

Managing the tacit knowledge of business improvement strategies in South African furniture manufacturing SMMEs, Soweto

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Abstract

Due to SMMEs having limited resources, which includes limited manpower, enterprises must ensure that they take the strategy of knowledge management seriously. When this is not properly done it means that the employees who are knowledgeable in the enterprise, the "knowledge-rich" may leave the enterprise and join the enterprises' competitors, or even start their own manufacturing enterprises and be their direct competitors (their previous employers). This study aims to evaluate the importance of tacit knowledge management of business improvement strategies in the furniture manufacturing SMMEs. Findings make it clear that most of the studied SMMEs have employees of less than 20. It was also found that Total Quality Management is the most used business improvement strategy by furniture manufacturing SMMEs. This study adopted a quantitative approach where 117 furniture manufacturing SMMEs have responded to questionnaires. The Cronbach Alpha of this study is .865. This study is limited to Soweto furniture manufacturing SMMEs and with regards to business improvement initiatives, this study focused on Total Quality Management, Six Sigma, Statistical Quality Control and Failure Mode and Effects Analysis. Further study will focus on sharing the tacit knowledge of the business improvement strategies in the furniture manufacturing SMMEs.

Keywords

Tacit Knowledge Management, Total Quality Management, Furniture Manufacturing, Business Improvement Strategy, SMMEs

1. Introduction

There are various sources for knowledge and information in SMMEs. SMMEs can get knowledge and information from Universities, public and private sectors. This knowledge may be of paramount importance when SMMEs want to remain in business or to gain a competitive advantage over their competitors [5]. Knowledge management is a key driver of innovation in organizations [12]. In addition, it helps enterprises when they deal with change management. Which is not an option but a necessity for SMMEs if they want to succeed in the changing markets of the customer needs and wants, and the change of technology. Furthermore, SMMEs differ greatly with big enterprises when making decisions [5]. However, there is limited research about knowledge management in furniture manufacturing SMMEs. Moreover, there are no records of research conducted on managing the tacit knowledge of business improvement strategies. Knowledge management is not a new discipline, it has been there for decades. However, research trends show that there was a slight decrease in the topic between 2011 and 2012. But, the topic managed to grow again [14]. It is discussed that SMMEs have many restrictions such as financing and technical skills. This makes them not to compete fairly with big enterprises that have been in the industry for a very long time and that have skilled labour and finances [9].

Business improvement strategies are praised for improving quality in enterprises. It is also important to know that customers are interested in high-quality products and services that they buy. In addition, customers would do anything to get high-quality products and services [10]. There are numerous business improvements that can be used to improve quality in businesses. Business improvement initiatives that can be used are as follows: Total Quality Management, Six Sigma, Lean Production, Statistical Control, Quality Control, Failure Mode and Effects Analysis the etc. Their aim is to improve the organizational performance. However, these quality initiatives were invented by big organizations such as Toyota, Motorola etc. and these initiatives were made for big organizations [16].

There are two types of knowledge management. The first one is elicited knowledge, which is a knowledge that can be stored in office cabinets, files etc. in short this knowledge can be stored somewhere and be left there for other people to use it. While tacit knowledge is rooted in the person. This type of knowledge cannot be stored or be left for other people to use it unless the bearer of such knowledge decides to share it effectively with fellows/colleagues. Adding to that, sharing such knowledge is very difficult [15]. [14] Came up with a framework for sharing tacit knowledge but their focus was on agricultural SMMEs. The framework included trust which was regarded as important, there must be effective teamwork with effective communication, the organizational culture must also support knowledge sharing, the management must also support their staff, employees must be motivated, be willing to share their knowledge and must be committed to sharing their knowledge.

The informal industry and SMMEs' employees need to transfer their skills to their fellow workmates because the success of this sector and SMMEs depends on those skills [6]. SMMEs play a very important role in contributing the Gross Domestic of the country. In South Africa, the number of SMMEs is 2 251 821. The number of formal SMMEs is 667 433 while informal SMMEs accounts 1 497 860. Furthermore, the rate of black-owned SMMEs is 34%. There has been a 3% increase in the number of SMMEs in the country. Looking at provinces, Limpopo has increased by 34% and it is followed by Gauteng province which increased by 14%. However, Gauteng still maintains position one with regards to having many SMMEs in the country. Sadly, Northern Cape has decreased by 31%. This is not good for the people of the Northern Cape Province. In 2007 and 2008 most of these SMMEs were affected by a severe drop. Provinces such as Limpopo lost about 30% of its total SMMEs, while Gauteng and Western Cape have always been growing from strength to strength. Amongst other challenges that are faced by SMMEs, crime, lack of skills and inadequate education top the list of, [13]. When comparing South Africa, Chile, Brazil, Ghana and Zambia South Africa is not doing well. It has the lowest number of start-ups, new businesses and established SMMEs [6].

1.1. Problem investigated and the relevance of the study

SMMEs have the fewer manpower and limited financial resources. The little employees that they have are poached by big corporations and they don't only leave the enterprise but they leave with the organizational knowledge [15]. Due to this, SMMEs are left by key employees who join big companies or even start their own businesses and leave with the knowledge that was supposed to have been used by employees of the SMMEs. This leaves SMMEs stranded and it comes very difficult for SMMEs to compete with big enterprises because they are already at a disadvantage of having limited resources. This can lead to the enterprise failing to keep up with the competition posed by big companies and other enterprises that have been established by their former key employees.

1.2. Research objectives

This research has the following objectives:

- ✦ To review knowledge management in manufacturing SMMEs.
- ✦ Will examine the business improvement strategies that are used by the studied SMMEs.
- ✦ Lastly, the study will look at the knowledge creation.

1.3. Aims of the study

This study seeks to look at the management of tacit knowledge of the business improvement strategies in the furniture manufacturing SMMEs that are based in Soweto region in Johannesburg, Gauteng Province, South Africa. The business improvement strategies are many but for the sake of this study will only look at Total Quality Management, Six Sigma, Failure Mode and Effects Analysis; and Statistical Control. This study further aims to find out if SMMEs manage their knowledge. This study will also look at the knowledge creation and review tacit knowledge management.

1.4. Similar studies

[5], conducted a study on the knowledge of technology on manufacturing SMMEs. The study found a correlation between knowledge source remoteness and company performance. This means that the more the distance the less effective it becomes. It was also discussed that if the business has sufficient networks that are effective, the company will likely make more profits and this will flourish, be sustainable and competitive.

1.5. The structure of this paper will be as follows:

- A). Introduction and background
- B). Literature Review
- C). Research Methods
- D). Findings, Analysis and Discussions

2. Literature Review

2.1. Knowledge Management

Knowledge management is defined as a process of storing of knowledge, re-using it and sharing it with other people in the enterprise. Furthermore, knowledge management is praised for improving innovation in the enterprise which is a needed strategy so that it can help create a sustainable competitive advantage. When innovation and competitive advantage is in place, the enterprise will improve its performance and sustainability [14].

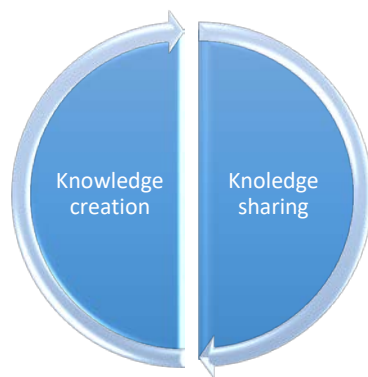


Figure 1 The cycle of knowledge sharing and knowledge creation

The above cycle shows how knowledge sharing works in enterprises. It shows that as soon as the knowledge is shared it can also be created and be used again in the future. This shows that the sharing of knowledge never ends.

There have been a number of researchers who have been researching this topic and it has been being tackled in different aspects or rather different angles. The research found that the first organization that had knowledge workers managed to improve the productivity of their employees. It is discussed that enterprises have to ensure that knowledge is managed within employees of the Province so that knowledge can remain with the employees of the enterprise [4]. However, it was argued that tacit knowledge can never be made explicit, meaning it cannot be recorded because it is rooted in a person who has it [3], "knowledge-rich"- [14].

2.2. Knowledge creation

It is believed that sharing of knowledge in enterprises creates another knowledge that can further be used in the enterprise. In order for sharing tacit knowledge to take place effectively between the person who is sharing and the person who is receiving it, there must be an effective framework. The framework was made for Agricultural SMMEs. The framework included that there must be trust between employees in the organization, there must be a very good working teamwork between employees for knowledge sharing to take place, employees must be motivated to share and be willing to learn from their colleagues, the management team of the enterprise must be supportive, they must reward those who are sharing their knowledge in SMMEs, the enterprise's culture must also support knowledge sharing, again knowledge should not be rushed for it will not be effective, it must be given enough time for two parties (sharing and receiving) to share the knowledge and lastly, effective communication is very important because should there be effective communication then knowledge sharing will take place, a language that accommodates the person sharing knowledge and the one who is receiving is must be understood by both of them [14].

2.3. Quality in SMME

It is very important for SMMEs to consider quality initiatives because they improve the performance of the enterprise. Ensuring quality in the enterprise will have repeated sales because customers are interested in quality products and services that they buy. Products that are of a high quality are free from defects and are less likely to be returned which saves more money for the enterprise [8].

2.4. Total Quality Management

It is believed that most organizations use Total Quality Management as their business improvement strategy. They do not use this business improvement strategy to only improve the quality of their products and services, but they also use it because it helps them to survive in the competitive market [17]. TQM is also used to increase the profits of the business. This strategy focuses on attaining customers' satisfaction and involving the management team in the process. Furthermore, this involves everyone who has a stake in the enterprise. This means all employees from general workers to senior managers and owners are involved, customers and suppliers are also involved [11]. Academics have been studying this quality initiative but they have not found a unique definition for the term TQM (Total Quality Management). The discovery of this quality initiatives is traced in the early 1930s in the American companies [17]. However, it is discussed that TQM was invented by big enterprises and it was meant for big enterprises. Big enterprises differ with SMMEs because SMMEs have limited resources such as manpower, money and other valuable resources. This means in order for SMMEs to successfully adopt TQM they have to modify it so that it can suit their needs and be able to compete with big enterprises.

2.5. Six sigma

Six Sigma has been in existence for more than 20 years now. Frameworks for implementing it in SMMEs have been proposed and some have been implemented. It is stated that if it not properly implemented in the enterprise it will be very difficult for people in charge of implementing it to fix and re-organize it. Six Sigma helps the enterprise to minimize waste and improve the enterprise performance. This business improvement strategy was pioneered by Motorola Company in the mid-1980s. This improvement strategy has evolved from being a manufacturing strategy to implementing it to healthcare, financial sector and other sectors (public) and it had made a significant impact on those sectors [10].

2.6. Statistical Quality Control

Statistical Quality Control is a process that is used for ensuring that the final products meets the required standards. It is stated that enterprises must have quality standards and programmes that they must follow. A study was conducted in the United States of America, it focused on SMMEs in the banking industry, and however, managers of such enterprises were not convinced that this business improvement strategy works. In order for it to be a success it needs management/executive to develop programmes and standards that needs to be followed. This will ensure the effectiveness of this business improvement strategy [18].

2.7. Failure Mode and Effects Analysis

This initiative is used to avoid and minimize mistakes on the products that can make customers be dissatisfied. This helps the manufacturing enterprise to detect errors during the production stage. When mistakes are minimized customer will not be dissatisfied by the products they buy. It was discovered that this business improvement strategy is used in manufacturing industries as it detects mistakes or faults in the product development stage [1]. This business improvement strategy can be used in industries or enterprises that need to improve their productivity and reduce defects [7].

3. Research Methods

This study used a quantitative approach where representatives of the furniture manufacturing SMMEs were given questionnaires to fill out. This strategy was used because it helps the author to get statistical evidence regarding a certain topic and it can be used to check the reliability of the instrument using the various analysing software. This approach "quantitative research" was the first research technique to be used by researchers and it was followed by qualitative approach and lastly, they introduced the mixed methods which are the combination of the two first research techniques (quantitative and qualitative) [2].

3.1. Sample

117 SMMEs that focused on manufacturing furniture in Soweto are studied. Soweto is very big township that is located in Johannesburg, in the Gauteng Province in South Africa. Gauteng province has many SMMEs as compared to other provinces [16]. In the next page, the map of Soweto is displayed.

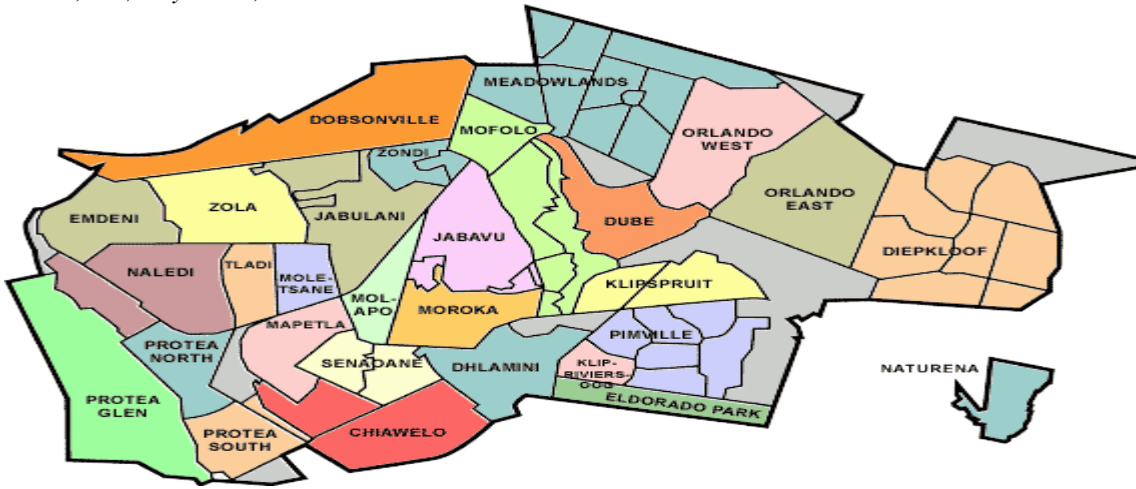


Figure 2 Map of Soweto (kasimemories.blogspot.co.za)

3.2. Procedure

Data gathered by means of questionnaires is analysed by SPSS. The respondents were asked if they were interested in forming part of the study and it was emphasized that data collected is for research only. They were assured that the data will be kept with confidentiality. This is used because the reliability of the study is checked using this software. The Cronbach Alpha for this study is .856.

4. Findings and Analysis

The questionnaire consisted of 3 sections. The first Section is about the biographical information of the enterprise studied, Section B is about information regarding the business if it has implemented business improvement strategies. Enterprises that have never used quality were required to proceed to Section C. 117 SMMEs were studied but only 29 proceeded to Section C because they have implemented quality in their businesses.

4.1. Number of years in business

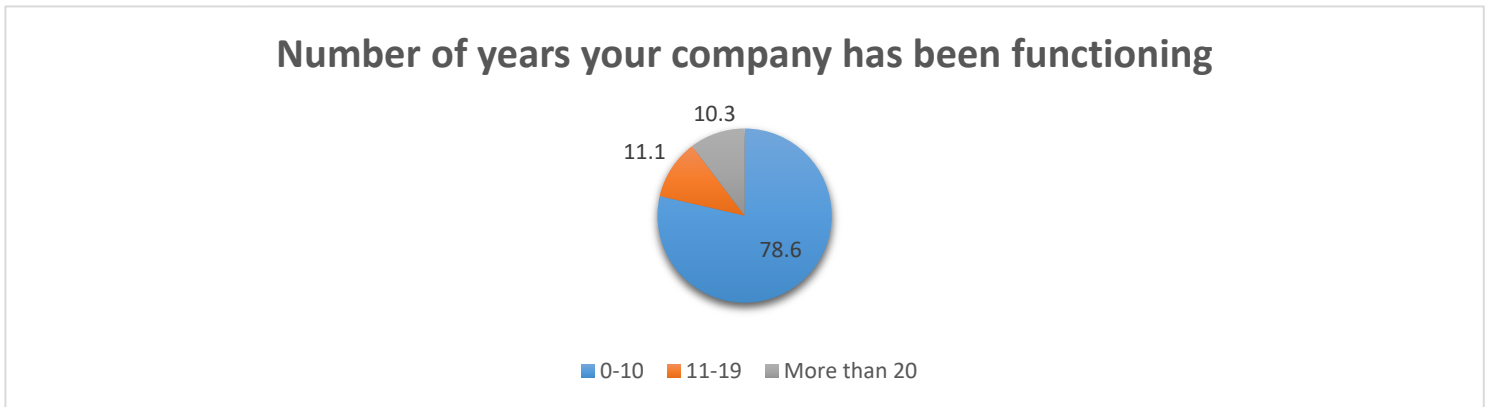


Figure 3 Number of years in business

The above figure illustrates the number of years SMMEs have been in business. The majority of these manufacturing SMMEs that are situated in Soweto, Johannesburg have been trading for less than 10 years. The rate is 78.6% for businesses that have been operating for less than 11.1 years, about 10.3% has been operating for more than 10 years and less than 20 years. The last one is 10.3% that has been operating for 20 years and more. Prove have accumulated experience for over the years. They have been operating since apartheid.

From the findings, it is clear that there about 10.3% of furniture manufacturing SMMEs that have more than 20 years of experience in the industry producing furniture. These SMMEs with their experience they can grow their businesses. However, a high number is for enterprises

that have recently been started and those that have been operating for less than 11 years. These SMMEs also have experience but they are not as knowledgeable as the other 20.4%.

4.2. Number of full time employees

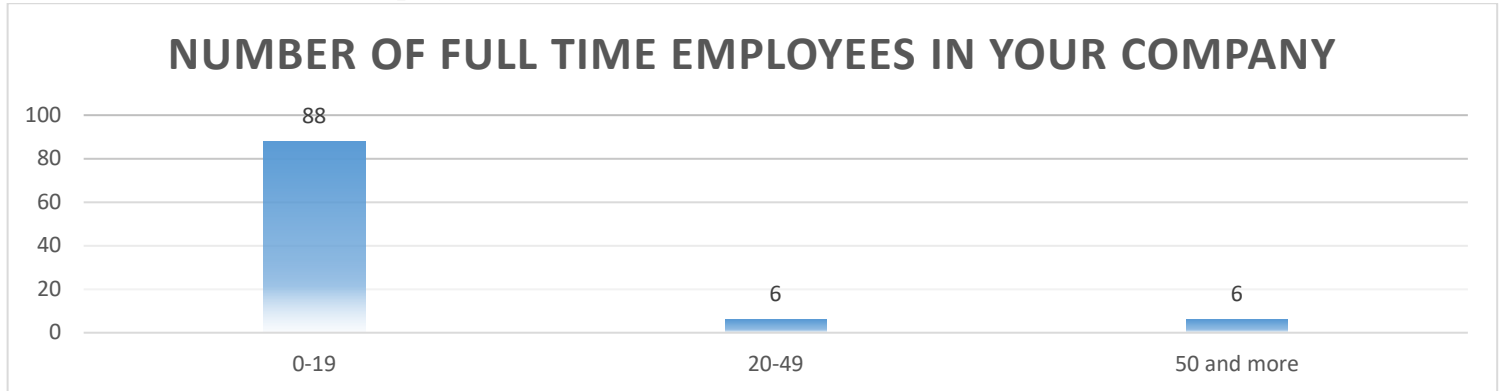


Figure 4 Number of full time employees

The above figure represents employees who work full time in the furniture manufacturing enterprises. About 88% of the enterprises have between 0 which means no employee to 19 employees. Followed by 6% which have 20-49 employees and lastly, another 6% have 50 and more employees in their enterprises. This means that most manufacturing SMMEs that are situated in Gauteng Province, Soweto have employees fewer than 20. These employees do general work such as cutting of boards, painting, making the actual product (furniture). They use their technical know-how.

4.3. Total Quality Management



Figure 5 The use of TQM in Furniture Manufacturing SMMEs

The furniture manufacturing SMMEs that are based in Soweto, region D in Johannesburg appear to use Total Quality Management. 62.1% which is number 5 it represents always. This means that 62.1% of the 29 enterprises are familiar with this business improvement strategy and they always use it in their businesses to improve the performance of their enterprises. This is followed by number 4 which represent often. About 20.7% of the 29 which responded to this answer stated that they often use it.

This shows that this is the most used business improvement strategy that is used to improve the business performance. However, it is worth noting that from 117 only 29 responded. The remaining were excluded because they have never implemented quality in their enterprises. The next page discusses the findings of Six Sigma (SS).

4.4. Six Sigma

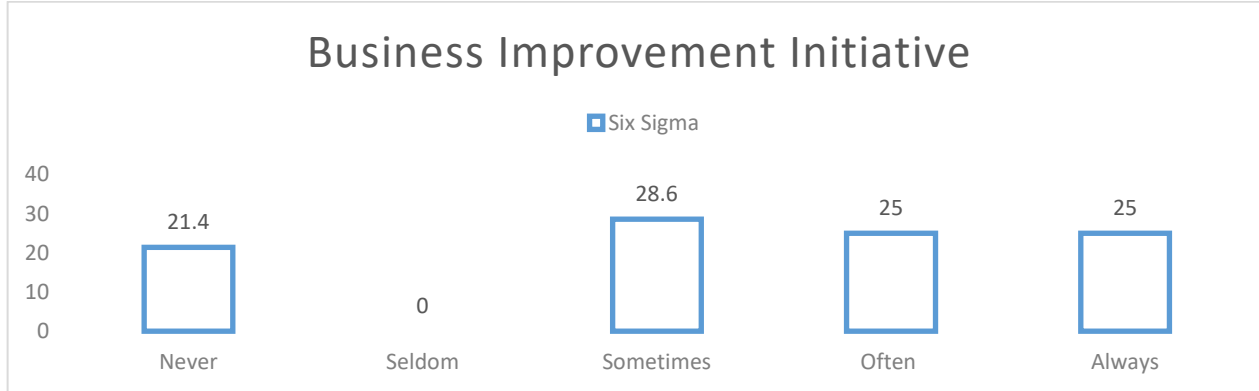


Figure 6 Six Sigma

With regards to Six Sigma, 28.6% have illustrated that they only use this business improvement strategy not usually but sometimes. While 25% indicated that they use it all the time. Another 21.4% have illustrated that they have never used this business improvement strategy. However, there is still a large number of SMMEs that does not know anything about these business improvement strategies. Moreover, such manufacturing SMMEs that stated that they have never used business improvement strategy were excluded from answering this question.

4.5. Statistical quality Control

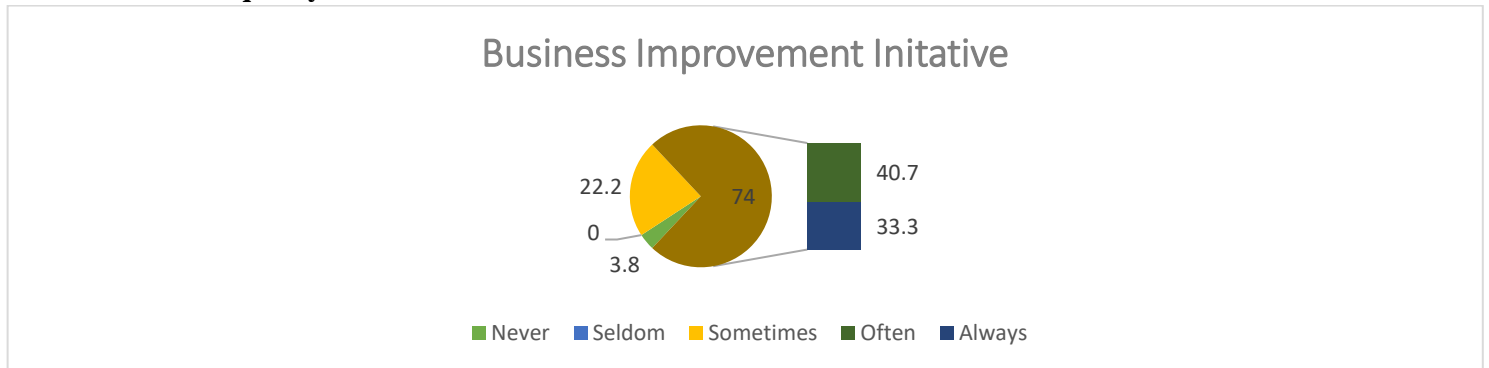


Figure 7 Statistical Quality Control

With regards to the above figure, 40.7% have indicated that they have often been using this business improvement strategy. This is followed by 33.3% that have indicated that they have seldom used it. This shows that this business strategy is also not used that much by furniture manufacturing SMMEs that are based in Soweto. This may be like this due to the lack of understanding of the initiative. Maybe SMMEs does not even understand the standards that they need to meet and does not even have programmes.

4.6. Failure Mode and Effects Analysis

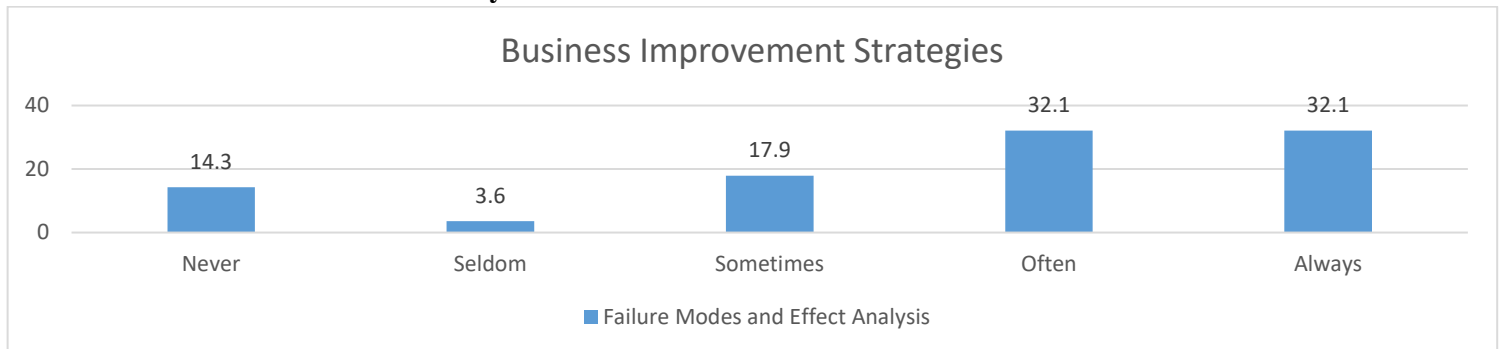


Figure 8 Failure Mode and Effects Analysis

The above figure represents failure modes and effects analysis. 32.1% stated that they always use this business improvement strategy. While another 32.1% saying that they often use it in their SMMEs. There is 14.3% that shows that they have never used this initiative.

As the studied SMMEs are in the manufacturing sector, this business improvement strategy is suitable for them as they produce furniture and will be able to detect errors in the production stage before they reach customers, it is advisable to use it. This strategy will help the enterprise to meet the customer's needs. However, this strategy is not widely used by furniture manufacturing SMMEs that are based in Soweto.

5. Discussions and Recommendations

From the findings and analysis, it is clear that the studied SMMEs have fewer employees and if they decide to leave their employers for other employers or start their own companies they will leave the enterprise in crisis. Employees should be encouraged to share their knowledge in the enterprise with their fellow employees. This will ensure that the enterprise knowledge remains in the enterprise with the enterprise employees. The way they manage quality should be shared with others. Employers must find ways to motivate both those who have the knowledge and the ones the knowledge should be shared with to willingly share their knowledge and be willing to learn those who have knowledge. Motivations can be by means of giving employees who are sharing and receiving knowledge the financial rewards or just recognize them.

It is also evident that Total Quality Management is mostly used by furniture manufacturing SMMEs that are based in Soweto. This can be as a result of it being less complicated. However, everyone must be trained because this business improvement strategy involves everyone in the enterprise including customers who are external.

Findings prove that more furniture manufacturing SMMEs do not use the failure mode and effect analysis. This may be like this because it is too complex to use as, or too expensive or even unknown to the enterprise as [16] found in their study. This study recommends that this business improvement strategy must be known by the studied SMMEs as it will help them identify errors early and be fixed. This will make a positive impact on the customers of the enterprise by means of positive word of mouth, repeated sales and general business growth.

6. Limitations and Implications

This study is limited to South African SMMEs that are trading in the furniture manufacturing sector. This research looked mainly on the tacit knowledge management of business improvement strategies and on those initiatives the research narrowed it to Six Sigma, Total Quality Management, Statistical Quality Control, and Failure Mode and Effects Analysis for they are the only business improvement strategies that are mostly used by furniture manufacturing SMMEs. This research did not study if these enterprises manage their knowledge and the strategy that they use to manage their tacit knowledge.

7. Conclusion

This study focused on furniture enterprises that are in the manufacturing sector and are based in Johannesburg, Gauteng Province, South Africa. The study focused on the knowledge management in particular tacit knowledge. It looks at ensuring the employees who are in charge of making sure that knowledge that is shared. The knowledge process has been studied and it was found that as soon as one shares knowledge they create another knowledge that can be used in the enterprise. It is found that Total Quality management is the most used business improvement strategy. Six Sigma is not widely used by the furniture manufacturing SMMEs. Knowledge management is a very important strategy that SMMEs should consider enforcing. It is discussed that the enterprise knowledge should remain in the enterprise. Further research must be done on sharing tacit knowledge within furniture manufacturing SMMEs.

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Biography

Mr. Lawrance Seseni is a University of Johannesburg student. Currently doing a Masters of Technology degree in Operations Management. His master's study is on Quality Management within SMMEs. In 2014 he was appointed as an academic tutor for Entrepreneurship to National Diploma students who were doing their second year of study. In 2016 he was appointed as an assistant lecturer for the first semester (5 months), his role was to lecture Entrepreneurship to first year National Diploma students in Small Business Management. He is now serving as a board of director with a portfolio of co-secretary of the IBASA YC (Institution of Business Advisers South Africa Youth Charter). He is also serving as a Strategic Adviser for Projects in the student organization called ENACTU University of Johannesburg. He served at Enactus University of Johannesburg since 2012 holding different portfolios. His research interests are on Knowledge sharing in SMMEs, service and product quality within SMMEs.