MAKERERE UNIVERSITY

MAKERERE UNIVERSITY BUSINESS SCHOOL

INDIVIDUAL LEARNING, KNOWLEDGE SHARING AND INNOVATIVE BEHAVIOR OF EMPLOYEES IN SMALL BUSINESSES, IN KAMPALA, UGANDA

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2017/HD10/204U

A DISSERTATION SUBMITTED TO MAKERERE UNIVERSITY BUSINESS SCHOOL (FACULTY OF GRADUATE STUDIES AND RESEARCH) IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF THE DEGREE OF MASTER OF BUSINESS ADMINISTRATION OF MAKERERE UNIVERSITY

PLAN A

FEBRUARY, 2022

DECLARATION

I, **AKWII LUCY GRACE**, hereby declare that this research report is my original piece of work and has never been submitted to any University or Institution of higher learning for any award.

Sign .....

Date: 1st / March / 2022

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2017/HD10/204U

APPROVAL

This research report has been prepared under our supervision.

Signed ..... Date 01/03/2022

Associate Prof. Kyogabiirwe Bagorogoza

Signed ..... Date 01st/03/2022

Dr. Charles Kawalya

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You are the reason for my successful completion of this dissertation.

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ABSTRACT

This study was conducted to establish the relationship between; knowledge sharing and innovative behaviour among employees, individual learning and innovative behaviour and the combined effect of knowledge sharing and individual learning on innovative behavior among employees of welding small businesses in Nakawa division, Kampala. As such, a cross-sectional, correlational and analytical research design was adopted. A sample of 186 welding small businesses was used in the study. The unit of inquiry were the employees of welding small businesses. Data was analyzed using SPSS version 23 and results were presented based on the study objectives. The research findings revealed that knowledge sharing and individual learning are significant predictors of innovative behaviour among employees in small businesses ($r=.641^{**}$, $p\leq.01$; $r=.723^{**}$, $p\leq.01$) respectively. The study also revealed that the combined effect of knowledge sharing and individual learning is 56.6% of the variations in innovative behaviour of employees in small businesses. As such, small business owner-managers should provide learning and knowledge sharing opportunities to their employees such as visiting other organizations in the industry, internship, mentorship and learning on the job. This will result into development of new or significantly improved products and services that satisfy the ever changing customer needs.

Key words: *Knowledge sharing, individual learning, innovative behaviour of employees, small businesses, Nakawa division, Kampala Uganda.*

CHAPTER ONE

INTRODUCTION

1.0 Overview

This chapter presents the background of the study, statement of opportunity, purpose of the study, study objectives, research questions, scope of the study, significance of the study and, the conceptual framework.

1.1 Background to the study

Innovation in businesses requires a diversity of cognitive and socio-political efforts from individual innovators. As the cornerstone of all innovation is creative concepts and ideas (Chen, Wu, & Chen, 2020). It is individual employees who develop, promote and actualize ideas (Al-Hawari, Bani-Melhem & Shamsudin, 2019). Specifically, employees look out for new technologies, suggest new strategies to achieve objectives, apply new work methods, explore and mobilize resources to implement new ideas (Rizki, Parashakti, & Sragih, 2019). These translate into development of new products, technologies and markets, customer retention and profit maximization (Sendjaya, Pekerti, Cooper, & Zhu, 2019).

Extant literature highlights different antecedents of innovative behaviour of employees in small businesses. For example, affective commitment and organizational citizenship behaviour (Matthew & Yvonne, 2013), transformational leadership and organizational culture (Rizki, Parashakti, & Sragih, 2019), absorptive capacity and knowledge sharing (Kang & Lee, 2017), leader-member exchange and work engagement (Garg & Dhar, 2017), organizational tenure (Woods, Mustafa, Anderson, & Sayer, 2017), psychological climate (Theurer, Tumasjan, & Welpe, 2018), thriving at work and organizational support, (Riaz, Xu, & Hussain, 2018).

However, the role of individual learning, knowledge sharing has been understudied in previous studies using evidence from contexts outside Uganda. (Kang & Lee, 2017); (Radaelli, Lettiere, Mura, & Spiller, 2014); (Suseno, Standing, Gengatharen, & Nguyen, 2020). This study suggests that individual learning and knowledge sharing can promote innovative behaviour of employees in small businesses as postulated and based on the Social Cognitive Theory (SCT).

The Social Cognitive Theory (Bandura, 2001) describes the influence of individual experiences, the actions of others, and environmental factors on individual innovative behaviour. It explains individual differences in their capabilities that are cultivated and those that remain underdeveloped such as learning. (Bandura, 2001) adds that individuals hold beliefs about their ability to make things like innovations happen through their own actions such as self-initiated learning, problem solving, information sharing and donation.

Individual learning is a lifelong process by which individuals in an organization aquire their knowledge (Smolarczyk & Hauer, 2014). (Parboteeah, Hoegl, & Muethel, 2015) indicated that best practices vary from one workplace to another. These practices do not occur by chance; they represent a long path of continuous improvement that can reach a customized secret formula that creates a clear understanding of individual and organizational learning requirements (Dong, Bartol, Zhang, & Li, 2017). Therefore, this is critical in fostering innovative behaviour of employees in organizations as it facilitates knowledge acquisition and skills development (Lee, Reinicke, Sarkar, & Anderson, 2015).

Similarly, Knowledge sharing is the provision of task information and know-how to help others and to collaborate with others to solve problems, develop new ideas, or implement policies or procedures (Paulin & Suneson, 2015). This occurs when an individual is willing both to learn

(i.e., knowledge collecting) and assist (i.e., knowledge donating) others in developing new capabilities (Wang & Hou, 2015). Additionally, the process indicates how organization's employees share their work-related experience, expertise, know-how, and contextual information with other colleagues (Ritala, Olander, Michailova, & Husted, 2015). As such employees who share knowledge are likely to develop innovative behaviour. (Ologbo, Nor, & Okyere-Kwakye, 2015)

Considering the human resource management perspective, (Bos-Nehles & Veenendaal, 2019) indicates that human resource practices such as fair reward systems, employee training, innovation support systems and good employee-employer relationship are vital in stimulating innovative behaviour. (Yuan & Woodman, 2010) further states that organizational support, job requirements, employee reputation and employees' dissatisfaction with the status quo are critical human resource aspects that foster such behaviour of employees.

A case of Metal Fabricators fighting COVID 19.

Metal Fabricators fighting COVID 19

In Kampala, there are various clusters and individual metal fabricators making items like windows, doors, metallic bed frames, motor vehicle parts, agro machinery parts and other countless products out of metal stock that is bent, punched, drilled, grinded, threaded and cut to produce different shapes. These can be found around Nakawa, Katwe, Kiseka, Kisenyi and many other individual fabricators along major and feeder roads in and around Kampala. They employ between 1 and 10 employees given the nature of the small business and averagely are people with elementary education, artisans, skilled tradesmen, few with secondary or higher education. Products are made according to the season of need, customer's wishes, the artisan skills for example during school times, mostly metallic boxes are on sale, then all year around, there are kids' bicycles, saving boxes among others which over time, the welders have self-taught, learned from their employers or colleagues (Burton & Abraham, 2006).

With the outbreak of COVID 19, it became imperative to take precaution as advised by the Ministry of Health by washing hands frequently with soap, wearing masks, social distancing among others. The welders and fabricators became more innovative as they made the products that are being used to stop the spread by encouraging frequent hand washing with soap and

water. The hand washing facility components include the Water storage stand that has a soap rest, others have tap stands with large metallic wash basins and pipes to lead out the water and to the higher end, some of these wash facilities have been mechanized to improve efficiency and also reduce contact. (Appendix 5.4) (Kyambogo, 2020) (Tuhereze, 2020).

1.2 Statement of Opportunity

The outbreak of the novel COVID 19 pandemic shocked many Ugandans and started to devise strategies of containing the disease. While in the struggle to contain the pandemic, it became imperative to take precaution as advised by the Ministry of Health by washing hands frequently with soap, wearing masks among others. As such, the metal fabricators took up the opportunity to come up with anything and everything can could be used at a hand washing facility as the new normal at all offices, supermarkets, markets and buildings. This was from what some of the welders originally knew, others picked up from colleagues that started the fabrication. The fabrication of the various hand washing facilities could be ascribed to the individual learning of welders in the different clusters and their ability to share knowledge. (Lee *et al.,* 2015; Ologbo *et al.,* 2015). It is on this basis that this study seeks to examine the influence of individual learning and knowledge sharing on the innovative behaviour of employees using evidence from the metal fabricating businesses in Nakawa division, Kampala Uganda.

1.3 Purpose of the study

This study was conducted to determine the effect of knowledge sharing, individual learning and innovative behaviour among employees in small businesses in Nakawa division, Kampala.

1.4 Objectives of the study

This study was guided by the following objectives;

1) To establish the relationship between knowledge sharing and innovative behaviour among employees in small businesses in Nakawa division, Kampala.
2) To establish the relationship between individual learning and innovative behaviour among employees in small businesses in Nakawa division, Kampala.
3) To examine the combined effect of knowledge sharing and individual learning on innovative behavior among employees in small businesses in Nakawa division, Kampala.

1.5 Research questions

This study was guided by the following research questions;

1) What is the relationship between knowledge sharing and innovative behaviour among employees in small businesses in Nakawa division, Kampala?
2) What is the relationship between individual learning and innovative behaviour among employees in small businesses in Nakawa division, Kampala?
3) What is the combined effect of knowledge sharing and individual learning on innovative behavior among employees in small businesses in Nakawa division, Kampala?

1.6 Scope of the study

1.6.1 Content scope

This study focused on knowledge sharing, individual learning and innovative behaviour among employees in small businesses in Nakawa division, Kampala as the study variables.

1.6.2 Geographical scope

The study was carried out in Nakawa division, which is located in Kampala the capital city of Uganda. This is because Nakawa Division possesses the second highest number of welding small businesses after Makindye Division among all the five divisions that make-up Kampala capital city (Ministry in Charge of Presidency, 2019). Welding businesses were selected because it is a developing segment of small businesses with potential to make a significant contribution to the growth of the Ugandan economy.

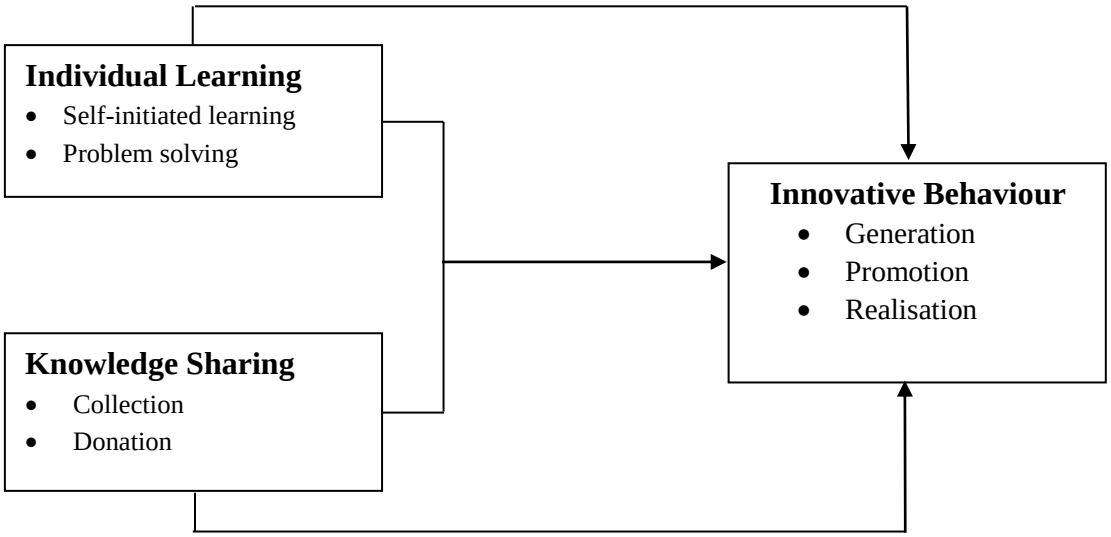
1.7 Significance of the study

i. The study will add to the existing literature on the antecedents of employee innovative behaviour in a developing country perspective.

ii. Policy makers will use the study findings to design policies that will foster innovative behaviour among employees especially the youths in Uganda.

iii. Study findings will help small business owners/managers to develop strategies that will enhance the innovative behaviour of their employees.

1.8 Conceptual framework knowledge



Source: Adapted from ((Sung & Choi, 2014)*;* (Kim & Lee, 2013)

Figure 1: Conceptual frame work

The research model demonstrates the relationship between individual learning, knowledge sharing and innovative behaviour among employees. Individual learning (self-initiated learning and problem solving) and knowledge sharing (information collection and information donation) are the independent variables while innovative behaviour among employees (generation, promotion, and realisation) is the dependent variable of the study as illustrated in figure 1. As such, when employees share knowledge in form of information collection and donation, it helps them to strengthen their understanding which is relevant in boosting their innovative behaviour. Similarly, knowledge sharing and individual learning that is self-initiated learning and problem solving is important in promoting innovative behaviour among employees.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This chapter presents review of the existing literature following study objectives.

2.1 Innovative behaviour among employees

Innovation behaviour of individuals in the workplace has been conceived as complex behaviour consisting of a three-stage process (Wang, Fang, Qureshi, & Janssen, 2015); (Kang & Lee, 2017). In the first stage of innovative behaviour, an individual recognizes a problem and comes up with new solutions and ideas, either novel or adapted. This is followed by an individual seeking ways to promote her or his solutions and ideas, and build legitimacy and support both inside and outside the organization. In the last stage of the innovation process, an individual, who exhibits innovative behaviour, realizes the idea or solution by producing a prototype or model of the innovation that can be experienced, applied and used within a work role, a group, or the organization as a whole (Messmann & Mulder, 2015); (Veenendaal & Bondarouk, 2015).

Based on the above literature, innovative behaviour among employees in this study is viewed as a multiple-stage process in which an individual recognizes a problem or opportunities for which she or he generates new (novel or adapted) ideas and solutions, works to promote and build support for them, and produces an applicable prototype or model for the use and benefit of the organization or parts within it. Basing on case of the Metal fabricators fighting COVID, they identified the opportunity brought by the pandemic of hand washing, then they put their expertise to work and they were able to come up with different designs of water stands and hand wash metallic basins.

2.2 Individual learning

The concept of individual learning has been viewed by several researchers differently. As such, (Smolarczyk & Hauer, 2014) viewed individual learning is a lifelong process that involves a process by which individuals in an organization increase their knowledge. Individual learning is also the capacity to build knowledge through individual reflection about external stimuli and sources, and through the personal re-elaboration of individual knowledge and experience in light of interaction with others and the environment (Wang & Chugh, 2014).

According to (Camps, Oltra, Aldas-Manzano, Buenaventura-Vera, & Torres-Carballo, 2016), organizations can promote individual learning of their employees through Problem solving that requires people's participation in each and every step, experimenting to produce incremental gains of knowledge, past experiences of employees that enable individuals to transfer previous experiences and practices to other employees, learning from others, transferring knowledge, management commitment, training and development, rewards, knowledge management and communities of practice.

(Parboteeah, Hoegl, & Muethel, 2015) indicated that individual learning's best practices vary from one workplace to another. These practices do not occur by chance; they represent a long path of continuous improvement that can reach a customized secret formula that creates a clear understanding of individual and organizational learning requirements (Dong, et al, 2017). Therefore, individual learning is critical to an organization's success since this learning includes acquisition of knowledge, skills, behaviours, and competencies needed to perform the job (Lee, et al, 2015). Relatedly, knowledgeable and skilled Individuals are difficult to find and difficult for competitors to imitate, giving their organizations a clear competitive edge. In the fast

changing world of today, organizations realize that continuous learning is vital to success and many initiatives are being developed to facilitate such learning (Jain & Moreno, 2015).

2.3 Knowledge sharing

Several scholars have perceived the concept of knowledge sharing differently. As such, (Paulin & Suneson, 2015) viewed it as the provision of task information and know-how to help others and to collaborate with others to solve problems, develop new ideas, or implement policies or procedures. Knowledge sharing is also defined as a social interaction culture, involving the exchange of employee knowledge, experiences, and skills through the whole department organization (Ritala, et al, 2015).

Knowledge sharing occurs when an individual is willing both to learn (i.e., knowledge collecting) and assist (i.e., knowledge donating) others in developing new capabilities (Wang & Hou, 2015). Knowledge sharing is thus the process where individuals mutually exchange their knowledge and jointly create new knowledge (Ignacio & Castaneda, 2015). That is, knowledge sharing is a process of communication between two or more participants involving the "acquisition" (i.e., knowledge collecting) and "provision" (i.e., knowledge donating) of knowledge (Wang & Hou, 2015). The process of knowledge sharing refers to how an organization's employees share their work-related experience, expertise, know-how, and contextual information with other colleagues (Ritala, et al, 2015).

This process is essential in transferring individual knowledge to organizational knowledge. This definition of knowledge sharing implies that every knowledge-sharing process consists of both 'bringing' (i.e., donating) and 'getting' (i.e., collecting) knowledge, in line with a number of other authors. For instance, (Razmerita, Kirchner, & Nielsen, 2016) noted that knowledge

sharing consists of both the supply of new knowledge and the demand for new knowledge. (Whalley, 2017) discussed how knowledge sharing involves both a knowledge carrier and a knowledge requester. Knowledge collecting and knowledge donating are also analogous to concepts such as knowledge recipient and source (Wang & Hou, 2015), knowledge seeker and contributor, knowledge recipient and owner (Safa & Von Solms, 2016), and knowledge buyer and seller (Loebbecke, Van Fenema, & Powell, 2016). This study combines these perspectives in labelling the two central processes of knowledge sharing following the previous studies (e.g., Razmerita, Kirchner & Nielsen, 2016; Wang & Hou, 2015). Knowledge collecting refers to consulting colleagues in order to get them to share their intellectual capital (Akhavan & Hosseini, 2016) while knowledge donating refers to communicating to others what one's personal intellectual capital is (Al-Husseini & Elbeltagi, 2018). That is, knowledge collecting refers to individuals asking for advice from each other in order to obtain intellectual capital, while knowledge donating is the motivation of individuals to pass on their own intellectual capital to others.

Therefore, both processes are active ones (either actively communicating to others what one knows, or actively consulting others in order to learn what they know), and both processes have different natures (Al-Husseini & Elbeltagi, 2018). In order to understand fully the complex mechanism of individuals' knowledge sharing behaviours in the relationship between knowledge sharing determinants and consequences, it is thus needed to apply the distinctive separated approach of knowledge-sharing behaviours.

2.4 Knowledge sharing and innovative behaviour of employees

Several studies have been conducted on the relationship between knowledge sharing and innovative behavior of employees (Mafabi, Nasiima, Muhimbise, Kasekende, & Nakiyonga, 2017) ; (Ologbo, Nor, & Okyere-Kwakye, 2015); (Radaelli, et al, 2014); (Hussain, et al., 2018); (Hussein, Singh, Farouk, & Sohal, 2016). For example, in a study Mafabi *et al* (2017) on the mediating role of intention in knowledge sharing behavior, it was revealed that knowledge sharing fully mediates the association between the study variables. In another study conducted by Ologbo *et al* (2015) on the impact of knowledge sharing on employee innovativeness in the manufacturing firms of Malaysia, it was found out that that knowledge sharing influences innovative capabilities of the employees. However, this study was in the manufacturing firms and thus calls for a similar study in the other sectors and contexts which this study intends to address. Additionally, Radaelli, et al, (2014) studied knowledge sharing and innovative work behavior in Health care revealed that there is a direct unmediated relationship between knowledge sharing and employee innovative behavior through boosting transformation and exploitation capabilities.

Furthermore, in a study undertaken by (Hussain, et al., 2018) on the impact of knowledge sharing and innovative work behavior of employees in the telecommunication sector of china concluded that both knowledge donating and knowledge collecting positively and significantly affect the innovativeness of the employees in the telecommunication sector. Though knowledge collection was to be more significant than knowledge donation. Relatedly, (Hussein, Singh, Farouk, & Sohal, 2016) investigated the impact of knowledge sharing on firm innovation capability in a law enforcement agency in the UAE. The study revealed that only Knowledge

collecting and not knowledge donation of employees significantly influences the innovation capability of the law enforcement agency studied.

2.5 Individual learning and innovative behaviour of employees

Extant literature shows that there is a relationship between individual learning and the innovative behavior of employees (Sapie, Hussain, Awang, & Isak, 2015); (Pandey, Gupta, & Gupta, 2019). For example, in their study of organization learning determinants of innovative work behavior among Malaysian small and medium enterprises, (Sapie, Hussain, Awang, & Isak, 2015) found that learning improves the innovative capability of the firms thus firms should create and maintain a culture of learning among their employees to support innovation. Additionally, (Pandey, Gupta, & Gupta, 2019) also revealed that learning mediates the relationship between spiritual climate and team-level innovative behaviours.

In another study on the effect of organisational learning on the innovative behavior of employees and work engagement in the southern Taiwan Science; (Lin & Lee, 2017) revealed that individual learning is positively associated with innovative behaviour of employees. (Anwar & Niode, 2017) further explored the impact of learning organisation on the innovative behavior of employees in automobile dealers' company of Indonesia. The authors found out that innovativeness of employees can be promoted through continuous learning since it helps to create a sense of wellbeing. More importantly, (Lin & Lee, 2017) argued that learning capabilities of employees in organizations promote firm's innovativeness.

2.6 Knowledge sharing and individual learning on innovative behavior of employees

Several scholars have examined the relationship between knowledge sharing and individual learning independently on the innovative behavior of employees (Hussain, et al., 2018);

(Hussein, Singh, Farouk, & Sohal, 2016); (Lin & Lee, 2017); (Anwar & Niode, 2017). However, limited research has been directed towards the combined effect of knowledge sharing and individual learning on the innovative behaviour of employees. Besides, there seems to be no single study that has directly investigated the combined effect of both variables on innovative behavior of employees in small businesses in Kampala Uganda. In a study conducted by (Siddiqui, Rasheed, Nawaz, & Abbas, 2019) on knowledge sharing and innovation capabilities: the moderating role of organizational learning. The authors argued that organizational learning entirely depends on the individual learning of employees in an organization. This results into knowledge sharing and eventually promotes innovative behavior of employees.

CHAPTER THREE

METHODOLOGY

3.0 Introduction

This section presents the research design, study population, sample size, sampling procedure, source of data, data collection instrument, measurement of study variables, validity and reliability of the instrument, data processing, analysis and presentation, ethical consideration and anticipated limitations of the study.

3.1 Research design

This study used a cross sectional research design which involves analysis of data collected from the sample at a specific point in time (Lisa, 2016). This research design was selected because it allows the researcher to give an opinion on a section of a population about a subject in a more efficient way. Data was analyzed quantitatively using inferential statistics (Creswell & Clark, 2017).

3.2 Study population

Study population is a collection of all elements of interest that enable the researcher to carry out an investigation. The population involved 380 welding Small businesses in Nakawa Division (UBOS, 2016). These businesses were selected because it is a developing segment of the small businesses that has exhibited innovative potential and they are likely to make a significant contribution to the growth of the Ugandan economy.

3.3 Sample size

Using Krejcie & Morgan's sampling table (Krejcie & Morgan, 1970),), a sample size of 191 welding small businesses were selected from 380 welding businesses operating from Nakawa

division, Kampala district from which one employee was selected from each business to participate in the study. The unit of analysis were the welding businesses in Nakawa division, Kampala and employees of these businesses on the other hand constituted the unit of inquiry.

3.4 Sampling procedure

A simple random sampling method was used to select the sample size of welding small businesses in Nakawa Division. Simple random sampling is where each and every element of the population has an equal chance of being selected in the sample (Alvi, 2016). This strategy was used because there is no possibility of sampling bias and the sample is presumed to be a good representation of the population. Purposive sampling on the other hand was used to select employees from these businesses to participate in the study. According to (Creswell & Clark, 2017) purposive sampling is a non-probability sampling where the sample selected depends on the objective of the study and characteristics of the population. Purposive sampling technique is also referred to as judgmental, selective, or subjective sampling. Therefore, employees were purposively selected from each business since they have a clear understanding of their innovative behaviours as compared to their supervisors.

3.5 Source of data

Primary data was gathered directly from the respondents. This is the data which is collected fresh and for the first time and still in its original form. This was done through administering a structured questionnaire and respondents were guided through the questionnaires to ensure high level of accuracy in the data collection process.

3.6 Data Collection Methods

Data was collected through administering a questionnaire (Albuquerque, Ramos, de Lucena, & Alencar, 2014). A questionnaire was used since it is easy to administer, facilitates collection of data from a large sample at a relatively low cost (Li, Zhang, Tsai, & Puls, 2014). Therefore, the questionnaires contained structured questions relating to each study variable in question. The questions relating to individual learning, knowledge sharing and innovative behavior of employees were constructed on an interval scale that was followed by respondents in providing feedback to the research. Respondents feedback were guided as strongly agree (SA) = 5, Agree (A) = 4, Not sure (NS) =3, Disagree (D) =2, Strongly Disagree (SD) =1. In addition, the questionnaire contained both closed ended questions (Mitchel and Jolley, 2004). In total, the questionnaire had five sections including the background information of the respondents, firm characteristics, and innovative behaviour of employees, individual learning and knowledge sharing.

3.7 Operationalization of study variables

Innovative Work Behavior. This was measured in terms of idea generation, idea promotion and idea realization (Scott & Bruce, 1994; Janssen, 2004). Employees were asked to report whether they engaged and displayed innovative behavior at work basing on items such as; *making suggestions to improve current products or services, producing ideas to improve work practices, acquiring new knowledge, actively contribute to the development of new products or services among others.*

Individual learning. This was operationalized in terms of self-initiated learning and problem solving (Sung & Choi, 2014) using items like participating in; *individual projects related to*

one's task, on-the-job training, formal off-the-job training courses like interpersonal relations, financial literacy, open learning centres among others. For Problem solving, items such as participating in; *tuition refund schemes, employee development schemes, job rotation for development purposes* among others were included.

Knowledge sharing. This was measured in terms of collection and donation of Information (Wang & Hou, 2015) using items such as; *When I need certain information, I ask my colleagues about it, I like to be informed of what my colleagues know, I ask my colleagues about their abilities when I need to learn something and When one of my colleagues is good at something, I ask him/her to teach me how to do it* for information collection. For Donation of information items such as; *When I have learned something new, I tell my colleagues about it, I share information I have with my colleagues, I think it is important that my colleagues know what I am doing* among other.

3.8 Data collection procedure

After the approval of the proposal, I followed the administrative procedure to obtain an introduction letter from the Makerere University Business School to get permission to collect data from small business managers in Kampala, Uganda. Using the introduction letter, the questionnaires were distributed to the target respondents. Phone calls were made to confirm the readiness of the questionnaire to be collected. After collecting all completed questionnaires, the collected data was analysed using Statistical Package for Social Scientists (SPSS) version 23.

3.9 Validity

Validity is the extent to which an instrument measures what it purports to measure (Souza, Alexandre, & Guirardello, 2017). This was achieved through developing the scales with the help of the experts and using items that were used in the previous studies. In addition, I used the expert judgment of the supervisors to verify the validity of the data collection instrument. In this way, the supervisors were contacted to evaluate the relevance of each item in the data collection instrument to the research objectives. The supervisors rated each item as either relevant or not relevant. Validity was determined using content Validity Index (CVI).

$$CVI = \frac{\text{Number of items rated relevant}}{\text{Total number of items}} \times 100\%$$

Accordingly, study results in Table 1 indicate that the instrument was valid since CVI for all the study variables were above the recommended threshold of 0.7.

Table 1: Content validity index

Variable	Anchor	CVIs
Knowledge sharing	2 point	0.750
Individual learning	2 point	0.809
Innovative behaviour of employees	2 point	0.878

Source: Expert opinion

3.10 Reliability

Reliability was achieved through administering the questionnaires and carrying out a pre-test of the questions to experts and pre-testing of pilot samples from owner-managers of small businesses who gave the feedback in order to improve on the questionnaire. In addition, test-retest reliability was used to measure the extent to which the questionnaire can produce

consistent results when the same group of respondents are used under similar conditions (Amin, 2005). Pretest results were used to modify the questionnaire. To measure reliability of the quantitative data, the Cronbach's alpha reliability coefficient was performed while considering the recommended cut-off points of 0.7. As such, study findings indicate that the questionnaire was reliable since Cronbach alpha figures for all the study variables are above the recommended cut-off point of 0.7 (Nunnally, 1978) as presented in Table 2.

Table 2: Reliability

Variable	Anchor	Cronbach Alpha Value
Knowledge sharing	5 Point	0.834
Individual learning	5 Point	0.720
Innovative behaviour of employees	5 Point	0.857

Source: Pre-test results

3.11 Data analysis

Data was analyzed using the statistical package for social scientists (SPSS) version 23 in order to summarize the data and make quick interpretation of results (Verma, 2012). Specifically, quantitative data generated from the questionnaire was analyzed to get descriptive statistics that involved determining frequencies, percentages, mean variance and standard deviation in order to get general response to the question in the Likert scale (Nemoto & Beglar, 2014). In addition, Pearson's correlation coefficient was performed to establish the relationship between the independent variables (individual learning and knowledge sharing) and dependent variable (innovative behaviour of employees). Regression analysis was conducted to determine the effect of the independent variables (Individual Learning and Knowledge sharing) to the predict the dependent variable, Innovative Behaviour. (Bastro & Pereira, 2012).

3.12 Ethical considerations

The researcher acquired an introduction letter from the University together with the identity card presented to the business managers under study as well as the respondents. Assurance was made to the respondents that the information was collected for academic purposes and would be handled with confidentiality. Consent of the respondents was highly considered to ensure that they participate in the study willingly. Relatedly, confidentiality of the respondents was paramount except in the case where they would give permission to be cited in the study.

CHAPTER FOUR

PRESENTATION AND INTERPRETATION OF FINDINGS

4.0 Introduction

This chapter comprises of presentation and interpretation of results in accordance with the study objectives. It begins with a description of the respondents' characteristics that include; gender, age group, educational level and experience. This is followed by the characteristics of the welding small businesses investigated that include the business ownership, number of employees and location of the business. Then the correlation and regression results of the study are presented following study objectives that include;

1) To establish the relationship between knowledge sharing and innovative behaviour among employees of small businesses in Nakawa division, Kampala.
2) To establish the relationship between individual learning and innovative behaviour among employees of small businesses in Nakawa division, Kampala.
3) To examine the combined effect of knowledge sharing, individual learning and innovative behavior among employees of small businesses in Nakawa division, Kampala.

4.1 Response rate

The target response was 191 respondents. Out of these, 188 questionnaires were received from the employee of welding small businesses operating in Nakawa division, Kampala Uganda. Through data cleaning, 186 questionnaires were retained as usable, accounting to a response rate of 97% as indicated in Table 3. This high response rate can be attributed the fact that the researcher maintained useful contacts with the respondent. As such, respondents were frequently contacted to confirm readiness of the questionnaire.

Table 3: Response rate

Item	Questionnaires
Target	191
Received	188
Usable response	186
Response rate	**97%**

Source: Primary data

4.2 Characteristics of the respondents

This section presents the characteristics of the respondents that include their gender, age, educational levels and business experience as presented below.

4.2.1 Gender of the respondents

Gender distribution of the respondents is presented in Table 4.

Table 4: Gender

Item	Frequency	Percent
Male	127	68
Female	59	32
Total	186	100

Source: Primary Data

Study results in Table 4 indicate that most of the respondents were male at 68 % and female respondents were 32%. This finding is not surprising due to the fact that most of the welding activities and operations are mostly done by males as compared to their female counterparts who come in to handle simple activities such as painting, cleaning, selling and marketing the finished products.

4.2.2 Age of the respondent

Age distribution of the respondents is presented in Table 5.

Table 5: Respondents' Age bracket

Item	Frequency	Percent
18-24	19	10
25-29	34	18
30-34	51	27
35-39	54	29
40 & above	28	15
Total	**186**	**100**

Source: Primary Data

Study results in Table 5 show that 29% of the respondents are in the age bracket of 35-39. This was followed by those in the age bracket of 30-34 (27%) and the least are in the age bracket of above 18-24 at 10%. This suggests that most employees in welding small business are still in their youthful age with potential to develop and improve on their innovative behaviours.

4.2.3 Education level of the respondents

Information was sought on the education level of the respondents as presented in Table 6.

Table 6: Level of Education of the Respondents

Item	Frequency	Percent
Primary	8	4
Secondary	46	25
Certificate	58	31
Diploma	48	26
Bachelors	21	11
Masters	5	3
Total	**186**	**100**

Source: Primary Data

Study results indicate that most of the respondents have a certificate (31%). This was followed by those with a diploma at (26%) and the least with a masters' degree and primary education (3% and 4%) respectively. This finding shows that employees in welding small businesses have enough education needed to do their work effectively and efficiently. In addition, this education is also noted to boost their innovative potential to come up better designs that are appealing to their customers.

4.2.4 Business experience of the respondents

Business experience of the respondent is presented in Table 7.

Table 7: Experience of the respondents

Item	Frequency	Percent
One year	29	16
Two years	72	39
Four years	56	30
Above five years	29	16
Total	**186**	**100**

Source: Primary Data

Study results in Table 7 indicate that majority of the respondents have experience in the welding business of almost two years (39%). This was followed by 30% who have experience of four years. Then the least are those with one year of experience and those above five years (16%). This finding is not surprising since most of the students who were supposed to continue with their education stopped going to school after the outbreak of COVID-19 and thus have less experience with innovative ideas due to their being new in the field.

4.3 Business characteristics

In this study, business location, legal form of business and business size – number of employees were considered in this study as core business characteristics as presented in the following subsections.

4.3.1 Business location

Study results on the distribution of business location is indicated in Table 8.

Table 8: Business location

Item	Frequency	Percent
Banda	14	8
Bugolobi	10	5
Bukoto	19	10
Butabika	7	4
Kiswa	10	5
Kiwatule	7	4
Kyambogo	12	6
Kyanja	17	9
Luzira	20	11
Mbuya	14	8
Mutungo	11	6
Nabisunsa	12	6
Naguru	14	8
Nakawa market	6	3
Ntinda	13	7
Total	**186**	**100**

Source: Primary Data

The study revealed that most of the welding small businesses are located in Luzira at 11%. This was followed by those that are located in Bukoto at 10%. The least are located in Nakawa at 3% as presented in Table 8.

4.3.1 Legal form of business

Study results on the distribution of legal form of business is presented in Table 9.

Table 9: Legal form of business

Item	Frequency	Percent
Sole proprietorship	89	48
Partnership	76	41
Limited Liability	21	11
Total	**186**	**100**

Source: Primary Data

The study revealed that most of the small welding businesses in Nakawa division are sole proprietorship type of businesses at 48% and 41% businesses are partnership in nature. This shows that most of the proprietors take on sole proprietorship and partnership as the easiest ways of starting and operating a small business in Uganda as compared to starting and operating as company that involves several procedures and requirements to be fulfilled before commencing business operations.

4.3.2 Business size

The distribution of the number of employees in welding small businesses is presented in Table 10.

Table 10: Business size

Item	Frequency	Percent
2 – 4	41	22
5 – 8	64	34
9 – 10	57	31
More than 10	24	13
Total	186	100

Source: Primary Data

The study revealed that most of the welding small businesses in Nakawa employ 5.8 persons (34%). This was followed by the businesses that employ 9-10 workers at 31% and the least employ more than 10 workers (13%) as presented in Table 10. This shows that most welding businesses in Nakawa are still small with potential to enhance innovative behaviours of their employees to survive and ultimate register sustainable growth.

4.4 Correlation analysis results

Pearson's Correlation analysis was conducted to measure the strength of linear associations between the study variables and is denoted by r. The Pearson correlation coefficient, *r*, can take a range of values from +1 to -1. A value of 0 indicates that there is no association between the two variables. A value greater than 0 indicates a positive association; that is, as the value of one variable increases, so does the value of the other variable. A value less than 0 indicates a negative association; that is, as the value of one variable increases, the value of the other variable decreases. The study variables were measured on a continuous scale, and thus Pearson correlation was found to be the most appropriate to test the relationships between the variables. Correlation results are presented in Table 11.

Table 11: Correlation results

Variables	**1**	**2**	**3**
Knowledge sharing (1)	1		
Individual learning (2)	.656**	1	
Innovative work behaviour (3)	**.641****	**.723****	1

**. Correlation is significant at the 0.01 level (2-tailed).

Knowledge sharing and innovative behaviour of employees

The results in Table 11 show that there is a positive significant relationship between knowledge sharing and innovative behaviour of employees (r=.641**, p≤.01). This means that any positive change in knowledge sharing is associated with a positive change in the innovative behaviour of employees of welding small businesses in Nakawa division, Kampala. In addition, the dimensions of knowledge sharing that include Information collection and information donation have a positive significant relationship with innovative behaviour of employees.

Individual learning and innovative behaviour of employees

The results in Table 11 show that there is a positive significant relationship between individual learning and innovative behaviour of employees (r=.723**, p≤.01). This demonstrates that any positive variation in individual learning is associated with a positive alteration in the innovative behaviours of employees of small businesses in Nakawa division, Kampala, Uganda. Similarly, the dimensions of individual learning that are self-initiated learning and problem solving have a significant positive relationship with innovative behaviour of employees of small businesses in Nakawa division, Kampala Uganda.

4.5 Regression analysis results

The regression analysis model was used to examine the combined effect of knowledge sharing and individual learning on innovative behaviour of employees. Particularly, hierarchal regression analysis was performed to test for the effect of the independent variables on the dependent variable. This was done to determine the extent to which the independent variables (knowledge sharing and individual learning) impact on the dependent variable (innovative behaviour of

employees). That is, the percentage change in the dependent variable accounted for by the change in the independent variable. Regression findings are presented Table 12.

Table 12: Hierarchical Regression model

Item	Model I	Model II	Model III
Constant	4.094	1.689	1.181
Control Variables			
Business size	-.130	-.068	-.044
Independent Variables			
Knowledge sharing		.635**	.292**
Individual learning			.526**
Model summary			
R	.130	.645	.757
R Square	.017	.416	.573
Adjusted R Square	.012	.410	.566
R Square change	.017	.399	.157
Model F	3.153	65.183	81.524
Sig	.077	.000	.000
Durbin Watson			1.507

Innovative work behaviour

In Model I, the control variable was regressed against innovative behaviour of employees. Results in Table 9 show that business size in terms of number of employees ($\beta = -0.130$, $P \leq 0.05$) has a negative insignificant contribution in predicting innovative behaviour of employees of small businesses in Nakawa division, Kampala Uganda. The model accounts for 1.7% of the change in innovative behaviour of employees of small businesses.

In Model II, knowledge sharing was introduced in the equation. Study findings indicate that knowledge sharing predicts 39.9% of the variance in innovative behaviour of employees. This indicates that a change in knowledge sharing results into .635 change in innovative behaviour of

employees. As such, knowledge sharing is a significant predictor of innovative behaviour among employees of small businesses in Nakawa division, Kampala Uganda ($\beta = 0.635$, $p \leq 0.01$).

In Model III, individual learning was introduced to the equation. The results in table 9 show that individual learning contributes 15.7% change in innovative behaviour of employees among small businesses in Nakawa division, Kampala Uganda. Thus for a unit change in individual learning, innovative behaviours of employees would improve by .526 units. The results demonstrate that individual learning is a true predictor of innovative employee behaviour among employees of small businesses in Nakawa division, Kampala district ($\beta = 0.526$, $P \leq 0.01$).

Finally, the combined effect of knowledge sharing and individual learning is 56.6% (R Square = .573) of the variations in innovative behaviour of employees in small businesses in Nakawa division, Kampala Uganda. This means that 43.4% is explained by other variables not considered in this study. In addition, comparing the two independent variables entered in the model, the results indicated that knowledge sharing contributes more to innovative behaviour of employees as compared to individual learning.

CHAPTER FIVE

DISCUSSION, CONCLUSION AND RECOMMENDATIONS

5.0 Introduction

This chapter presents the discussion of the results generated in chapter four. Conclusions and recommendations on knowledge sharing, individual learning and innovative behaviour of employees of welding small businesses in Nakawa division, Kampala Uganda. Specifically, the discussion is presented based on the study objectives by comparing the findings of this study with what other scholars have established before in extant literature. This helps to draw conclusions, recommendations and identify areas for future research.

5.1 Discussion of findings

This research was carried out basing on five objectives. Findings in relation to these objectives were thus obtained. In this section, these findings are further discussed to check their relevance and contribution to existing literature. The discussions are aligned to the study objectives in relation to key findings obtained from data analysis process.

Knowledge sharing and innovative behaviour of employees

The study revealed that there is a positive significant relationship between knowledge sharing and innovative behaviour of employees. This demonstrated that any positive change in knowledge sharing is associated with a positive change in the innovative behaviour of employees of welding small businesses in Nakawa division, Kampala. Specifically, when employees in small businesses acquire and donate knowledge to the colleagues with less awareness, it unlocks their potential to develop innovative behaviours.

Study findings are supported Ologbo *et al* (2015) who indicated that knowledge sharing influences innovative capabilities of the employees in their study of the impact of knowledge sharing on employee innovativeness in the manufacturing firms of Malaysia. This is also supported by Radaelli, et al, (2014) who studied knowledge sharing and innovative work behavior in Health care and revealed that there is a direct unmediated relationship between knowledge sharing and employee innovative behavior through boosting transformation and exploitation capabilities.

Furthermore, study findings are in agreement with Hussain *et al.*, (2018) who revealed that both knowledge donating and knowledge collecting positively and significantly affect the innovativeness of the employees in the telecommunication sector of china. However, study findings are contrary to Hussein et al., (2016) who investigated the impact of knowledge sharing on firm innovation capability in a law enforcement agency in the UAE, it was revealed that only Knowledge collecting and not knowledge donation of employees significantly influences the innovation capability of the law enforcement agency studied.

Similarly knowledge sharing fully mediates the association between intention, attitude, subjective norm and perceived behavioral control (Mafabi *et al.*, 2017).

Individual learning and innovative behaviour of employees

Study findings also show that there is a positive significant relationship between individual learning and innovative behaviour of employees. This implies that any positive variation in individual learning is associated with a positive alteration in the innovative behaviours of employees of small businesses in Nakawa division, Kampala, Uganda. As such, when employees

in welding small businesses are engaged in self-initiated learning and problem solving, they develop skills and knowledge that are relevant in boosting their innovative potential.

Study findings are supported by Sapie, Hussain, Awang and Isak (2015) who found that learning improves the innovative capability of the firms thus firms should create and maintain a culture of learning among their employees to support innovation in their study of organization learning determinants of innovative work behavior among Malaysian small and medium enterprises. This is also strengthened by Pandey, Gupta and Gupta, (2019) who reported that learning mediates the relationship between spiritual climate and team-level innovative behaviours.

In the same vein, Lin and Lee, (2017) reported that individual learning is positively associated with innovative behaviour of employees in their study of the effect of organisational learning on the innovative behavior of employees and work engagement in the southern Taiwan Science. Relatedly, Anwar and Niode (2017) documented that innovativeness of employees can be promoted through continuous learning since it helps to create a sense of wellbeing.

The combined effect of knowledge sharing and individual learning on innovative behaviour of employees

The study further revealed that a combination of knowledge sharing and individual learning positively and significantly predict innovative behaviour of employees in small businesses in Nakawa division, Kampala Uganda. This suggests that when knowledge sharing and individual learning are combined, their effect on innovative behaviour of employees is stronger than when they work in isolation. The findings of this study makes a unique contribution to existing literature. This is because most of the extant studies have focused on the direct association

between knowledge and individual learning independently on the innovative behavior of employees (see; Hussain, *et al.,* 2018; (Hussein, Singh, Farouk, & Sohal, 2016; Lin & Lee, 2017; Anwar & Niode, 2017).

Specifically, in a study conducted by Siddiqui, Rasheed, Nawaz and Abbas, (2019) on knowledge sharing and innovation capabilities: the moderating role of organizational learning. The authors argued that organizational learning entirely depends on the individual learning of employees in an organization. This results into knowledge sharing and eventually promotes innovative behavior of employees. It is therefore important to note that a combination knowledge sharing and individual learning catalyze innovative behaviour of employees of welding small businesses in Nakawa division, Kampala Uganda.

5.2 Conclusion

The findings and discussion on knowledge sharing and innovative behaviour of employees in welding small businesses lead to the conclusion that for employees to come up with innovative ideas in terms of the new products such as the hand washing machines, designs and shapes of doors, windows and garages, they need to acquire and donate knowledge to their colleagues in order to unlock their innovative behaviours. This knowledge and skills will also enable them to offer guidance to their customers in order to satisfy their needs.

Additionally, study findings on individual learning of employees in welding small businesses lead to a conclusion that for welding businesses to enhance innovative behaviour of their employees, they must focus on the learning of their employees. This learning can be done through on-the-job training, mentoring and employee development schemes, visits to other

organizations in the industry, participating in group activities and employee exchange programmes. This will enable them acquire more knowledge and undertand changes that occur within their jobs in order to better serve their customers.

Finally, study results on the combined effect of knowledge sharing and individual learning on innovative behaviour of employees of welding small businesses lead to the conclusion that for innovative behaviour of employees to be enhanced, owner-managers of small businesses need to promote both knowledge sharing and individual learning than using the strategies in isolation. This is because their combined impact yields more results in terms of promoting innovative behaviour of employees than when used independently.

5.3 Recommendations

This study was conducted to determine the effect of knowledge sharing, individual learning and innovative behaviour among employees in small businesses in Nakawa division, Kampala. Based on the study findings and discussion, the following practical, theoretical and policy recommendations are made.

5.3.1 Practical recommendation

Study results demonstrated that individual learning is positively associated with innovative behaviour of employees in welding small businesses of Nakawa division, Kampala district. Thus, owner-managers welding small business should provide on and off the job training to the staff, encourage peer learning and mentorship to enable their employees acquire knowledge that is relevant in unlocking their innovative behaviours. This will enable them to generate new ideas for difficult issues in the business, acquire new knowledge needed for their jobs, actively contribute to the development of new products and make suggestions to improve current

products of the business. This will also improve the business' work, champion their ideas to others and acquire new groups of customers. Similarly, individual learning of employees will enable them secure funds needed to implement new ideas, develop adequate plans and schedules for the implementation of new ideas and transform innovative ideas into useful applications.

Owner-managers of welding small businesses are also recommended to promote knowledge sharing among their employees as a catalyst for innovative behaviour. This can be achieved through information collection, in which employees consult their colleagues to learn from them, and the donation of information that enables workers to willingly and freely communicate with colleagues with a view to enhancing their innovative behaviour.

5.3.2 Theory recommendation

This study was anchored on the Social Cognitive Theory (Bandura, 2001) that describes how individuals hold beliefs about their ability to make things like innovations happen through their own actions such as self-initiated learning, problem solving, information sharing and donation. It is therefore recommended that future studies should use other theories such as the innovation diffusion theory (García-Avilés, 2020) and the Schumpeterian theory (Guichardaz & Pénin, 2019; Ferreira, V., & Lisboa, 2019) to broaden the understanding of innovative employees' behaviours.

5.3.3 Policy recommendation

In partnership with the private organizations such as Uganda Small Scale Industries Association (USSIA) and Uganda Manufacturers' Association (UMA) the government should annually recognize and award employees that demonstrate innovative potential. This will motivate

employees in micro, small and medium enterprises (MSMEs) and large organizations in Uganda to become more innovative.

5.4 Limitations of the study and areas for further research

The study adopted a cross sectional design where data was collected at one point in time and the findings from such studies are always limited to the current period only hence future studies should look at a longitudinal research design where businesses are monitored for a long period of time.

The study was restricted to a quantitative approach using a structured questionnaire to produce information from the respondents meaning that other features that can be observed were not included in the findings, thus future research should incorporate qualitative aspects for example using observations and interview guides.

Furthermore, the combined effect of knowledge sharing and individual learning is 56.6% of the variations in innovative behaviour of employees in small businesses in Nakawa division, Kampala Uganda. This means that 43.4% is explained by other variables not considered in this study. As such, further research should explore other predicting factors of innovative behaviour of employees and if possible, other variables need to be combined with these variables in order to stimulate attainment of innovative behaviour of employees of welding small businesses in Uganda.

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Appendix

Data collection instrument

MAKERERE UNIVERSITY

MAKERERE UNIVERSITY BUSINESS SCHOOL

Questionnaire

Dear respondent,

Thank you for accepting to volunteer and complete this questionnaire. Your responses are important and your thoughtful considerations are highly appreciated. I am a student of Makerere University Business School conducting a research on "*Individual learning, knowledge sharing and innovative behavior of employees in small businesses in Uganda*". This research is a pre-requisite for the award of the degree of Master of Business Administration. Your responses will contribute greatly to achieving the research aim and objectives of this study which will be of benefit to small business enterprises. All responses received will be treated with utmost confidentiality, and will only be for the purposes of this research work. Kindly answer these questions as objectively as possible so that the results of the data analysis are fairly accurate. Thank you very much for your cooperation.

SECTION A: Background Information of the respondent

Please tick the appropriate box for the items below;

1. Gender: Male ☐ Female ☐
2. Age group

18-24	25-29	30-34	34-39	40 & above

3. Level of Education

Primary	Secondary	Certificate	Diploma	Bachelors	Masters

4. Business experience

One year	Two years	Four years	above years

SECTION B: Background Information of the business

1. Business location (Nakawa parishes)

1. Banda	6. Kiwatule	11. Mutungo
2. Bugolobi	7. Kyambogo	12. Nabisunsa
3. Bukoto	8. Kyanja	13. Naguru
4. Butabika	9. Luzira	14. Nakawa market
5. Kiswa	10. Mbuya	15. Ntinda

2. Legal form of business

Sole proprietorship	Partnership	Limited Liability

3. Number of employees

2 - 4	5 – 8	9 to 10	more than 10

SECTION C: Innovative work behavior

Innovative work behaviour is an individual's behaviour that aims to achieve the initiation and intentional introduction (within a work role, group or organization) of new and useful ideas, processes, products or procedures.

CODE	Please indicate by ticking in the appropriate box the extent to which you agree / disagree with the most suitable response that are rated as follows: 1= Strongly Disagree (SD); 2= Disagree (D); 3= Not sure (NS); 4= Agree (A); 5= Strongly Agree (SA).	SD	D	NS	A	SA
ID	**Generation**					
ID1	I search out new technologies, processes, techniques, and product ideas.	1	2	3	4	5
ID2	I produce ideas to improve my work practices.	1	2	3	4	5
ID3	I create new ideas for difficult issues in our business.	1	2	3	4	5
ID4	I acquire new knowledge needed for my job.	1	2	3	4	5
ID5	I actively contribute to the development of new products or services.	1	2	3	4	5
ID6	I make suggestions to improve current products or services.	1	2	3	4	5
ID7	I am confident that I can generate new ideas.	1	2	3	4	5
ID8	I always waiting for a chance to express my ideas	1	2	3	4	5

IP	**Promotion**					
IP1	I improve our business' work.	1	2	3	4	5
IP2	I champion ideas to others.	1	2	3	4	5
IP3	I acquire new groups of customers.	1	2	3	4	5
IR	**Realization**					
IR1	I investigate and secures funds needed to implement new ideas.	1	2	3	4	5
IR2	I develop adequate plans and schedules for the implementation of new ideas.	1	2	3	4	5
IR3	I transform innovative ideas into useful applications.	1	2	3	4	5

SECTION D: Knowledge sharing in the work place

Knowledge sharing is as a social interaction culture involving the exchange of employee knowledge, experiences, and skills in an organization.

CODE	Please indicate by ticking in the appropriate box the extent to which you agree / disagree with the most suitable response that are rated as follows: 1= Strongly Disagree (SD); 2= Disagree (D); 3= Not sure (NS); 4= Agree (A); 5= Strongly Agree (SA).	SD	D	NS	A	SA
KC	**Information collection (to consult with colleagues to learn from them)**					
KC1	When I need certain information, I ask my colleagues about it.	1	2	3	4	5
KC2	I like to be informed of what my colleagues know.	1	2	3	4	5
KC3	I ask my colleagues about their abilities when I need to learn something.	1	2	3	4	5
KC4	When one of my colleagues is good at something, I ask him to teach me how to do it.	1	2	3	4	5
KD	**Information donation (employees' willingness to communicate with colleagues)**	1	2	3	4	5
KD1	When I have learned something new, I tell my colleagues about it.	1	2	3	4	5

KD2	I share information I have with my colleagues.	1	2	3	4	5
KD3	I think it is important that my colleagues know what I am doing.	1	2	3	4	5
KD4	I regularly tell my colleagues what I am doing.	1	2	3	4	5

SECTION E: Individual Learning of employees in the work place

Individual learning is a lifelong process that involves a process by which individuals in an organization increase their knowledge.

CODE	Please indicate by ticking in the appropriate box the extent to which you agree / disagree with the most suitable response that are rated as follows: 1= Strongly Disagree (SD); 2= Disagree (D); 3= Not sure (NS); 4= Agree (A); 5= Strongly Agree (SA).	SD	D	NS	A	SA
SIL	**Self-initiated learning**					
SIL1	I participate in individual projects related to one's task	1	2	3	4	5
SIL2	I participate on-the-job training.	1	2	3	4	5
SIL3	I have attended formal off-the-job training courses like interpersonal relations, financial literacy.	1	2	3	4	5
SIL4	I participate open learning centres.	1	2	3	4	5
SIL5	I actively participate in personal development reviews.	1	2	3	4	5
SIL6	I have personal development plans.	1	2	3	4	5
SIL7	I participate in mentoring schemes in our business.	1	2	3	4	5
PS	**Problem solving**					
PS1	I am actively involved in tuition refund schemes.	1	2	3	4	5
PS2	I participate in employee development schemes.	1	2	3	4	5
PS3	My job changes with time for development purposes.	1	2	3	4	5
PS4	I visits other organizations in the industry.	1	2	3	4	5
PS5	I participate in employee exchanges programmes.	1	2	3	4	5
PS6	I participate in groups activities.	1	2	3	4	5

Thanks for your time!

b) Images relating to the case study

Image 1 A hand washing kit that was innovated at Makerere University in August, 2020

Image 2 A mechanised free touch hand washing equipment innovated by a technician at Kyambogo University June, 2020