons for automation adoption at the uMshwathi Municipality. The findings clearly expressed that automation has developed a viable effective relationship at uMshwathi Municipality by creating smooth communication between the municipality and its citizens. However, 31 (20.7 percent) remained neutral, 7 (4.7 percent) disagreed with the statement and 10 (6.7 percent) strongly disagreed. Therefore, it is essential for the municipality to convey important information, provide strong relationships with external sponsors and to build solid communication about products, services and company culture and values through varied automation processes such as the extranet, community outreach and sound based systems.

5.2.2.7 AUTOMATION ALLOWS CITIZENS TO EASILY ACCESS MUNICIPAL INFORMATION

Based on the findings, 68.7 percent of the respondents perceived automation as useful and enabling citizens to easily access municipal information while 30.7 percent of the respondents disagreed or were unsure. This places a challenge upon the uMshwathi Municipality to improve its measures of communication and the transmission of information. Smith and Mofolo (2019) states that access and transparency of information is one of the Batho Pele principles which all public sectors are compelled to conscientiously adhere to, therefore, the uMshwathi Municipality should regularly provide updated information to all citizens equally to ensure that citizens are updated. Newspapers, radio, posters and leaflets are channels of communication which could assist the uMshwathi Municipality to share information with respective customers.

5.2.2.8 AUTOMATION IS CONVENIENT AND EASY TO USE FOR EMPLOYEES

Automation at the uMshwathi Municipality was perceived to be effective, convenient, easy to use for employees and useful; this was demonstrated by the majority of the respondents, approximately 76.7 percent. They also believed that automation would require less effort and increase individual work performance. Some of the employees outlined that automation is effective because employees do not need to move across the municipal departments to pass information to individuals if it is done electronically. It is recommended that the uMshwathi Municipality ensure that its employees are competent in the use of the adopted automation at the uMshwathi Municipality.

5.2.3 OBJECTIVE THREE: TO DETERMINE THE CHALLENGES AND OPPORTUNITIES IN ADOPTING AUTOMATION PROCESSES WITHIN THE UMSHWATHI MUNICIPALITY

The following section discusses the challenges and opportunities in adopting automation processes within the municipality and provides possible recommendations to the uMshwathi Municipality.

5.2.3.1 IT IS EASY TO FIX AUTOMATION ERRORS IN THE WORK ENVIRONMENT

The study revealed that uMshwathi Municipality has come a long way in resolving and minimising challenges within their departments to render satisfactory and modernised service delivery. However, they have not yet reached the optimal level of service delivery with 25.3 percent of the respondents indicating that they could not fix automation errors in the work environment. They reported that it was time-consuming and hampered the swift flow of service delivery. Minor automation errors resulted work stoppage, whereas manual errors could be fixed by the user who could then proceed with the task.

Therefore, it is further recommended that the uMshwathi Municipality should provide comprehensive training for employees on how to use automation effectively and

efficiently as well as how to fix possible automation errors. The uMshwathi Municipality should inform its employees about how valuable the information is before employees commence entering the data and further elucidate as to why accurate information is important and how inaccurate information can negatively affect the municipality as a whole.

5.2.3.2 COMPETENCE WITH THE AUTOMATION SYSTEM

This study revealed that 72 percent of employees within the uMshwathi Municipality felt competent working with the entire automation system. Therefore, these findings show that the municipality employees perceive automation as being user-friendly and believe that automation requires less effort and increases work performance. However, some of the participants divulged that they have never received any training in using the automated system which may lead to challenges that can impact service delivery. In order for the uMshwathi Municipality to maintain a record of good service delivery, it is recommended that the municipality managers conduct a skills audit of municipal employees so the municipality can organise training and workshops to fill the gaps in knowledge and skills to upgrade employee skills.

5.2.3.3 THE AVAILABILITY OF THE AUTOMATION SYSTEM

The study discovered that there were times when the automation system within the uMshwathi Municipality was offline, therefore, the study strongly recommends that the uMshwathi Municipality introduce an alternative system which could be manual system, merely to continue providing rapid and quality service delivery while the automation system is offline, rather than to cease all activities or dismiss citizens who are seeking service from the municipality. Some of the employees also indicated that the uMshwathi Municipality has no electricity backup which results in the entire municipal system ceasing routine operations when there is no electricity. It is also strongly recommended that the uMshwathi Municipality provide backup systems like generators to all municipal departments.

5.2.3.4 TRAINING ON THE AUTOMATION SYSTEM

The study also discovered that almost 23 percent of the respondents did not receive informative training on the automation system. A well-trained employee exhibits greater productivity and higher quality of work performance than an untrained employee; training also increases the skills of the employees in the performance of tasks. Deckop (2016: 69) indicates that training and development in the area of administration are vital where technology changes consistently, training becomes the prerequisite for every organisation to remain in the global market. Organisations cannot rely only on conventional specialisms to compete in the future, therefore, it is crucial for an organisation to develop their employee skills, because it is the century of productivity and quality (Sahinidis 2018: 325). Therefore, the study recommends that the uMshwathi Municipality offers regular automation training to newly appointed employees and provide refresher training to older employees which might assist both newer and older employees to become familiar with modernised office automation.

5.2.3.5 ADAPTING TO THE AUTOMATION SYSTEM

The findings revealed that employees within the uMshwathi Municipality are able to adapt and use the automation system as indicated by 74 percent of the respondents. Therefore, this means that uMshwathi Municipal employees can use the adopted system easily, efficiently and effectively to perform the assigned work at an optimal level. This may result in high expectations of fewer human errors, work accuracy and quality service delivery.

Swift adaptability to the automation systems will impel municipal employees to work faster. Then automation was perceived useful as well as a key player in enhancing creativity in the present time. It has, therefore been found to be pivotal for employees

to think outside the box and develop innovations in the work environment which would eventually assist all the departments within the uMshwathi Municipality.

5.2.3.6 COMPUTERS SUPPORT THE ADOPTED AUTOMATION PROCESSES

The results revealed that although computers support the adopted automation process, there is a minor gap where 9.3 percent of the respondents indicated that computers do not support the adopted automation process and 18.7 percent of the respondents were uncertain whether computers support the adopted automation process. The majority of the respondents (85.3%) indicated that computer programmes were the most commonly used automation process. This study has revealed that computers at the uMshwathi Municipality optimally support the adopted automation processes. It is, therefore, strongly recommended that the uMshwathi Municipality close the compliance gap between the computers and the adopted automation sytem by modernising or upgrading the current computers to suit the adopted automation system.

5.2.3.7 THE AUTOMATION SYSTEM IS MAINTAINED ON A REGULAR BASIS

Almost 40.7 percent of the respondents disagreed that automation within the uMshwathi Municipality is maintained regularly, which will affect the smooth and swift rendering of service delivery.

The uMshwathi Municipality should conduct automation maintenance which could include:

- Repairing or replacing faulty computers after the duration of three years.
- Monthly cleaning of equipment by removing and disposing of unnecessary equipment and applications.
- Weekly monitoring of the condition and functionality of networks and equipment, including testing website access and links.

- Updating or upgrading hardware and software, including installing new versions of the operating system at least once a year.
- Weekly redeploying of equipment and backing up stored files.

5.2.3.8. ACCESS TO TECHNICAL SUPPORT

The findings reveal that although technical support is readily available, there is a gap where 22 percent of the respondents reported that technical support is not readily available. The municipality's increasing reliance on computer systems in all areas of its operations and decision making processes makes it crucial for the uMshwathi Municipality to ensure correct and regular running of the automation systems. Ogbonna (2013: 73) states that the organisation with technical support that is not regularly available usually encounters problems such as offline computer systems, poor networks connections, application problems and hardware and software faults. Therefore, it is strongly recommended that the uMshwathi Municipality provide enough technicians or outsource technicians to ensure regular availability of technicians in the working environment within all the municipal departments. It is strongly advisable for the uMshwathi Municipality to introduce an opportunity for in-service training or graduate work-integrated learning for technical support to save money and minimise municipal expenditures. Furthermore, the researcher recommends that the uMshwathi Municipality utilise remote technical support whereby a technician can resolve computer problems without being physically present in the area where the computer is located.

5.3. LIMITATIONS OF THE STUDY

This was a case study based research and the study was only limited to administrative personnel at the uMshwathi Municipality, therefore, generalisations may not be made to other similar organisations. Although, questionnaires were purposively structured to assist in identifying pending discrepancies the data might not characterise the real condition on the ground through personal viewpoints and opinions.

5.4. SUGGESTIONS FOR FUTURE RESEARCH

The researcher focused solely on uMshwathi Municipal administrative employees with regards to ascertaining the effectiveness of automated systems towards the improvement of service delivery within the uMshwathi Municipality. Responses were slightly in contrast with the problem statement, therefore, further research should include citizens residing within the uMshwathi Municipality to discover precisely what the source of dissatisfaction is in the uMshwathi Municipality administrative environment since automation has been introduced and implemented to improve the effectiveness of administrative procedures.

5.5. CONCLUDING REMARKS

The findings presented in the study will hopefully benefit the uMshwathi Municipality management concerning the development of service quality offered to citizens by its personnel and also provide the support required by its personnel to improve the quality of the services that they offer to citizens. The municipality has to focus more on bridging existing service quality gaps. The purchase of updated equipment like computers with internet installation will assist in the responsiveness as employees and customers can access a municipal website to acquire swift assistance. The uMshwathi Municipal management can improve the work environment by providing adequate equipment such as work tools and modernised automation to personnel in order to perform their jobs more effectively and efficiently. Automation advancements such as an updated website can facilitate the development of an intranet system and interactive software that could encourage more communication between municipal employees and the citizens. Continuous training of administrative employees is also very important as it helps the entire municipality in improving the quality of service delivery to citizens.

The proposed recommendations were based on the information given by the respondents and are supported by a precise literature review. Therefore, the research findings are expected to exclusively aid the uMshwathi Municipality to support employees utilising these recommendations and further guaranteeing that an adopted automation could work effectively.

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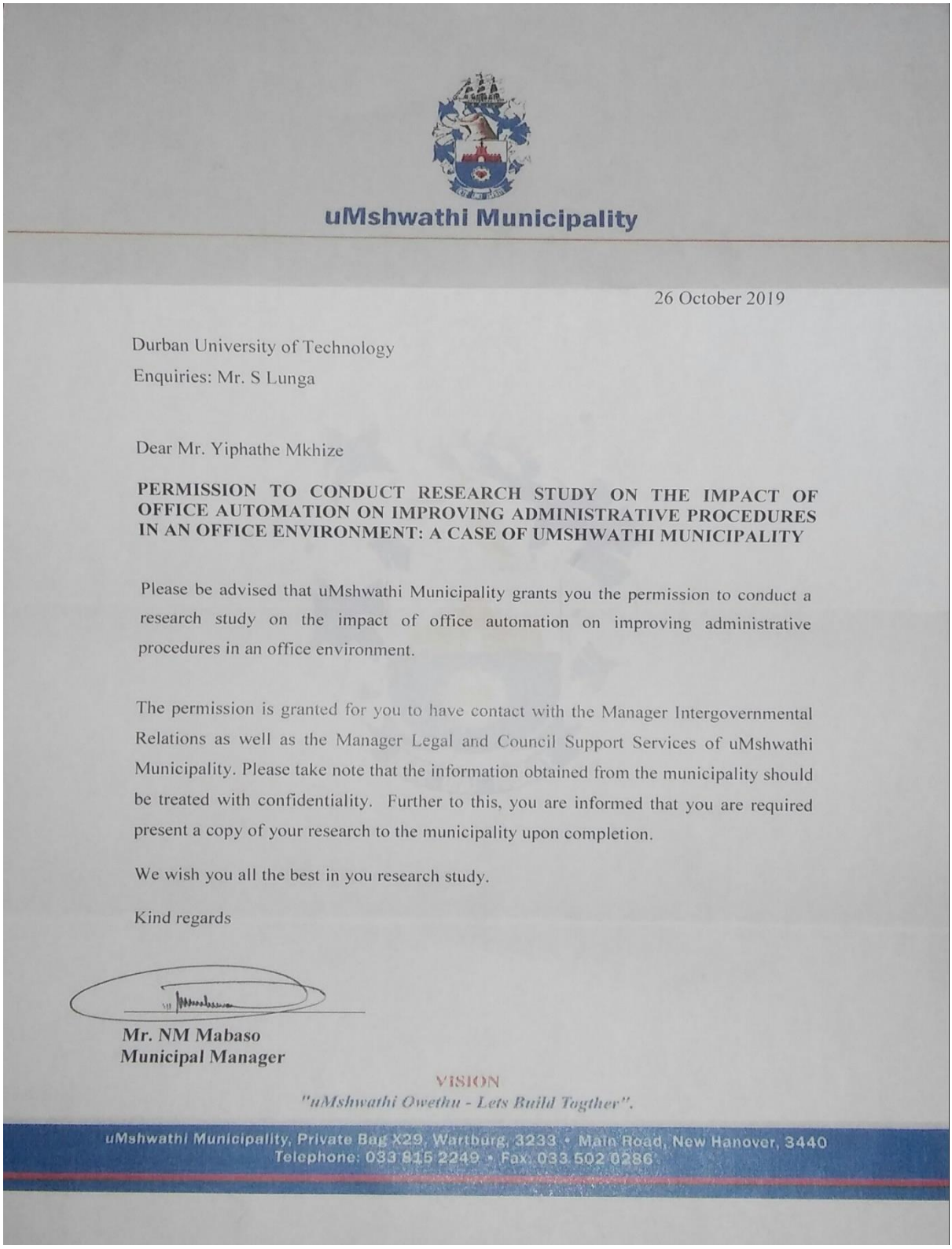
APPENDICES

APPENDIX A PERMISSION TO CONDUCT A RESEARCH AT UMSHWATHI MUNICIPALITY



uMshwathi Municipality

26 October 2019

Durban University of Technology
Enquiries: Mr. S Lunga

Dear Mr. Yiphathe Mkhize

PERMISSION TO CONDUCT RESEARCH STUDY ON THE IMPACT OF OFFICE AUTOMATION ON IMPROVING ADMINISTRATIVE PROCEDURES IN AN OFFICE ENVIRONMENT: A CASE OF UMSHWATHI MUNICIPALITY

Please be advised that uMshwathi Municipality grants you the permission to conduct a research study on the impact of office automation on improving administrative procedures in an office environment.

The permission is granted for you to have contact with the Manager Intergovernmental Relations as well as the Manager Legal and Council Support Services of uMshwathi Municipality. Please take note that the information obtained from the municipality should be treated with confidentiality. Further to this, you are informed that you are required present a copy of your research to the municipality upon completion.

We wish you all the best in you research study.

Kind regards

Mr. NM Mabaso
Municipal Manager

VISION
"uMshwathi Owethu - Lets Build Togther".

uMshwathi Municipality, Private Bag X29, Wartburg, 3233 • Main Road, New Hanover, 3440
Telephone: 033 815 2249 • Fax: 033 502 0286

APPENDIX B LETTER OF INFORMATION AND CONSENT FORM

LETTER OF INFORMATION

Title of the Research Study:

The impact of office automation on service delivery: A case of uMshwathi Municipality.

Principal Investigator/s/researcher:

Mkhize Yiphathe

Co-Investigator/s/supervisor/s:

Dr M. Ngibe

Dr R Govender

Brief Introduction and Purpose of the Study:

The study is accompanied to discover the influence of automated administrative systems towards the improvement of administrative procedures in an office environment within uMshwathi Municipality. The study is precisely intended to ascertain the effectiveness of the automated systems adopted by uMshwati Municipality in supporting and improving service delivery within the Municipality. Eventually, uMshwathi Municipality and its citizens will benefit from the study findings solitary if they effectively adhered on the practicable and courteously recommendation which will be proposed by a researcher

Outline of the Procedures:

You are kindly requested to complete the questionnaires as honesty and fully as you are able. Incomplete forms cannot be included in the survey. Your answers will be anonymous, and the findings aggregated. Therefore, it is kindly requested that you fully complete the questionnaire.

Risks or Discomforts to the Participant:

No risks or discomforts will you be subjected to when participating in this study.

Benefits:

The study will ultimately divulge the impact of automation on improving administrative procedures within uMshwathi Municipality administrative environment also to determine critical challenges that might interfere with satisfactory service delivery upon customers within uMshwathi Municipality. The study hopes to assist the Municipality by providing a comprehensive report on issues and factors that prohibit employees to use adopted systems for the improvement of administrative procedures and most importantly in to render satisfactory service delivery to the community.

Reason/s why the Participant May Be Withdrawn from the Study:

Anytime, you may decide to withdraw from the study, if you did not feel comfortable with the nature of the questions.

Remuneration:

Please note that no remuneration or incentives will be given to you as a participants. All participation is totally voluntary.

Costs of the Study:

You will not be liable for any incurred costs of this study.

Confidentiality:

Any information provided by you for the purpose of this study will remain strictly confidential. The statistician, the researcher and supervisors will be the only people to be given access to the information.

Research-related Injury:

Participation in this study will not cause any harm to you.

Persons to Contact in the Event of Any Problems or Queries:

Researcher:

Yiphathe Mkhize (084 303 1266 or yiphathe@gmail.com)

Supervisor:

Mr. M Ngibe (031 373 5858 or musawenkosi1@dut.ac.za)

Co-supervisor:

Dr R Govender (031 3035643 or rosalineg@dut.ac.za)

General:

Potential participants must be assured that participation is voluntary and the approximate number of participants to be included should be disclosed. A copy of the information letter should be issued to participants. The information letter and consent form must be translated and provided in the primary spoken language of the research population e.g. isiZulu.

CONSENT

Statement of Agreement to Participate in the Research Study

- I hereby confirm that I have been informed by the researcher, **Yiphathe Mkhize** about the nature, conduct, benefits and risks of this study - Research Ethics Clearance Number:
- I have also received, read and understood the above written information (Participant Letter of Information) regarding the study.

- I am aware that the results of the study, including personal details regarding my sex, age, date of birth, initials and diagnosis will be anonymously processed into a study report.
- In view of the requirements of research, I agree that the data collected during this study can be processed in a computerised system by the researcher.

- I may, at any stage, without prejudice, withdraw my consent and participation in the study.

- I have had sufficient opportunity to ask questions and (of my own free will) declare myself prepared to participate in the study.

- I understand that significant new findings developed during the course of this research which may relate to my participation will be made available to me.

☐ I agree to be part of the research study.

I have fully been informed about the nature of this study and my role as a participant. By ticking (X) the box, I provide consent to be part of this research study.

I, _____herewith confirm that the above participant has been fully informed about the nature, conduct and risks of the above study.

_____	_____	_____
Name of researcher	Signature	Date

APPENDIX C QUESTIONNAIRES

SECTION A: Biographical Data (Please tick where applicable)

Please tick the appropriate box.

1.1 Please indicate your gender:

Male	
Female	

1.2 Please indicate your age group.

16-25	
26-35	
36-45	
46-55	
56-65	

1.3 Please indicate your years of administrative experience.

Less than a year	
1-5	
6-10	
11-15	
16 – 20	
21 and above	

1.4 Please indicate the department you belong to.

WATER SUPPLY	
Sewage collection and disposal	
Refusal removal	
Electricity and gas supply	
Health services	
Roads and storm water drainage	
Street lighting	
Parks and recreation	
Other (specify)	

SECTION B: The impact of office automation on service delivery.

These sections intend to gather data regarding the impact of office automation on service delivery.

2.1. Please place a tick indicating the current automation process being used by uMshwathi Municipality.		
Tools	**Tick (x)**	**Comments (if applicable)**
Computer programmes (specify)		
Scanner		
Digital signature		
Intranet		
Filing system (specify)		
Self – service		
Other (specify)		

Please place a tick (x) in the box below reflecting the level of agreement or disagreement with the statement provided, where 1=SD; 2=D; 3=N; 4=A and 5=SA

Example

Statement	***Strongly disagree (SD)*** ***1***	***Disagree*** ***(D)*** ***2***	***Neutral*** ***(N)*** ***3***	***Agree*** ***(A)*** ***4***	***Strongly agree*** ***(SA)*** ***5***
Office automation improves my performance					***X***

2.2. The following statements are based on the challenges in adopting automated system (processes) within the uMshwathi Municipality.					
Statement	**Strongly Disagree (SD)** **1**	**Disagree (D)** **2**	**Neutral (N)** **3**	**Agree (A)** **4**	**Strongly Agree (SA)** **5**
2.2.1. It's easy to fix automation errors in the work environment.					
2.2.2. I'm thoroughly competent with the entire automation system.					
2.2.3. The automation system is always online.					
2.2.4. I have received informative training on the automation system.					
2.2.5. It's easy to adapt to the automation system.					
2.2.6. Computers support the adopted automation processes					

2.2.7. The automation system is maintained on a regular basis.					
2.2.8. Technical support is readily available.					
2.3 The following statements are based on the effectiveness of automation on service delivery within the uMshwathi Municipality.					
Statement	**Strongly Disagree (SD) 1**	**Disagree (D) 2**	**Neutral (N) 3**	**Agree (A) 4**	**Strongly Agree (SA) 5**
2.3.1. Automation enhances service delivery within uMshwathi Municipality.					
2.3.2. Automation processes is in line with the administrative procedures at the uMshwathi Municipality.					
2.3.3. Automation increases data accuracy within the uMshwathi Municipality.					
2.3.4. Automation improves the process of service delivery within uMshwathi Municipality.					
2.3.5. Automation removes the risk of human error.					
2.3.6. Automation improves communication between the uMshwathi Municipality and its customers/ citizens.					
2.3.7. Automation allows citizens to easily access Municipal information.					
2.3.8. Automation is convenient and easy to use for employees.					

2.4. The following statements are based on the current automation processes being used within uMshwathi Municipality					
Statement	**Strongly Disagree (SD)** **1**	**Disagree (D)** **2**	**Neutral (N)** **3**	**Agree (A)** **4**	**Strongly Agree (SA)** **5**
2.4.1. Automation in my office is convenient to render improved quality service delivery.					
2.4.2. Automation is flexible and allows for multitasking					
2.4.3. Current automation improves work satisfaction.					
2.4.4. Current automation decreases work overload.					
2.4.5 Current automation expedites administrative processes.					
2.4. 6. Automation processes are innovative.					

4. How effective is automation for the improvement of service delivery within the uMshwathi Municipality?

5. What are critical challenges and opportunities arising in adopting the automation system within the uMshwathi Municipality?

6. What recommendations can you provide to improve office automation on administrative procedures in office environment of uMshwathi Municipality?

Thank you for taking your time to complete this questionnaire