Millennials' experience of on-the-job knowledge transfer from older generations in the manufacturing industry

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ABSTRACT

The challenges that South African businesses are facing today indicates a need to optimise resources. One such challenge is the transfer of knowledge in a multigenerational workforce where a difference in values exists.

A literature review on generational theory, generational values and knowledge management was conducted and revealed companies can benefit from understanding the differences between the generations and implementing a formal management system to facilitate knowledge transfer.

A qualitative inductive research method was applied for the research study to gain further insights into the millennial's experience during knowledge transfer. A total of 13 semi-structured in-depth interviews were conducted with millennials from the Automotive, Fast-Moving Consumable Goods (FMCG), Printing and Advertising, Pulp and Paper, Automotive Components and Logistics sectors.

The findings led to the development of a conceptual framework that can be used by managers who are interested in how generational differences amongst South Africans impact the flow of knowledge in the workplace. The key findings from the research are that both generations value interaction and knowledge transfer between the generations requires a relationship build on respect.

KEYWORDS

Generational theory, generational values, generational differences, knowledge management, knowledge transfer

DECLARATION

I declare that this research project is my own work. It is submitted in partial fulfilment of the requirements for the degree of Master of Business Administration at the Gordon Institute of Business Science, University of Pretoria. I further declare that I obtained the necessary authorization and consent to carry out this research.

5 March 2024

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CHAPTER 1: PROBLEM DEFINITION AND PURPOSE

This chapter outlines the business problem and need for knowledge transfer between generations. This research explores broadly how generational differences influence knowledge transfer in the workplace, with a specific focus on the manufacturing industry in South Africa. This chapter outlines the need for knowledge transfer between the older and younger generations to ensure that manufacturing companies in South Africa can optimise this resource in a competitive environment.

The study used an inductive qualitative approach to explore an under-researched area of how the differences in generational values, preferences and attitudes are experienced in on the job knowledge transfer. The study gathered data on the personal experiences of millennials working in the South African manufacturing industry when engaging in learning from the older generation in the workplace and explores associated constructs such as the values, communication, leadership, learning and work ethic preferences of millennials. These constructs stem from the literature review on intergenerational theory and the findings from the study add depth of understanding to these constructs and reveal new insights.

The study also aims to contribute to business in the form of a conceptual framework, derived from the findings, that can be used by managers to take a holistic approach to inter-generational learning and knowledge transfer.

1.1 Business problem

Manufacturing is a significant contributor to the South African economy as it contributes 11,4% toward the country's GDP in 2023 and employs 11,5 million people throughout the value chain (Statistics South Africa, 2023a). Although these statistics show a decline from previous years, the manufacturing industry remains a significant player in the economy. Some of the challenges that the industry experiences are political instability, infrastructure failure, supply chain delays and skills shortage and these challenges are

making it increasingly difficult to conduct business in the country. Considering the current unemployment rate in South Africa at 31,4% (Statistics South Africa, 2023b), ignoring the challenges in the manufacturing industry would further impact unemployment in South Africa.

This draws attention to businesses to review their resources and to evaluate whether they are using their resources effectively. One such resource is the knowledge that the company possesses, and companies must therefore evaluate how they view this resource and whether they have adequate processes in place to preserve and grow this resource. Statistics South Africa reports that baby boomers, who were born between 1945 and 1964 and are retired or approaching retirement age, make up 7,8% of the workforce and generation X, born between 1965 and 1980 and typically filling middle to senior management roles, 24,3% of the workforce; and millennials, born between 1981 and 1996 and establishing themselves in the workplace, 62,3% of the workforce (Statistics South Africa, 2023c). As baby boomers reach retirement age it can be assumed that they will be succeeded by the younger generations (Ben-Hur & Ringwood, 2017). This statistic indicates that the South African workforce is transitioning to a multigenerational work force where employees of different generations are interacting with each other. This interaction was rare in the past when organisation structures were hierarchical, and the older generation, typically in senior positions, did not engage with the lower ranked employees. However, with the higher focus on teamwork and cross functional working groups, the generations are forced to work more closely with each other (Taylor, 2018). Baby boomers, generation X and millennials with unique value systems must work together toward achieving the company's objectives (Kraus, 2017). This shift in workplace age demographic poses a challenge to companies who value the knowledge that the company has invested in over the years and must implement systems to transfer this knowledge to the next generation (Gerpot et al., 2016). Therefore, it is important for companies to understand how these generational differences will influence the preservation of exiting knowledge and the generation of new knowledge (Ben-Hur & Ringwood, 2017).

The knowledge that has been acquired by the older generation can be both explicit and tacit knowledge. Explicit knowledge can be acquired through formal training and can be recorded in manuals in either paper or electronic form. While tacit knowledge is developed by the employee applying their own insights and intuition and remains the "know how" of the individual employee and maybe more difficult to document (Igbinovia & Ikenwe, 2017). Both forms of knowledge are valuable to the company to ensure repeatability and quality of critical tasks which forms the foundation for the development of new ideas. Various factors could influence knowledge sharing such as whether knowledge transfer is a priority for the company, there are systems in place to store and retrieve knowledge, whether the type of knowledge, tacit or explicit, can be transferred, the attitude of the person sharing the knowledge, and the ability of the knowledge owner to teach someone else (Lombardi, 2019)

1.1.1 Age demographics of the South African manufacturing workforce

The landscape of the South African workforce has changed over the past 29 years since South Africa celebrated its first democratic general election. Macha and Kadakia (2017) in their findings stated that, although there are still many challenges that the country faces, the access to education in South Africa at elementary, secondary and tertiary levels has more than doubled since 1994 resulting in more youth become eligible to access the workplace. This factor has contributed to an increase in different generations and cultures in the workplace.

1.1.2 Retention of knowledge and skills in the South African Manufacturing sector

Complex socio-economic factors such as rising inflation, high levels of unemployment and infrastructure decline drove some South Africans to seek better standard of living in other parts of the world. Those who worked in the manufacturing sector left behind a significant void as they took with them their knowledge and know-how, thus resulting in skills shortage in South Africa (Kaplan & Höppli, 2017). Similarly with the recent crises

that the country has experienced such as the Kwa-Zulu Natal and Gauteng riots in July 2021, the Kwa-Zulu floods in April 2022 and the ongoing infrastructure failures by state owned entities, residents are choosing better lives elsewhere. This phenomenon commonly referred to as "brain drain", has placed more pressure on companies to retain skills.

Kaplan and Höppli (2017) found that the immigration statistics reported by Statistics South Africa over the past ten years were unreliable and pursued an independent study. The study revealed that the number of South African's living and working overseas increased by 53% between the years 2000 and 2017 and by a further 11,6% by 2020. In a study by Mlambo and Adetiba (2017) they found the immigration of health care workers can be curbed by addressing the culture of the organisation and organisational development overall improving working work conditions. While these statistics present general immigration statistics it draws the notable growth in the number of immigrants is cause for concern. Therefore, the issue of knowledge transfer from the older generation to millennials is important for companies to think about how they can prepare their talent pipelines.

1.1.3 Knowledge transfer within the South African Manufacturing sector

Recent research on knowledge transfer, particularly in the manufacturing industry in South Africa, was limited in the literature, therefore studies conducted by other researchers was reviewed to understand the known barriers and success factors for knowledge transfer. In a study in the public sector by Nkomo et al. (2021), they found that barriers occur at company level and at individual level. In the former, companies do not have structures in place to support knowledge transfer and in the latter, employees believe that the knowledge belongs to them and are unwilling to share. In another study by Mkize (2015) the author found that knowledge transfer requires leadership support to establish knowledge transfer practices to motivate employees to share knowledge. Studies by Ncoyini (2016) and Munyani (2017) also found that the company culture will positively influence knowledge transfer and that this must be led from the top.

Grobbelaar (2021) stated that if companies understood the value of the knowledge that baby boomers hold then they will place more emphasis on formal knowledge transfer.

1.1.4 Academic Problem

The South African context may present unique factors given the challenges that companies face to train the next generation (Fear, 2015). Knowledge management and generational differences has been studied extensively in developed countries, however research is lacking in the South African context. Considering the generational and cultural diversity in the workplace, highlighting the factors that influence knowledge transfer from the older generation to millennials will provide further insights into human resource development and talent management in the South African context.

1.1.5 Generational theory lens

The research will be studied through a generational theory lens to explore the stereotypes of generational difference in on job knowledge transfer. Studies on generational differences according to Jones et al. (2018) have focused primarily on the generation stereotypes based on the timeframe in which they were born with conflicting views on whether the stereotypes can be generalised across a generation cohort. Rudolph et al. (2020) agree that values and preferences can differ even within a generation cohort and hence generational differences should not be the main focus for workplace conflict. According to Schmidt and Meuhfeld (2017), Kuyken et al. (2018) and Jones et al. (2018), little is known about whether generational differences exist in the workplace. Similalrly, the authors argue that literature to date has focused on developed countries and cannot be assumed to be applicable to other parts of the world.

1.1.6 Intergenerational knowledge transfer

Ben-Hur and Ringwood (2017) state that leaders must look beyond the generations stereotypes, because generations change all the time. Instead, leaders must focus on creating an environment that addresses the needs of each generation. Millennials value the relationships that they develop with their managers (Mayangdarastri & Khusna,

2020) and the responsibility is with leaders to transform the organisation culture where both generations can develop and grow together (Lazányi & Bilan 2017).

1.2 Research problem

The aim of the research was to gain a deeper understanding of the factors that influence knowledge transfer between the older generations and millennials in the manufacturing industry in South Africa and to gain new insights into the barriers and enablers for knowledge transfer.

The research aimed to

1) Explore millennials experiences of knowledge transfer from older generations.
2) Identify the conditions and circumstances that enable knowledge transfer between the different generations.
3) Explore how generational differences influence knowledge transfer.

The literature review highlights some of the factors that influence knowledge transfer such as generational differences in terms of communication preferences, leadership style, learning preferences and work ethic differences. The literature review also looks at the development of knowledge and the implications for knowledge management as a competitive advantage.

1.3 Key findings of the research

The research study found that while generational differences do play a part in influencing knowledge transfer in the workplace, more emphasis is needed on the relationships between the generations, and this must be initiated by the leader to direct the companies culture and values. This needs strong support from enablers such as HR and IT to

facilitate organisation development to integrate the generations. The research report is structured as follows in Figure 1.

Chapter 2: Literature Review

Chapter 3: Research Questions

Chapter 4: Research Methodology and Design

Chapter 5: Research results

Chapter 6: Discussion of the results

Chapter 7: Conclusion and Recommendations
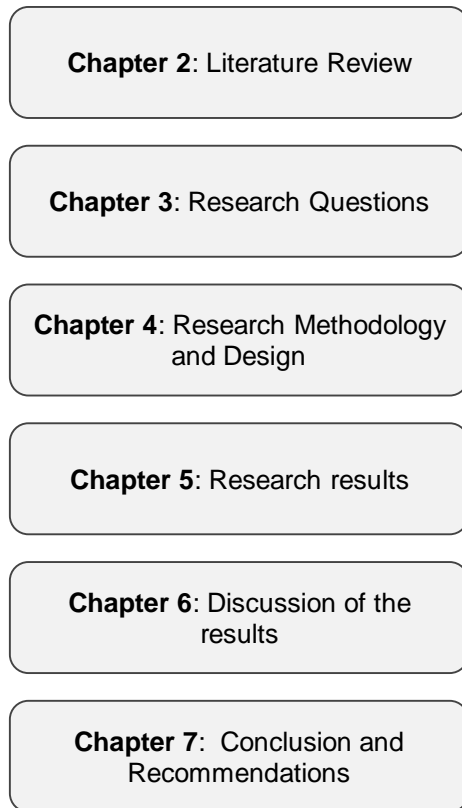
Figure 1. Report structure

CHAPTER 2: LITERATURE REVIEW

2.1 Introduction

Based on the research problem outlined in Section 1.2, this section aims to deepen the understanding of the factors that influence knowledge transfer between the older and younger generations in the workplace. The literature review starts by exploring the Theory of Generations as conceptualised by Karl Mannheim in the1920s as a framework to develop the differences between the generations and how it plays out in the workplace. The literature focuses predominantly on the Baby Boomers who are typically the managers in the workplace and Millennials who are the new entrants and future leaders in the workplace. The approach to the literature review is mapped out below in Figure 1.
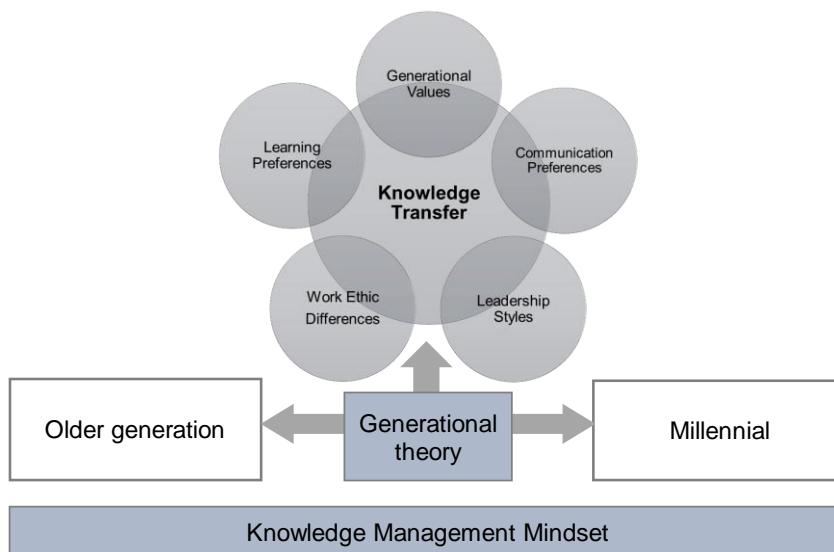
Figure 1. Generational differences (Author's own)

The literature review covers an in-depth study of differences in generational values, communication preferences, leadership style preferences, learning preferences and

work ethic in relation to generational theory. This is the academic lens which has provided the framework for this research and debates within these constructs related to millennials are discussed.

The literature review also highlights the critical and unique factors which influence South African generations within the manufacturing sector which is the context for the study. The contextual factors are relevant given the debates in the generational theory literature and the understanding that effective knowledge management systems are developed within an organisational culture which is influenced by national culture.

The layout of the literature review is presented in Figure 2 below.

2.2 Understanding Generational Theory	2.2.1 Generational values 2.2.2 Communication preferences 2.2.3 Leadership style preferences 2.2.4 Learning preferences 2.2.5 Work ethic
2.3 Intergenerational Knowledge Transfer and why it is important for business	2.3.1 Intergenerational Knowledge Transfer 2.3.2 Knowledge management as an Organisation 2.3.3 Knowledge acquisition 2.3.4. Knowledge sharing 2.3.5 Knowledge transfer

Figure 2. Layout of Literature Review

The literature review concludes with a summary of the literature for the purpose of formulating the primary research questions detailed in Chapter 3.

2.2 Understanding Generational Theory

Businesses have typically segregated their workforce by generation and have designed their human resource programs around the age cohorts. This section will explore

generational theory and the factors that business leaders need to consider when planning for the various generations.

Karl Mannheim's Theory of Generations, developed in 1920, was the first to segregate the generations by historical events. The sociologist posits that generations who experience similar historical events develop similar attitudes, beliefs and worldviews. Mannheim emphasises that the formative years of the individual is a crucial time when ideas and behaviours are entrenched and as these individuals become exposed to the same social, technological, political, and economic events, they will form a collective conscious that will influence their ideas and behaviours. Mannheim adds that while the younger generations may learn these ideas and behaviours from their parents, they will similarly also form their own collective conscious based on the events that they experienced (Popescu, 2019). Woodruff (2023) opposes this view because the author believes that individuals who come from different socio-economic standings may not be influenced by the popular narrative. Yamada (2023) also disputes the notion of a mass society, because this overlooks individual agency where individuals can think and act for themselves. Ting et al. (2018) applied the concept of a generational cohort in their study in Malaysia considering the historical events in the region and found that the traditional labelling of the generations did not apply as in the case of the work by the founder, Karl Mannheim.

A more recent generational study by Wiiliam Strauss and Neil Howe took a different perspective on generational theory based on the view of a of a recurring generational cohort. In their book published in 1991, they state that generational cohorts occur in approximately 20-year cycles and each cycle depicts a period of growth or discovery (Karashchuk et al., 2020). However, after four iterations, termed a saeculum, a new generation will emerge, and this typically takes place when a significant social or political event occurs. The generation cohorts are grouped similar to Mannheim's generational theory, Lost generation born between 1883 and 1900; G.I. generation born between 1901 and 1924; Silent generation born between 1925 and 1942; Boomer generation

born between 1943 and 1960; Generation X born between 1961 and 1981 and the Millennial generation, born from 1982 onward.

This theory is based on the authors' observations of the events that took place in North America, such as it receives criticism from other researchers for only being applicable in the North American context (Kowlaski, 2019) and generalises generational cohorts without taking factors such as culture, gender and geographical location into account (Constanza et al., 2023).

According to Karl Mannheim's framework Baby Boomers, born between 1945 and 1964, experienced post-war hardships, shaping their strong work ethic and resilience. On the other hand, Millennials, born from 1980 to 1996, entered a world marked by rapid technological advancements (Louw & Steyn, 2021). Jonck et al. (2017) highlight specific challenges in the South African context, including political conflict, economic instability, and the emergence of the digital economy, influencing each generation's values and responses to workplace situations. Deal et al. (2012) add that the South African generation cohorts can be grouped as the Apartheid Generation born between 1938 and 1960, the Struggle Generation born between born 1961 and 1980, the Transition Generation born between 1981 and 1993 and the Born-Free Generation born between 1994 and 2000. The authors add that this correlates to the general grouping of the generations as they would have experienced similar social, technological, political and economic events. The Struggle Generation would have seen the first computer sold in South Africa, the Transition generation, economic sanctions because of the country's political stance while the Born-Free generation, the rise of democracy in the country.

These challenges would have shaped the values of the different generations and therefore each generation will respond to situations differently. Ben-Hur and Ringwood (2017) state that these generational differences may influence how the generations interact with each other in the workplace, while the concept of generational differences in the workplace is challenged by authors such as Heyns et al. (2018) as they found the need for autonomy prevalent amongst the generations.

Understanding these generational differences is crucial for businesses, especially in the manufacturing sector where there is a migration of skills. Millennials are becoming the talent pipeline as older generations approach retirement. Ngotngamwong (2019) research suggests that millennials possess unique skill sets surpassing those of Baby Boomers and failure to engage this millennial workforce risks disrupting the talent pipeline, impacting competitiveness (Sun & Bunchapattanasakda 2019). The scope of this study is on the baby boomer transferring knowledge to the millennial.

2.2.1 Generational values

The next generation of leaders will emerge from the millennial workforce, which has been described by Baker et al. (2018), as being ambitious and aspiring to achieve more than the previous generation. While they will bring their own values to the workplace, it is important to understand how leaders will leverage the difference in values between the generations.

According to Ben-Hur and Ringwood (2017) and Kezsei et al. (2018), millennials are self-driven and seek autonomy in the workplace. They have access to information and believe that they do not have to rely on others to get the job done. They perceive supervision as micromanagement which contradicts their need for autonomy They do, however, value authority and relationships that will make a difference in society. They are concerned about sustainability and look for role models in the company to emulate good citizenship (Ernst & Young, 2022). Millennials value the quality of leadership and want to work in a company where they can feel proud about their leaders (Pasko et al., 2021). The reputation of the company is important to them as they associate themselves with the values of the company. The researchers recommend that while there are studies conducted in the developed countries, researchers can explore developing countries to help leaders navigate the impact of national culture.

Baby boomers who were typically raised post Worl War II Traditionalists born between 1930 and 1949), in contrast to millennials are traditional in their values. They would not have experienced the economic hardship of their parents and valued recognition in the workplace. Baby Boomers value hard work and long hours and believe that "*more control means more order*" (Buawers et al., 2022). In the South African context, baby boomers who would have experienced the revolution against apartheid and economic sanctions. Jonck et al. (2017) in their empirical study on generational differences amongst South African found similarities in their preferences. Both generations value authority, are creative and value social interactions in the workplace.

While values are generalised for each generation, it is important for companies to meet the values of each generation. Louw and Steyn (2021) add that matching company values with those of each generation is essential for maintaining employee engagement.

2.2.2 Communication preferences

Millennials, the Born-Free generation, as referred to by Deal et al. (2012) were born in an era of democracy where the sharing of beliefs and ideas was no longer considered to be rebellion. This era supported the millennial's need to for their voices to heard and is consistent with Nowsu et al. (2016) and Hall (2016) that millennials prefer frequent, honest, and open communication. Millennials value leadership, so they will look for role models in managers that provide them with the opportunity to express how they feel as well as to offer them constructive criticism on how they can improve their performance. Raslie (2021) adds that millennials are amiable communicators and are not as assertive as the stereotype suggests.

The different generations are known to differ in value systems, attitudes and approaches and this will influence how they communicate with each other so Rupčić (2018) calls companies, that are not adapting to the different communication styles,

to attention as this can hinder knowledge transfer in an organisation. Velenti (2019) presented a contrasting finding in there were no distinct differences in communication style preferences amongst the generations and that this should not have a negative impact on knowledge transfer. The author suggests that companies should shift their focus on how the generations communicate with each other and provide feedback.

2.2.3 Leadership style preferences

Employees will consider factors such as management style, job rewards and the nature of the task that they are given to determine their engagement. Putriastuti and Stasi (2019) explored 5 types of leadership styles, namely transformational, authentic, ethical leader-member exchange and information processing. They found that each leadership style will appeal to different millennials depending on what they valued the most. Kornelsen (2019) found that traditional leadership approaches may be less effective on millennials and that responsible leaders will combine different leadership styles to fit the situation. The post war leadership styles of baby boomers may be deeply entrenched in tradition of survival, and this may reflect how they engage with others in the workplace (Delgado et al., 2020). Webber and Foster (2018) explore the expectations of millennials and suggest that leaders become more agile and shift away from traditional models. Similarly, Al Khajeh (2018) looked at the familiar leadership styles such as transactional, transformational, democratic and found that the leadership style chosen needs to engage employees.

Leveraging generational differences requires an understanding of leadership style preferences and organisational support that is in place in a company (Lawton-Misra & Pretorius, 2021). Long (2017) posits that the leadership style that best suites millennials is still not yet known. Companies should be proactive in adapting leadership styles to optimise the value that millennials bring to the workplace (Wolor et al., 2021). Traditional leadership approaches may be less effective on millennials, requiring a more agile and

flexible approach (Webber & Foster, 2018). The choice of leadership style should align with the values of each generation (Kornelsen, 2019).

2.2.4 Learning preference

According to Baker et al. (2018), millennials view learning as an opportunity to grow and progress in the company. They are technology-savvy and prefer learning through visual and interactive mediums (Chandan, 2018), they want learning to be collaborative and want to be able to contribute to the learning process (Mayangdarastri & Khus 2020), they value recognition of their ideas (Chopra and Bhilare, 2020) and they attach value to coaching (Yap et al., 2020). Millennials are concerned about feeling valued in the workplace (Hall, 2016) and being able to contribute in the workplace makes them feel motivated (Nguye, 2020).

Millennials are social learners (Hall, 2016) and value interaction with their peers in the workplace. In a study by Jevana (2017), the researcher found that when compared to learning from manuals or simulations, millennials preferred on job training in a classroom setting or at the work site as the most effective form of training. On job development or on job training has positive implications for learning in younger people (Nguye, 2020) because this platform provides them with an opportunity to share their ideas and make a difference.

Both the older and younger generations have witnessed the evolution of technology however at differing degrees. While the older generation witnessed the first landing on the moon, the younger generations saw technology accelerate toward artificial intelligence, big data and the access to vast amounts of information through cloud services. Knoetze and Jantjies (2019) found that baby boomers prefer methods like in person training and documented processes because they found this method to be easily transferable while millennials on the other hand, prefer interactive electronic platforms. The authors recommend that future training programs accommodate the different learning preferences.

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2.2.5 Work ethic differences

Work life balance was identified as a significant factor that will impact the millennial's motivation in the workplace (Yap & Badri, 2020) as this provides the millennial with the flexibility to balance other aspects of life such as family and hobbies without having to feel conflicted to choose one over the other and it was found that this results in an improvement in overall and mental well-being (Appel-Meulenbroek et al., 2019).

As postulated by Buawers et al., (2022), Baby boomers value hard work and spend long hours in the office, in contrast, millennials value autonomy and prefer to pace their work instead of having the manager constantly checking up on them (Kezsei et al. (2018). Zabel et al (2017) in their empirical study on work ethic found no differences in the way each generation valued work.

2.3 Intergenerational Knowledge Transfer and why it is important for business

The success of an organisation is dependent on its ability to optimise the resources that are available to it. The resource-based theory states that a company will exploit the resources that provide them with the highest competitive advantage (Barney & Harrison, 2020). These resources include machine capital, land and building capital, intellectual capital, brand capital, and social capital. Social capital can be referred to as the relationships that the organisation has with employees, customers and external stakeholders and these relationships may have taken generations to build (Rupčić, 2018).

The organisation should not rely solely on the relationships that they build with their employees and should understand the factors that influence the forming of these relationships. Unless employees establish relationships with each other where they can share and transfer knowledge then the risk is that this knowledge will be lost. Therefore, a more robust approach is necessary rather than leaving it to chance.

With the onset of 4IR and the subsequent increase in the use of technology, the business environment is becoming more competitive. It is becoming critical for companies to apply the knowledge that they have gained as their intellectual capital to maintain their competitive advantage (Mikalauskienė & Atkočiūnienė, 2019). Further to competitiveness in the world of 4IR, organisations will have to be innovative to bring about new ideas to goods and services that are required by the market (Byukusenge & Munene 2017). To understand how a company uses and transfers the intellectual capital that it has acquired it is necessary to understand how that knowledge is managed in the organisation. When systems and structures are in place for knowledge management, it encourages employees to share and apply their knowledge in a way that is beneficial to the organisation. Further, as learning occurs in formal and informal settings, through institutional learning and life experiences respectively, this learning contributes to the overall knowledge building for that individual. Similarly, these systems should be set up in a way that encourages the collection and capturing of the new information that is relevant to the organisation in the changing business environment.

Mardini et al. (2018) posit that knowledge management is crucial for innovation as new ideas are required to bring about innovation. This view is supported by Santoro et al. (2018) that knowledge management supports the flow of information which has a positive impact on innovation. In instances where companies do not implement formal knowledge management systems, those companies may not be aware of what knowledge is held by its employees and how and when knowledge transfer occurs. In a quantitative study by Caputo et al. (2019) the research indicated that having a knowledge management system positively influenced the company's performance, however, add that the willingness to share information requires further investigation.

2.3.1 Intergenerational Knowledge Transfer

In addition to the domestic challenges that South African companies face, they still must plan for global trends such as climate change and 4IR. In the current business

environment, companies must come up with new ideas to remain competitive. Park and Kim (2018) found that the sharing of knowledge motives employees to innovate and come up with new ideas. This view is supported by Andleeb et al. (2020) and recommends that more research is conducted on how innovation motivates employees. When considering 4IR and climate change, developing countries particularly will have to rely on technology from developed countries. This will require a larger scale of knowledge sharing to allow developing countries to catch up with the rest of the world (Miśkiewicz, 2018). The acquisition of new knowledge that is necessary in the context of 4IR for companies to remain relevant and to meet customer demands and will see the company progress into the future. The transition to the use of technology in a company is dependent on the knowledge that resides within that company because AI systems need to be taught and operated by knowledgeable human beings (Maisiri et al., 2019). Knowledge retention and transfer is becoming more critical for South African companies to compete as global players in the economy (Rasool & Botha, 2011).

The research findings of Sumabl et al. (2017) states that companies may not prioritise employee knowledge and as a result will focus on dealing with crises as they arise. This places companies at a disadvantage in the long run as employee knowledge is not managed in a way that it can be accessed and shared. Chua et al. (2010) found that companies benefit by developing a culture that supports the sharing of knowledge. Employees who are encouraged to share their knowledge openly benefit the company to achieve their objectives when it comes to improving quality in their operations and in supply chains.

2.3.2 Knowledge management as an organisational resource

All knowledge starts out as data, comprising of words, numbers and symbols. This data serves as information to the user, telling the user more about the characteristics of a phenomenon. Over time the user will build on this information through his or her own experiences, intuition or insights. At this stage, the information becomes knowledge

which is more valuable than the latter and becomes useful to the user when used in context for decision making (Bolisani et al., 2016; Mcleod & Shell 2007).

Knowledge management refers to the acquiring, storing and dissemination of knowledge and requires people, processes and technology to be implemented successfully (Igbinovia & Ikenwe, 2017). Knowledge management is a key proponent for successful knowledge transfer as formal knowledge management systems enhance the gathering and transfer of knowledge, particularly with regards to tacit knowledge (Gerpot et al., 2016).

Tacit knowledge is often difficult to formalise because it is based on an individual's subjective ideas and personal experiences. The knowledge owner will reflect their own ideals and emotions in the way they develop tacit knowledge (Zimfir, 2020). Gerpot et al. (2016) add that a knowledge management system will enhance the gathering and transfer of tacit knowledge.

Companies have adopted various methods of storing knowledge such as in manuals, computer mainframes and more recently as companies move toward big data, knowledge is stored in the cloud services. The dissemination of knowledge, if not managed by the company, can create barriers as knowledge owners may limit access to knowledge. The reasons may vary depending on the sensitivity of the knowledge or the reluctance of the knowledge owner to share their knowledge with the millennial.

2.3.3 Knowledge acquisition

Knowledge transfer can occur through mentorship, communication and can be described as the process of transferring experiences from one individual to another (Argote et al., 2000). These processes can be formal or by shadowing the knowledge owner. Knowledge transfer is also defined as the process of transferring expert, practical and social knowledge between individuals (Gerpto et al., 2017).

Companies can benefit by promoting the sharing of knowledge for the sustainability of the company. This is demonstrated by Nonaka (1995) in the well-known bread making

machine example. The bread making machine company, after many attempts to make the machine work, could not achieve the desired outcome simply by following the instructions that were provided with the machine. However, when this was combined with the know-how of a bread maker, the company was in a better position to make improvements to the design and meet the customers' expectations. In this example the bread maker's tacit knowledge was transferred from an expert who had gained much experience in bread making to the bread making machine company with specific knowledge of building machines.

2.3.4 Knowledge sharing

The transfer of tacit knowledge can be challenging to companies as it is dependent on the mindset and personalities of the knowledge owners. The value of tacit knowledge, particularly in manufacturing environment supports the sharing of key know how developed through years of experience, problem solving, applying technical judgement and interpreting designs will be lost if the knowledge owner has the mindset of withholding knowledge (Zackarias et al., 2022). Older employees may lean toward withholding this knowledge as a form of psychological ownership or maintaining hierarchy over the millennial (Pereira and Mohiya, 2021) and may be unwilling to share their knowledge. A knowledge owner with a growth mindset will be open to learning and will create an environment where it is safe to learn (Dweck, 2016).

The relationship between the millennial receiving training and the older employee is also an important factor for the company to take into consideration because millennials value meaningful relationships. Goh (2002) posits that this relationship can also become a barrier in the transfer of knowledge. When the relationship is not conducive to sharing knowledge.

2.3.5 Knowledge transfer

Traditionally, companies will introduce new employees to their new job through a series of formal and informal training. The new recruits, after having met the prerequisite requirements for the job by means of their formal education, will have to be trained in the operations of the company. The new recruit would have successfully completed their qualification in the form of a certificate, diploma, degree or post graduate degree. The next step is to enhance this knowledge with practical training in the workplace. The recruit will then be exposed to formal and informal training that the company has to offer. Formal training consists of structured on job training in terms of legislative training such as safety, health and environment. Informal training is obtained by mentoring and job rotation for to gain broader understanding of the company's operations and cross functional collaboration (Al-Zoubi et al., 2022). Informal training provides the newcomer with the platform to learn from other experienced employees. This training may take the form of demonstration, observation practice and feedback to ensure that concepts have been grasped sufficiently. The authors add that a systems approach will support companies to achieve their training objectives. Training that is conducted at the actual work site with an expert available to explain concepts will benefit the trainee. Further the trainee will also benefit when training is planned, and clear objectives and learning outcomes are set in place. Providing training manuals as a tool for ongoing reference will allow the trainee to refer to refresh their skills.

Some companies may evaluate their employees competence by various means of assessment programs such as the Kirkpatrick framework. Cathapay (2021) cites this framework as evaluating the trainee's reaction. learning behaviour and results. These dimensions assess whether the trainee is satisfied with what and how they have been taught, whether the training increased their knowledge, how they are applying the new knowledge in the workplace and whether there is an improvement is business processes.

2.4 Conclusion

The literature review looked at generational theory and the generalisation of generational stereotypes. The literature review highlighted the generational differences in values, communication preferences, leadership preferences, learning preferences and work ethics between the generations.

The literature review revealed that while there are similarities within the generation cohorts and between the South African cohorts when compared to developed countries, generational labels cannot be applied broadly within a generation because the individual's values and preferences must be considered.

Knowledge management systems allows companies to have a view of the knowledge that the company has and knowing this will allow the company to plan its strategies in line with its knowledge resource. Further, by implementing knowledge management systems tacit and explicit knowledge that the company has invested in can be captured and can be made readily available to employees. The merits of transferring key know how from one generation to the next will prepare the company for future challenges such as 4IR and climate change.

By acknowledging and leveraging these generational differences, and the merits of implement knowledge management systems, companies can create a workplace environment that fosters effective knowledge transfer, ensuring a smooth transfer of skills and expertise across generations.

CHAPTER 3: RESEARCH QUESTIONS

This chapter outlines the research questions that were derived from the research objectives and the available literature review and aims to answer three specific research questions which will provide further insights into the factors that influence knowledge transfer between the older and younger generations in the workplace.

3.1 Research question 1: What are the barriers experienced by millennials in intergenerational knowledge transfer?

This research question aimed to identify the factors that negatively influenced knowledge transfer between the different generations. This question was a starting point to understand the interpersonal dynamics between the generations when knowledge transfer takes place. This research question aimed to highlight the challenges that the millennial experienced during knowledge transfer from the older generation and took a deeper dive into how the millennial was made to feel during knowledge transfer sessions.

3.2 Research question 2: What are the enablers experienced by millennials in intergenerational knowledge transfer?

This research question aimed to explore how knowledge transfer typically takes place in the workplace, the factors that supported knowledge transfer, who should take responsibility for knowledge transfer, how the manager approaches knowledge transfer and suggestions from the millennial on how knowledge transfer can be improved. This research question aims to discover factors that positively influence knowledge transfer between the different generations in addition to what is found in literature, that will be beneficial for businesses in the South African context.

3.3 Research question 3: What are the preferred methods for knowledge transfer amongst millennials?

This research question aimed to provide insights into the factors that engage the millennial in knowledge transfer. This research question explored the millennial's preference for the use of technology in knowledge transfer sessions and explored the communication style of the manager during knowledge transfer.

CHAPTER 4: RESEARCH METHODOLOGY AND DESIGN

4.1 Introduction

This chapter discusses the research methodology that was chosen for this research topic. Further, the research design, data sampling and data analysis are discussed in this chapter.

4.2 Research Methodology and Design

Qualitative research is an appropriate research method when the researcher wishes to explore behavioural and social factors in terms of the participant's feeling, ideas and experiences (Ugwu & Eze, 2023). It is for this reason that recent studies on generational theory were qualitative (Grobbelaar, 2021). Quantitative research on the other hand is concerned with numerical data which is not fitting for a research study of this nature. Reflecting on the literature review in Chapter 2, further exploration into intergenerational knowledge transfer was necessary to develop further insights into the millennial's experience of on job knowledge transfer. The research questions for this project aimed to explore the millennial's experiences to better understand the phenomenon of generational differences. Therefore, qualitative research was adopted for this research project (McCracken, 1998).

This research design allowed the researcher to gain further insights into the research questions and to develop themes from the interview feedback (Creswell et al., 2007). Qualitative analysis according to Schwarze et al. (2020) assists the researcher to identify how the phenomenon, in this case, intergenerational knowledge transfer occurs. Further, through qualitative analysis the researcher was able to link the issues raised to the circumstances under which they were raised (Akinyode & Khan, 2018), resulting in

a richer understanding of the phenomenon. This research design assisted to answer what and why in the research problem.

An interpretivist philosophy was chosen for the research study. This perspective supported the researcher to observe, through the interview process, the participant's personal experiences to gain further insights (Saunders & Lewis, 2012) on how knowledge transfer occurs between the different generations in the manufacturing environment. This philosophy enabled the researcher to gain deeper insights into the participant's reality as the participant described his or her own unique experience (Alharahsheh & Pius, 2020).

The inductive analysis approach that was selected allowed for thematic analysis. After each recorded interview was manually transcribed, the researcher read through the transcripts to become familiar with the data. The researcher created an excel spreadsheet to keep track on the relevant quotes from each participant. To prepare the data for coding, all non-related data, such as the interviewer's questions were deleted from the transcripts. The data was then imported into, ATLAS.ti computer software to complete the coding process. The codes were manually developed into suitable categories and then into relevant themes (Terry et al., 2017). The themes were derived from common reference points in the data analysed (Vaismoradi & Snelgrove, 2019). The codes generated can be found in Appendix 6.

4.3 Population

The population that was relevant to this study were millennials working in an intergenerational working environment in the manufacturing industry in South Africa. The reason that this population was chosen was to understand the millennial's perspective regarding knowledge transfer. Also, from a practical point of view, taking into consideration the amount of time available for research, and the sample size, it was

only practical to gain the millennial's perspective. The selected population also allowed the researcher to narrow the problem down to a specific industry thus making the research data collection process more manageable.

4.4 Sampling method and size

The sampling method was purposive non-probability. The researcher selected participants from within the researcher's network.   The researcher selected the recommended 12 – 16 participants. McCracken (1998) recommends a small sample size that will allow for deeper analysis of the content. As participant's availability or willingness could not be predicted, the researcher also requested participants to recommend other participants with the same criteria through snowballing. One participant referred to a potential participant, however the research could not secure that participants availability.

The sample was taken across five different industries in manufacturing namely Automotive, Fast-Moving Consumable Goods (FMCG), Printing and Advertising, Pulp and Paper, Automotive Components and Logistics to grasp the millennial's experiences in the broader scope of manufacturing. The sample is presented in Table 1 below.

Table 1. Sample chosen

Participant	Industry	Position
A	Automotive	Principle Engineer - Product Planning
B		Senior Manager - Quality control
C		Principle Engineer - Logisitcs
D		Principle Engineer - Localisation
E		Senior Manager - Manufacturing Development
F		Manager - Finance
G	FMCG	Manager - Operations
H		Manager - Operations
I	Printing and Advertising	Finacial Manager
J	Pulp and Paper	Manager - Oprations
K	Automotive components	Technical Director
L		Manager - Audit and Compliance
M	Automotive	Principle Engineer - Vehicle Testing

The reason for choosing non-probability sampling was, while research on intergenerational knowledge transfer has been conducted in Western countries, there is little research being done elsewhere (Wang, 2008). Therefore, it is difficult to judge if frameworks that were developed elsewhere can be applied in another country where different generations share a workplace. Developing a framework that can contribute to businesses in the Manufacturing context will add value to the industry but may not be generalised to other sectors in the country. Most of the participants selected were from the Automotive sector as these participants were accessible to the researcher.

The data was collected by using the recording function on a smart phone. In addition to this the researcher made notes of pertinent points during the interview (Creswell et al.,

2007). The interview guide was sent to the participants via e-mail in advance of the interview. This allowed the participants time to review the questions and to recollect their knowledge transfer experiences. The interviews took place in person, Microsoft Teams and Google Meet. The researcher sought permission to record the meeting in advance. The interviewer explained the background of the research topic followed by the research questions. The interview was scheduled for 45 minutes, and the researcher allowed at least eight hours to transcribe and analyse each interview. The researcher continued with the interviews until a point of saturation was reached (Saunders & Lewis, 2012).

4.5 Units of Analysis

The millennial's account of their experiences formed the units of analysis for this research. This supported the objective of the research as stated in Chapter 1, which was to determine the factors that positively and negatively influence knowledge transfer between the generations in the workplace.

4.6 Data Collection tool

The research strategy was in the form of a semi-structured interview questionnaire. The researcher chose this strategy because the questions asked could be standardised for all the participants (Creswell et al., 2007), but allowed for flexibility to probe responses. This approach also encouraged free flow discussion without distracting the participant. Since the aim of the research was to understand how knowledge transfer occurred between the different generations, the standardised questions placed the researcher in a position to code the responses and develop themes. Further, open-ended questions allowed the participants to elaborate on their personal experiences.

Due to the time frame available for research, the time horizon for the research was cross sectional (Saunders & Lewis, 2012). The research was conducted once, taking the responses of the interviewees at the time that the research was conducted. The researcher invited participants by email with the invitation letter attached in Appendix 1. Once the participants confirmed their willingness to participate in the research interview, a meeting based on the participants availability was scheduled. This was duly followed by sharing the research questionnaire. A copy of the questionnaire is attached in Appendix 3.

4.7 Data collection

The measurement instrument was a semi-structured interview. The questionnaire consisted of specific questions extrapolated from the research questions to guide the themes. The interview allowed for open-ended questions to find out more about the research topic. The open-ended questions allowed the participant the flexibility to elaborate on key inflection points from their experiences. This instrument is widely used in qualitative analysis where the experiences of others can be recorded (Creswell et al., 2007) and analysed into a potential framework. The semi-structured interview also allowed the participant to move from one question to another without feeling restricted and without disturbing the flow of the interview.

The researcher held a pilot interview with a research partner from the researcher's MBA cohort as well as with an HR manager within the researcher's place of employment. The reasoning behind selecting an HR manager was to support with more guiding questions from an organisational development perspective, with the HR manager having experience of questions relevant to the research topic from employee engagement programs or exit interviews.

4.8 Data analysis

The researcher conducted a literature review on the chosen topic to understand what had already been identified and what had not been identified on the chosen research topic. The researcher then prepared an interview guide consisting of questions extrapolated from the research questions. The researcher sought approval from the Gordon Institute of Business Studies (GIBS) Ethics Committee (GIBS, 2021) which was duly granted and is reflected in Appendix 4. This was followed by collecting primary data through the semi-structured interviews, coding the data then analysing the data for common themes. The themes identified were analysed to develop a framework that can be applied to intergenerational knowledge transfer to build on existing theory. To support the development of themes the following model by Terry et al. (2017) was applied. Refer to Table 2 below.

Table 2. Thematic Analysis (Adopted from Terry, et al., 2017).

Process	No.	Criteria
Transcription	1	The data have been transcribed to an appropriate level of detail, and the transcripts have been checked against the tapes for "accuracy"
Coding	2	Each data item has been given equal attention in the coding process
	3	Themes have not been generated from a few vivid examples (an anecdotal approach), but instead the coding process has been thorough, inclusive and comprehensive
	4	All relevant extracts for each theme have been collated
	5	Themes have been checked against each other and back to the original database
	6	Themes are internally coherent, consistent and distinctive
Analysis	7	Date have been analysed, interpreted, made sense of, rather than just paraphrased or described
	8	Analysis and data match each other - the extracts illustrate the analytical claims
	9	Analysis tells a convincing and well organised story about the data and topic
	10	A good balance between analytical narrative and illustrative extracts is provided
Overall	11	Enough time has been allocated to complete all phases of the analysis adequately, without rushing a phase or giving it a once over-lightly
Written report	12	The assumption about, and specific approach to, thematic analysis are clearly explicated
	13	There is a good fit between what you claim you do, and what you show you have done - i.e. described methods and reported analysis are consistent
	14	The language and concepts used in the report are consistent with the epistemological position of the analysis
	15	The researcher is positioned as active in the research process, themes do not just "emerge"

The coding process required the researcher to carefully read through each research question to understand its meaning, then assign a code that described the response in a word or phrase. To ensure the quality of the coding process, at best the researcher ensured that the codes were not repeated, were applied in the same way in each interview.

The interview questions were linked to the research questions through a process of triangulation by making use of a consistency matrix. This process supported the validity of the research (Noble & Heale, 2019) by checking for connections between the interview questions and research questions. The consistency matrix can be found in Appendix 5.

Due to the nature of the research topic, no ethical issues were identified. Each participant was informed of the purpose of the research and was requested to complete a consent form confirming that the research was conducted in an ethical manner (Saunders & Lewis, 2012). The consent form is attached in Appendix 2.

4.9 Data validity and reliability

Qualitative research is considered subjective, and controls are necessary to limit researcher bias (Saunders & Lewis, 2012). Bias can occur through misinterpretation of the questions and of the results. Therefore, the structured questionnaire instrument was suited for this qualitative research (Saunders & Lewis, 2012) and the analysis framework by Terry et al. (2017) in Table 2 of section 4.8 was duly followed. It is acknowledged that the researcher works in the manufacturing sector, specifically in automotive, with the millennial generation and therefore interpretations of the data may be subject to researcher's bias which was mitigated as far as possible through quality controls as previously mentioned.

4.10 Research limitations

The limitations identified in the chosen research methodology are listed as follows:
- The interviewer is a novice researcher and has limited experience conducting interviews for academic research. This could have had an impact on the results.

- The sample size of thirteen participants was too small to gather a holistic view of the millennial population experience. Qualitative research is not intended to be generalised across the population, but rather provides deep insights into the experiences of the sample.
- The feedback from the participants is subjective and is based on the individual's account of their experience.
- The research was conducted at a specific point in time and the researcher was not able to evaluate the reliability of the conceptual framework developed (Saunders & Lewis, 2012)
- The research was conducted in the manufacturing sector spanning Gauteng and KwaZulu Natal and experiences may not be shared in other regions or sectors.
- The scope of the research was to focus on the millennials perspective and knowledge transfer from older generations to millennials. It is noted that the process of knowledge transfer tends to be more dynamic and so the findings are limited by the scope of the research. Further perspectives would need to be gained in additional research.

CHAPTER 5: RESULTS

5.1 Introduction

This chapter lays out the findings based on the research questions outlined in Chapter 3. The interview questions, which were derived from the literature review in Chapter 2. were based on the semi-structured interview questionnaire in Appendix 3. The qualitative research methodology and design allowed participants to relate to their experiences as millennials working in an inter-generational workplace. The semi-structured interview questionnaire also highlighted themes that were not identified in the literature and are also discussed in this chapter.

The inductive approach to the research project supported the generation of 190 relevant codes for the development of categories and themes from the participants' responses. The themes are discussed in this chapter.

To further enrich the research project, a pilot interview was held with an HR manager within the researcher's workplace to gather some of the issues that millennials are reporting in the company. The results of that interview are not recorded in the analysis; however, some insights were shared in terms of employee engagement. This will be discussed in Chapter 7.

5.2 Description of sample

The sample chosen for this research is detailed in Table 3 below. The qualifying participants were millennials who had within their career time span reported to a manager of the older generation. The millennials had either started their careers as graduate trainees or had rotated into different departments within the company. This provided a broader scope as the millennial could compare their knowledge transfer experiences.

Table 3. Sample profile

Participant	Age	Gender	Race	Industry	Position	Workplace location	Additional information
A	37	Male	White		Principle Engineer - Product Planning	Durban	A began his career as a graduate trainee and has as overseas work experience. He has rotated as Principle Engineer and Project Leader in his current company and has reported to managers in middle and senior management.
B	38	Female	Black		Senior Manager - Quality control	Durban	B began her career as a graduate trainee and now heads up a department in the Quality Division at her current company. B has not rotated outside of the Quality Division. B is very active in coaching and mentoring younger employees.
C	36	Female	Indian	Automotive	Principle Engineer - Logistics	Durban	C began her career as a graduate trainee and has overseas work experience. C leads a critical project and managers a department
D	32	Female	Indian		Principle Engineer - Localisation	Durban	D entered her current company as an in-service trainee and progressed to the graduate trainee program.
E	43	Male	Indian		Senior Manager - Manufacturing Developme	Durban	E's work experience began as a teacher before entering manufacturing and is currently holding a position of teaching production systems to shop floor members.
F	34	Female	Indian		Manager - Finance	Durban	F works for a family owned business and holds a position in senior management.
G	30	Male	White		Manager - Operations	Durban	G began his career as a graduate trainee and manages a department.
H	37	Female	Black	FMCG	Manager - Operations	Gauteng	H began her career as a graduate trainee. She has worked for 4 companies in FMCG and manages a department.
I	30	Female	Black	Printing and Advertising	Financial Manager	Gauteng	I began her career as a graduate trainee. I has worked for 3 companies in FMCG and manages a department.
J	37	Male	Black	Pulp and Paper	Manager - Operations	Durban	J began his career as a graduate trainee and manages a department.
K	34	Male		Automotive components	Technical Director	Durban	K began his career as a graduate trainee and has progressed to Director.
L	35	Male			Manager - Audit and Compliance	Ladysmith	L has worked in the same company since completing tertiary and manages his department.
M	37	Male		Automotive	Principle Engineer - Vehicle Testing	Durban	M began his career as a graduate trainee. M has specialist skills and therefore has not rotated outside his current department.

5.3 Presentation of results

The findings from the interviews are discussed in the order presented in Figure 3 below.

5.4 Results for Research Question 1	5.4.1. What millennials found difficult during knowledge transfer 5.4.2 Describe how you feel when you are in knowledge exchange with your manager 5.4.3 Summary of Research Question 1
5.5 Results for Research Question 2	5.5.1 How millennials typically receive on job knowledge transfer 5.5.2 What was helpful for the millennial during on job Knowledge transfer 5.5.3 Responsibility for knowledge transfer 5.5.4 How the manager's approach differs form the millennial's approach during knowledge transfer 5.5.5 How the millennial thinks knowledge transfer can be improved
5.6 Results for Research Question 3	5.6.1 The manager's communication style during knowledge transfer sessions 5.6.2 The use of technology in knowledge transfer 5.6.3 Summary of Research Question 3
5.7 Conclusion	

Figure 3. Presentation of results

5.4 Results for Research Question 1

RESEARCH QUESTION 1: What are the barriers experienced by millennials in intergenerational knowledge transfer?

The aim of Research Question 1 was to identify the negative factors that influence knowledge transfer between the different generations. Questions three and eight as laid out in the Interview Questionnaire in Appendix 3 aimed to answer this research question. To present a more holistic view of the interviewees' experience, the interviewees were encouraged to draw from experiences at different stages of their careers and across different companies. This further allowed for richer insights into the millennial's experience across different manufacturing companies in South Africa. The responses to these two questions highlighted what the millennial perceives as enablers for sustainable knowledge transfer.

5.4.1 What the millennials found difficult during knowledge transfer

Question three was set up to identify the barriers for knowledge transfer with the older generation. It was important to understand the challenges that the millennials experienced during knowledge transfer because millennials feel that they can add value to the workplace and challenges in the workplace will limit their contribution. Table 4 below outlines the main findings of what millennial's found difficult during knowledge transfer.

Table 4. Summary of the findings of what the millennial found to be difficult during knowledge transfer

Categories	Frequency	Themes
The manager was unwilling to learn new methods of working	13	Fixed mindset
Lack of trust in the millennial's potential	12	Psychological safety
The manager perceived the millennial as a threat to their position	8	
Lack of support when challenges arose	5	Learning organisation
Not explaining the logic behind decision making	4	

Fixed mindset

Most participants replied that the unwillingness of the manager to learn new methods of working as a challenge to on job knowledge transfer. Millennials found that even though they brought new knowledge into the company, their suggestions to do things differently was not considered by the manager. Managers were fixated on executing a task in the manner that was familiar to them. Participant K expresses this as,

"The older will always question the younger because they have the better idea for how they feel that it should be."

Participant B supported this view in stating that,

"The further up you go on the generations they always believe in "this is how it's always been done" and this is best practice and don't fix it if it's not broken, which for me is a bit of a problem."

This led to some participants feeling less confident and doubted whether their potential was valued in the company. Participant F relates,

"…and I felt like a bit stupid because I'm like you not making me feel like I've added any value because I'm the one who has been already like in the background like, you know, doing a lot of the stuff."

Psychological safety

Some participants cited that the manager felt threatened by the millennial because the millennial, who entered the company with a higher qualification would soon replace them. One participant stated that,

"I wouldn't say I've suffered or had that ou- what I have had is um, almost resistance from managers where they, they don't want you surpassing them. So, they don't want you out shining them."

Other participants like participant H agreed with this,

"..'an insecurity where they feel like they've worked so hard to be where they are and now you wanna come and you wanna get this so quickly."

Learning organisation

Participant G whose preference for knowledge transfer was to understand the logic behind decision making, shared a similar experience with his manager. He was concerned that his manager was not willing to share how he had arrived at a particular decision in a previous instance. The participant felt that this was knowledge that he could use to enhance his understanding of a particular situation and that he could apply the same methodology when next he was faced with a similar decision in the future.

"If something is not explained to me, I struggle to get passionate about it."

Participant A had a similar experience. He felt that while he had received some training, he was not confident that it was enough to foresee a problem.

"You feel you didn't have the support to prevent that from happening and then there's also not much guidance after that."

Participant F works closely with the Execute team, felt that having access to knowledge and information would improve her judgment in her daily work. She felt that her manager shared information on a need to know basis and that this undermined her role as part of the management team.

Participant K added,

"What I needed somebody is just to kind of recognise my potential and rather be an enabler."

5.4.2. How the millennial was made to feel knowledge exchange with their manager

Question eight dealt with how the millennial was made to feel during the knowledge transfer sessions with the older generation manger. Millennials place importance on workplace engagements because they are social learners and value interactions with their peers and managers. Table 5 below outlines the main findings of how the millennial was made to feel during knowledge transfer session with his or her manager.

Table 5: Summary of finding relating to how the millennial was made to feel during knowledge transfer sessions

Categories	Frequency	Themes
The manager is annoyed when asked questions	13	Interpersonal relationships
Made to feel like the millennial is not adding value	9	Psychological safety
Made to feel like part of the team	5	Inclusion
Made to feel inferior due to limited on job experience	5	
Not a learning environment	3	Learning organisation

Interpersonal relationships

The main theme that emerged from this question was the manager's initial reaction when asked a question or asked for help. All participants responded that the manager would not readily welcome questions and would appear to be annoyed or irritated.

"But if I make a mistake as somebody who is learning, you are this animated person screaming and shouting like a whatever, then for me it's like how do you go back and interact. So again, from a trust factor, I think it sometimes breaks down the trust." (PB)

Psychological safety

The manager's attitude led to some participants feeling less confident and doubted whether their potential was valued in the company. Participant F relates,

"And I felt like a bit stupid because I'm like you not making me feel like I've added any value because I'm the one who has been already like in the background like, you know, doing a lot of the stuff."

Inclusion

The second theme that emerged from responses to this question was inclusion, how the millennial was accepted by the manger and the perception that the manager had already formed an opinion of the millennial. In this question participants shared both positive and negative experiences. Participant D was a graduate trainee in her workplace and was under the mentorship of a retiring manager. The manager was passionate about training the younger generation and facilitated the training with other knowledge experts.

"He made me feel like I was part of the family, I suppose, because they're taking me under their wing and teaching me."

In contrast, participant D was left to fend for herself after the manager retired.

Participant A and C shared their similar experience as graduate trainees.

"Okay, I, I'm just gonna go figure this out myself, because it's not an environment where, you know, I can, I feel that I can gain the knowledge I need to, freely, in order to progress." (PA)

"Being an inexperienced person engaging with an experienced person you do feel like, you know, the difference. Yeah, you are made to really feel like a newbie, you know. You're definitely treated in that way." (PC)

How dare they send someone like me who doesn't know anything and how could… I have no future in the company and all of that." (PH)

Three female participants found that discrimination was a main factor for them not feeling included as a millennial in the workplace. They felt that the remarks made contradicted the company's culture. Participant I said,

"There's like the racial division but there's also like the division caused by tribes in SA, where if you cannot speak isiZulu or isiXhosa, and as a minority, as a black person, you will feel a bit alienated." (PI)

"….how dare they send someone like me who doesn't know anything and how could… I have no future in the company and all of that." (PH)

Learning organisation

One participant mentioned that when the manager did not collaborate with the millennial then it made the atmosphere tense which was not conducive for learning.

"…it's not an environment where, you know, I can, I feel that I can gain the knowledge I need to freely in order to progress." (PA)

5.4.3 Summary of Research Question 1

Research Question 1 asked the millennials to share the challenges they experienced during knowledge transfer. According to the millennials, some managers showed up differently when it came to knowledge transfer and this could be attributed to differences in education, experience levels and personality traits. Some managers were limited in their ability to learn new ways of working, and withheld information to maintain their own value to the company. Overall, the millennials were dissatisfied that knowledge management systems were not in place. There was inconsistency among managers in documenting procedures and the lack of systems in place made it difficult to access existing documents. The manger's approach to learning was dependent on the manager's perspective on whether they felt valued by the company or whether they viewed the millennial as a threat to their position. Two participants felt that they did not receive the level of training that they desired and this left them unprepared to solve problems in the workplace. An interesting insight into discrimination in terms of race, gender and culture was also highlighted in the responses.

5.5 Results for Research Question 2

RESEARCH QUESTION 2: What are the enablers experienced by millennials in intergenerational knowledge transfer?

The aim of Research Question 2 was to identify the enablers experienced by millennials in intergenerational knowledge transfer. Questions one, two, six, seven and nine as laid out in the Interview Questionnaire in Appendix 3 aimed to provide further insights into what the millennial perceives as enablers for knowledge transfer in terms of how knowledge transfer takes place, who should take responsibility for knowledge transfer, how the managers approached knowledge transfer and recommendations to improve knowledge transfer.

5.5.1. How millennials typically receive on job knowledge transfer

Question one asked the participant how they typically received on the job knowledge transfer. The aim of this question was to understand how companies executed knowledge. The responses received was a gauge of whether companies value and preserve knowledge.   Table 6 below outlines the main findings of how the millennial typically gained on job knowledge transfer.

Table 6. Summary of the findings of how the millennial typically received on job knowledge transfer

Categories	Frequency	Theme
On job training was dependent on the individual manager	13	Learning Organisation
Millennial developed own networks to gain knowledge	12	
Millennial's conducted their own research to gain further knowledge	12	
On job training was formal only during onboarding and formal e programs	10	
Prior learning before asking the manager for help	8	
OJT was not prioritised by the company structure	5	

Learning organisation

The general responses to this question were that the millennial received some form of formal training at onboarding and during their formal training programs. However, later in their careers the degree of on job knowledge transfer differed from manager to manager.

"I think it's more reaction, and depending on the type of management you have they will hold your hand through it but most of which you have to figure out yourself or from just reading the room or responding to the environment."

All the millennials interviewed stated that knowledge transfer typically began by reading through SoPs (Standard Operating Procedures). Shop floor demonstrations of the learned procedures depended on the manager's attitude. Participant F said'

"I think generally there's a sentiment of like, here's a piece of work, go and do it, and then, I then uncover information and I find information by- like doing my own research and looking back into historical records."

Participant D shared a positive experience in gaining on job knowledge during her graduate training program. Participant D found that the manager enabled teaching and coaching through her peers, and they were willing to help and answered all her questions in a manner that she could perform her tasks.

To supplement this knowledge, participants found that they had to take the initiative to seek out knowledge from knowledge owners or develop their own networks to sustain their knowledge.

Participant G found that it was helpful to do research prior to asking the manager questions because he felt that it was his responsibility to enter knowledge transfer with some background knowledge of the subject matter.

One participant stated that outside of formal onboarding training, his company does not prioritise knowledge transfer because daily operations and crisis management were prioritised over knowledge transfer.

5.5.2 What was helpful for the millennial during on job knowledge transfer

Question two asked the participants what was helpful for them during knowledge to understand which approaches or systems supported knowledge transfer. Table 7 below outlines the main factors of what was helpful for the millennial during knowledge transfer.

Table 7. Summary of the finding of what was helpful for the millennial during knowledge transfer

Categories	Frequency	Theme
Building a relationship with the manager	13	Interpersonal relationships
Manager providing advise during a task	13	
Gaining the manager's respect	12	
Gaining the manager's trust	12	
Being humble toward the manager	12	
Learning from standardised method followed by face-to-face demonstration in the workplace	11	Learning Organisation
Receiving constructive feedback	8	

Interpersonal relationships

All participants agreed that building a relationship with the manager and gaining the manager's respect was helpful in knowledge transfer.

"…my attitude was that eventually determined how much they would help." (PC)

"…put your ego aside and go to people before you have been long in the environment because chances are they know better than you. (PB)

"…how you- how you basically show interested in the subject, um, and basically the relationship that you build with these people." (PJ)

"…the manager went together in-person, with the regular check sheet, did all the checks step by step to make sure, understand, how to- how it needs to be done; once it's understood, then I could do it by myself." (PA)

"There was no, sort of, training of how to do and so on. And only when we started the activity could you start realising the gaps and then had to go and quickly make plans to close those gaps." (PA)

<u>*Learning organisation*</u>

Some participants felt that receiving feedback during training helped them to identify their skills gap and this also made them feel confident.

"…so they experience in in general was good because they're asking you questions to see that you've covered everything, every aspect of that machine." (PH)

5.5.3 Responsibility for knowledge transfer

Question six dealt with who typically took the lead for knowledge transfer in the company. Table 8 below outlines the results of who the millennial perceived to be responsible for knowledge transfer.

Table 8. Summary of the findings of who took responsibility for knowledge transfer

Categories	Frequency	Themes
Millennial taking accountability for their own learning	13	Learning organisation
Knowledge transfer was dependent on the manager	13	
Manager reluctant to teach for fear of the millennial leaving	8	Organisation development
Manager only taking responsibility when held accountable	8	

Learning organisation

The main factors that emerged from this question was that knowledge transfer was dependent on the manager, particularly where knowledge transfer was not formalised in the company. Participants found that forming a relationship with the manager in some cases enabled knowledge transfer. Participant E said,

"You have to make sure that they're comfortable in that environment and they allow you to be in their space for you to extract the best knowledge."

The millennial cohort all stated that in instances when they did not receive support from their managers, they had to take the initiative to seek out knowledge from knowledge owners. Participant H developed her own networks within the company and across regional branches to sustain the flow of knowledge. She said,

"And then, you did your own networking, that was your own initiative to find out how um, your other colleagues experience that same equipment, you know, if there were any differences."

Organisation development

Twelve participants were recruited into their respective companies as graduate trainees. They remarked that in most instances this was the only time that the manager took the lead for knowledge sharing. Participant C attributes this to the fact that the manager was accountable for her training during the program and had to report her progress to the Executives.

Only two participants mentioned that a retiring and resigning employee took the lead in knowledge transfer. Participant M said,

"In his last, maybe two or three months, he's opened up in showing me a little bit more of what to do, but he would always tell me when I first joined, read the manuals."

"And it should not be an individual, it should be the organisation that says, "I I feel that the generation that are leaving now have a lot of importance or still have a role to play in transferring knowledge."

Participant L shared an interesting insight that was not explored in detail in Chapter 2 stating that,

"Not everyone is a natural teacher, and some people feel threatened by it."

This observation by participant L links back to the company's preparedness and the steps they take toward knowledge transfer in an intergenerational workforce.

Participant E, who is passionate about teaching exclaimed that,

"By us not extracting the knowledge base from the older generations to impart into the younger generation, that gap is going to be missed to the point that you will find either productivity starts to suffer, the product, some sort of quality starts to suffer, somewhere you will find our output based on that knowledge you had , you have lost it and not able to transfer it and now you expecting a new generation to to pick it up."

5.5.4 How the manager's approach differs from the millennials approach during knowledge transfer

Question 7 asked the participant how their approach differed to their manager's approach during knowledge transfer. Participants had different interpretations of this question with respect to the subject's approach to work ethic, work life balance and approach during knowledge transfer.

Table 9 below outlines the main themes of how the millennial perceived their approach during knowledge transfer compared to their manager's approach.

Table 9. Summary of the finding of hoe the manager's approach differed compared to the millennial's approach

Categories	Frequency	Themes
Manager's response is unpredictable	13	Interpersonal relationships
Millennial shows the manager respect to gain support	12	
Manager is assertive to obtain results	2	
Manager only provides what is requested	12	Psychological safety
Millennial wants to work independently	4	Organisation development
Manager shows higher level of enthusiasm to work	8	
Manager work life balance differs	3	

Interpersonal relationships

Participant D maintained that she always approached her manager with humility and in return the manager was polite toward her.

"…there is a big role that the generational like thinking plays into things that um, there isn't really a, an inclusion of younger people who maybe could be more in touch with what is going on um, in the business space and what is going on like within a business because I think with younger people, there's a bit more dynamism, there's a bit more um, wanting to be more than just colleagues, more like, more social, more like exchange of ideas um, and interest in what other people are doing whether it's from a social stance or a work stance I think there's just a, an excitement about sharing." (PF)

Psychological safety

Six participants mentioned that the manager provided short answers to questions posed during knowledge transfer and sometimes became irritated when asked questions.

Organisational development

Two participants felt that the manager doubted their ability and challenged them in an open forum. One participant stated that his manager questioned the millennials commitment to work and whether they focused enough on work.

5.5.5 How the millennial thinks knowledge transfer can be improved

Question nine ask the participant for suggestions on how knowledge transfer could be improved.

Table 10 below outlines the main constructs of what the millennial believed would improve knowledge transfer.

Table 10. Summary of the finding of how to improve knowledge transfer

Key Findings	Frequency	Themes
Formalise knowledge transfer in the company	13	Learning Organisation
Document tacit knowledge into procedures	5	
Millennials can improve their social skills particularly when dealing with the older generation	12	Interpersonal relationships
Transparency in succession planning	10	Organisational Development
Provide feedback	3	Communication

Learning Organisation

Most participants believed that companies should formalise knowledge transfer. The answers to this question are linked to question one where most participants responded that knowledge transfer was not formalised in their companies.

"I think it needs to cascade down from general management. I sometimes think that maybe managers are not sure how to." (PA)

"I think it's like- it should always be the leader, should always be like a parent-child kind of, um, relationship." (PF)

Some participants attributed this to the fact that employees are rotated frequently and therefore some managers may be reluctant to teach for fear of "wasting their time."

Participant A said that in his department where knowledge transfer was not formalised, employees were not given the resources that they required and often made avoidable mistakes.

"Jobs that are being done and having to be redone over and over because there's no sufficient knowledge transfer and support."

In contrast some participants suggested that knowledge transfer should be less formal because this supported relationship building with the manager.

"I would like to see it as kind of a- maybe a coaching program, um, where the um, the leader or the senior person takes more a role of a mentor um, to help the individual gravitate upwards in their career but also for the purpose of being a better leader within that organisation." (PF)

" ….and it should be something that is more like, regular, like you know, it's a point- like makes a point, put it in your diary, maybe like once a month, maybe also over a cup of coffee. Does not need to be like extremely formal but just to help build the trust dynamics."

In contrast, four participants added that the millennial should also take ownership when it came to their and should initiate knowledge transfer with their manager.

I think it's like- it should always be the leader, should always be like a parent-child kind of, um, relationship.

Interpersonal Relationships

Participant L's insights to improving knowledge transfer was,

"I think everyone looks at knowledge transfer as really just the hard part and I mean-…the hard part is transferring knowledge….you have two people that are from different generations …. that requires a bit of some soft skills to blend or rather to bridge the gap in terms of the generations, which I think for me is the bigger challenge."

A similar view was shared by participant C who noticed that in her department, not all millennials adopted the approach of forming a relationship with the manager. She found that other graduate trainees in her department were arrogant in their approach and were unable to receive the same level of knowledge transfer as she did.

"You still need to learn how to sort of carry yourself as opposed to being in college or tertiary where you primarily with students and now in a corporate environment."

Organisational development

Participant C recognised that in her department, where there is an ageing work force, the older managers felt threatened that the millennials would replace them. Two other participants agreed that succession planning needed to be more transparent to address the ageing managers insecurities about being replaced by the millennial.

"I could also maybe feel that the treatment maybe, obviously there's more, um, you know, hype around new grads and coming through but the older generation maybe feel lack of appreciation or lack of acknowledgement." (PC)

"The older generation has so much to offer but the only way they start to transfer that knowledge is if they feel safe." (PE)

"They're leaving with the knowledge because nobody is taking the time to say, "oh this guy has been working on this system for so long and I need someone to shadow him until he leaves," make him feel comfortable, make him feel important because when you have this- when somebody feels important, you know, it's such a- it's such a lifter or emotionally, just picks you up and you feel important and somebody thinks you are a key entity within my organisation." (PJ)

"So as as a person who's wanting to receive and wanting to learn, you have to um, humble yourself, you have to um, build relationships with the people because you're not just gaining the knowledge to run away, you gaining the knowledge to work better to, you know, be part of the team. "(PL)

"So, we need to expand on that knowledge base so they should get like a on-boarding pack, based on all our key functions or areas." (PK)

Participant E shared a different angle on inclusion and felt that the focus should not only be on the millennial.

"So, for example, if you have a team building activity and not sensing the teamwork activity on a physical aspect or physical activity itself, or something that that that's, you can have something that also appeals to every generation." (PE)

5.5.6 Summary of Research Question 2

Research Question 2 asked the millennials to share their experiences on the enablers for knowledge transfer. In summary knowledge transfer was only formalised for structured programs such as graduate training programs. In most cases the millennial had to either self-learn or develop networks to obtain information. Outside of structured programs, knowledge transfer was dependent on the manager. Interpersonal relationships was a recurring theme in Research Question 2 and most millennials shared that thy could not predict how the manager was going to respond to them when they approached the manager for knowledge transfer. Some managers were either irrational or shared short responses. Most responses indicate that forming a relationship with the manager and having structured programs in place for knowledge transfer were important to facilitate knowledge transfer. One insight in terms of whether the manager was capable of teaching was also shared.

The interviews showed that most managers had different priorities and were reactive when it came to knowledge transfer. Both good and bad experiences were shared with the manager providing different levels guidance and training respectively. Some participants responded that building relationships and being humble during knowledge transfer can impact how willing the manager is to share information. Some millennials highlighted the value of being open to learning and adapting their approach depending on the manager's attitude toward them. Some millennials mentioned that while the

manager should take responsibility for personal growth and development, it is also up to the manager to share knowledge. Two participants mentioned the volatility of the older manager and not knowing how the manager is going to respond to them made knowledge transfer difficult. Two participants shared that they collaborated with the manager to present new ideas. Some participants mentioned that the company needs to be more transparent and consistent in their organisation planning.

In terms of recommendations on how to improve knowledge transfer most millennials suggested that leadership must take ownership for knowledge transfer and therefore knowledge transfer must be formalised and that establishment of electronic knowledge data bases will make it easier to access information. Three millennials preferred regular reviews and feedback from managers. Two participant sees intergenerational knowledge transfer as a challenge and that soft skills are required to close the gap.

5.6 Results for Research Question 3

RESEARCH QUESTION 3: What are the preferred methods for knowledge transfer amongst millennials?

The aim of Research Question 3 was to identify the preferred methods for knowledge transfer among millennials. Questions four and five as laid out in the Interview Questionnaire in Appendix 3 aimed to answer this research question. Question four dealt with the communication style of the manager during knowledge transfer sessions while question five dealt with the preferred communication platforms for the millennial.

5.6.1 The manager's communication style during knowledge transfer sessions

Question four asked the participants to describe how their manager communicated with them during knowledge transfer sessions. The participants expressed a lot of interest in this question and shared personal stories to elaborate on their experiences.

Table 11 below outlines the main constructs that emerged when millennials communicated with their managers during knowledge transfer.

Table 11. Summary of the findings on communication during knowledge transfer

Categories	Frequency	Themes
Speak in a respectful manner	12	Interpersonal relationships
Show appreciation for the manager's know how	10	
Learn more about the manager on a personal level	5	
Do not make the manager feel less important	6	Psychological safety
Irrational behaviour	6	
Millennial prefers open and honest communication	12	Communication
Use communication platforms that appeal to the millennial	4	
Regular check-ins with the millennial	3	
Allow for two-way communication	2	

Interpersonal relationships

Answers to this question overlapped with question two of the Research Questionnaire as participants stated that communicating with their managers in a respectful manner was helpful for them. Most participants felt that developing an amicable relationship with their manager was the most important factor in gaining support. Inherently, across the demographic of the participants, this approach emanated from their upbringing as they were taught to respect others. They found that engaging with the manager in a respectful manner, created an environment conducive for sharing knowledge. Participant G said,

"…then it's- or you're trying to have the learning kind of environment, you can- I tend to try and structure the questions of- around: "How would you do it?", "How do you go about it?". So, prompting the question, in a sense, on your- based on your previous experiences and then try- try and make the the question more in the conversation- in a conversational manner where you then get the buy in on the person."

Some participants valued two-way communication because this allowed them to also receive feedback from their managers. Participant L said,

"There's a lot about respect when you communicate to elders, you know. So- and and respect starts with that two-way communication."

Psychological safety

Some negative sentiments emerged from the interviews. Some participants found that their managers were irrational in their behaviour and felt that the manager had formed an opinion of them prior to getting to know them. Participant H thought that this was because the manager assumed that millennials change jobs frequently.

"The older generation tend to be very- what's the word, short in their responses, not really interested, they won't really think you know why you're there or you're going to last."

Two participants said that their managers may have felt threatened by the millennial surpassing them and hence their negative attitude toward the millennial.

Communication

Some participants shared that when it came to communication, they chose to approach the manager in the way that they would like to be approached.

"…it was ensured clear communication, ensured checking in with me." (PA)

".. We come from a culture where I don't think people get enough honest feedback. So, for me, literally I don't get much." (PB)

".. Then try to get them through those kind of softer skills so that when you're trying to get into a bit more detail questions, it's not just, abruptly, "I need this now"." (PG)

5.6.2 The use of technology in knowledge transfer

Question 5 enquired whether technology was used during knowledge transfer. The open-ended question prompted whether this was the millennial's preference and whether the company supported technology use.

Table 12 below outlines the main constructs of how technology was used during knowledge transfer and the millennial's preferred platform during knowledge transfer.

Table 12. Summary of the finding of how technology was used in knowledge transfer sessions

Categories	Frequency	Themes
Company learning platforms do not adequately support e-learning	13	Learning organisation
Record OJT as a manual for future reference	13	
Manager's must have an open mind to using technology	13	
The millennial uses all learning methods but prefers technology	8	

The interviews revealed that the typical knowledge transfer sessions were face to face discussions, workshops, brainstorming sessions in a classroom-like setting and Microsoft Presentations. Most participants stated that they were comfortable with these formats however, preferred to use technology due to its efficiency. They found that the manager's reluctance to use technology was a barrier to understand and solve problems quickly. Since most participants had technical backgrounds, they found that simple

systems like Microsoft Excel could be used to record and sort data, thus streamlining problem solving. Participant E carefully navigated his manager's dread for technology and approached the use of technology subtly.

"I never got a point where I showed him on a space that he was uncomfortable. And I, and I sat him down and I didn't, I didn't go with a direct solution. While he was working, while I'm working on my computer and I said, "I'll come and show you something,"

Participants added that technology plays an important role in recording information that can be made available for employees to learn at their own pace and to revisit learning material. One participant said that this repository of information is crucial for future generations to learn from those before them.

5.6.3 Summary of Research Question 3

Research Question 3 asked the millennials to share their interactions with the manager and asked for recommendations on what could be done to improve knowledge transfer. Some participants shared that making the manager feel safe in knowledge transfer sessions coupled with open and honest communication supported knowledge transfer. Based on their upbringing, they show respect toward their elders regardless of their position. Some participants preferred informal communication that allowed for two-way communication and found that trust is important to build communication with the manager.

With regards to the use of technology during knowledge transfer, most participants responded that the systems to support electronic learning platforms was lacking in the company. The benefits, they added, was that access to information on electronic platforms would allow the millennial to learn at their own pace and to also review content to refresh. In some cases, the millennial developed their own system to make information readily available for colleagues to use.

5.7 Conclusion

The results from the 13 interviews conducted were presented in this chapter. The themes that emerged from interviews were tabulated and presented based on the frequency of mentions throughout the interviews. These findings generated rich insights into the challenges and enablers of knowledge transfer between the generations. The diversity of the interviewees highlighted different perspectives and experiences in the workplace which add significant value to the research.

The participants shared various factors that influence knowledge transfer in the workplace, including the importance of formal training programs, setting clear goals and objectives, the use of different communication platforms and the value of relationships in knowledge transfer. Some participants discussed the barriers that arose from different personalities and the lack of organisational support in the workplace to address this. The responses highlighted the urgency for companies to intervene in knowledge transfer and knowledge management because the preservation of knowledge as an asset cannot depend on an individual's attitude and biases.

Generational theory and its relevance in the South African context, based on the responses from the interviewees, will be discussed in Chapter 6.

CHAPTER 6: DISCUSSION OF RESULTS

6.1 Introduction

In this chapter, the research findings, of the study of inter-generational knowledge transfer conducted among millennials working in the manufacturing industry in South Africa, are discussed in detail. The results will be compared and contrasted with the literature review that was conducted in Chapter 2 and used to formulate the research questions in Chapter 3. The themes that were developed in Chapter 5, in conjunction with the literature review, are used to understand the results of the study. These findings contributed to the understanding of challenges and enablers of inter-generational knowledge transfer in manufacturing companies in South Africa. An overview of the research questions and emerging themes are tabulated below in Table 13. The interview questions encouraged the participants to elaborate on their responses to answer why they experienced certain challenges or why certain enablers were possible which resulted in the overlapping of themes. The key findings were that the development of personal relationships, having structured knowledge transfer systems in place, and preparing the organisation to adapt to the changes in a multigenerational workforce supports knowledge transfer.

This chapter covers the mapping of research questions to themes identified in the research, followed by a detailed discussion of each Research Question. The key findings are summarised in section 6.5 of the chapter.

Table 13. Research Questions and emerging Themes

Research question	Themes	Link to interview questions in Chapter 5
Research question 1: What are the barriers experienced by millennials in intergenerational knowledge transfer?	• Fixed mindset • Psychological safety • Inclusion • Learning organisation	What the millennial found to be difficult during knowledge transfer (Table 4.) How the millennial was made to feel during knowledge transfer sessions (Table 5.)
Research question 2: What are the enablers experienced by millennials in intergenerational knowledge transfer?	• Learning organisation • Interpersonal relationships • Psychological safety • Organisation development • Communication	How the millennial typically received on job knowledge transfer (Table 6.) What was helpful for the millennial during knowledge transfer (Table 7.) Who took responsibility for knowledge transfer (Table 8.) The manager's approach compared to the millennial's approach (Table 9.) How to improve knowledge transfer (Table 10.)
Research question 3: What are the preferred methods for knowledge transfer amongst millennials?	• Interpersonal relationships • Psychological safety • Learning organisation	Communication during knowledge transfer (Table 11.) How technology was used in knowledge transfer sessions. (Table 12.)

6.2 Discussion of results for Research Question 1

RESEARCH QUESTION 1: What are the barriers experienced by millennials in intergenerational knowledge transfer?

Research question 1 explored the challenges that millennials experienced in on job knowledge transfer in Manufacturing companies in South Africa. To answer this

question, the participants were asked to share their personal experiences of on job knowledge transfer specifically regarding what was difficult for them and how they were made to feel during on job knowledge transfer. The responses were coded and grouped into categories and ranked by frequency. Four themes, Fixed mindset, Psychological safety, Learning organisation and Inclusion emerged from this research question and are discussed below.

Fixed mindset

A fixed mindset manifests in an individual who avoids opportunities to learn to conceal their lack of knowledge. Conversely an individual with a growth mindset will show an openness to learning, will accept that learning is continuous and will encourage others around them to learn (Campbell et. al., 2020; Dweck & Yeager, 2019). A key finding from the data was that all the older generation managers showed some form of resistance when new ways of working were proposed by the millennial. This is consistent with the description of the older generation in the literature as being set in their ways (Buawers et al., 2022) and less open to learning new ways of working. This finding could also be compared to the baby boomer's instinct for survival Delgado et al. (2020), that the trusted approach will determine a successful outcome. Some of these forms of resistance were with specific refences to different ways of working and the use of technology in problem solving and alternate ways of completing a task. Some managers were typically fixated on completing a task in the way it had always been done and believed that this was the better way to complete a task. The result of this was that millennials experienced limited autonomy in their learning process.

Psychological safety

In a Psychological safe workplace, employees will feel safe to be themselves. Employees will not feel afraid or ashamed to be vulnerable, make mistakes and share their personal views and opinions (Newman et. al., 2017). Some of the benefits of

psychological safety in the workplace is that employees can learn and be creative in a workplace that is conducive to learning. The research indicated that some managers did not feel safe in the workplace as they felt threatened that they would be replaced by the millennial, particularly when the millennial's education was at a higher level than the manager's. Some participants attributed this to the lack of communication within the company in terms of knowledge transfer and succession planning. Managers were expected to teach the younger generation and managers assumed that they would be replaced the millennial. The research also found that some managers where irrational in responding to the millennial and that this made it difficult for the millennial to approach the manager. The role of the organisation to address how the millennial is onboarded is not discussed specifically in the literature however authors such as Lazányi and Bilan (2017) and Mlambo and Adetiba (2017) do mention the value of aligning the company culture and the benefits of organisational development to integrate the generations.

Inclusion

Inclusion in the workplace allows employees to share information with each, involve others in decision making and allow others to have a voice (Shore et. al 2018). Employees who are made to feel like they belong in a team and can be themselves are likely to contribute more to the team (Chung et al., 2020). The South African millennial wants to be heard Deal et al., (2012) and value leaders who enable the sharing of views and opinions, however in the research findings some millennials were not made to feel part of the team due to their lack of experience and this made them feel like they were not contributing. Two positive experiences were shared where the manager took the initiative to support the millennial, and this had a positive result in knowledge transfer.

Learning Organisation

In a learning organisation, the company will ensure that support systems are in place for the preservation and transfer of knowledge (Kerin, 2022). By adopting a systems

thinking approach for learning, enablers such as HR and IT supporting structures, organisation culture and team learning will be set in place (Odor, 2018). Millennials view learning as an opportunity to grow (Baker et al., 2018), and want to contribute to their learning process, however the research findings indicated that two millennials did not receive support from their managers when problems arise, and the millennials had to problem solve on their own without knowing whether their actions and decisions would result in the desired outcome. Further the participants resolved that the environment was not conducive for learning which according to Zackarias et al. (2022) supports the transfer of knowledge between generations.

When the differences in values between the older generation and millennials were discussed in the literature review, it was found that millennials believe that they have much to offer and want to contribute to society (Ben-Hur & Ringwood, 2017; Kezsei et al., 2018). Millennials are self-driven and want to contribute more than the generations before them so they want learning to be collaborative so they can contribute to the learning process (Mayangdarastri & Khus 2020). When comparing the research findings of Research Question 1 to the literature review, it was found that the South African millennial's expectations were consistent with what is found in literature however were not delivered in the workplace. With regards to psychological safety, this points to the organisations preparedness to accept millennials in the workplace and therefore suggests that organisations take deliberate steps that will enable the integration of the generations.

6.2.1 Conclusive findings for Research Question 1

In summary, the findings for Research Question 1 indicates that the millennials faced various challenges during knowledge transfer. The fixed mindset of the manager made it difficult for the millennial to express autonomy (Heyns et al., 2018) in learning situations. The millennials wanted to contribute to the learning process, however, were not included and not made to feel part of team and therefore felt they were not valued by the manager. The findings highlighted the differences in the generations in their

approach to learning and without leadership intervention to integrate the generations through change management processes, knowledge transfer is left to chance.

6.3 Discussion of results for Research Question 2

RESEARCH QUESTION 2: What are the enablers experienced by millennials in intergenerational knowledge transfer?

Research question 2 attempted to explore the enablers for knowledge transfer between the generations to identify the success factors for knowledge transfer. The research question first attempted to identify how knowledge typically took place followed by three more questions on the factors that facilitated knowledge transfer. The four themes identified in Research Question 1 were also identified in this research question with Communication emerging as a new theme.

Learning organisation

The research findings identified that knowledge transfer varied vastly when it took place in formal and informal settings, and this was consistent amongst different manufacturing companies. In formal settings, which were typically at the on boarding phase or during structured development programs, managers were held accountable for coaching, mentoring and knowledge transfer because managers were answerable to the company Executive to report the millennial's progress.

In contrast to this, when knowledge transfer was not formalised, knowledge transfer was dependent on the manager. The research found that in the absence of formal knowledge transfer, the millennial took the initiative to self-learn and develop networks to continue their knowledge journey. In the absence of formal training, it was found that all the millennials took steps to develop their own knowledge by self-learning, developing

relationships with subject experts in the company and developing internal and external networks in their specialist field. In contrast to this, the literature review discussed the benefits of transferring knowledge, particularly tacit knowledge within the company. In the absence of formal training where tacit knowledge can be transferred the millennial loses the opportunity to learn problem solving, how to apply technical judgement and interpreting designs form the older generation (Zackarias et al., 2022).

Interpersonal relationships

Interpersonal relationships exist within a social and work context and can have both positive and negative effects in developing relationships in either context. Various factors can influence how individuals relate to each other such as the individual's personal experiences and the culture in the workplace (Szostek, 2020). These factors can influence how an individual shows up in the workplace and conflict may arise if these factors are not addressed (Troth et al., 2018).

The main finding from this interview question was that the millennial found that treating the manager with respect helped to build trust with the manager. The millennials took it upon themselves to develop a relationship with the manager.

Millennials value leadership and associate leaders with company values and view the leaders as role models therefore they place importance on developing relationships with the manager (Nowsu et al., 2016); Hall, 2016). This is evident in the research findings where millennia's adopted a respectful approach toward the manager to make the manager feel comfortable during knowledge transfer. In instances when the millennial developed a relationship with the manager, knowledge transfer was successful. The participants observed this phenomenon in the way they approached their manager compared to millennials who were overconfident and arrogant.

Organisation development

Organisation development prepares the organisation for change and promotes an environment for continuous learning (Smith & Mackinnon, 2019). In organisation development interventions the company takes intentional steps to bring the people, systems and processes into alignment to be able to accept the changes in the business environment. It helps leaders manage the changes in the company and by adopting change management processes such as Kurt Lewin's Change management model or Kotter's eight change model, employees are conditioned to the changes and are more willing to accept the changes (Burke, 2022).

The differences in how the manager and millennial approached work were highlighted in the responses to this question. Some millennials preferred to work independently instead of being micromanaged and boundaries set to establish work life balance were not respected by the manager. These findings indicate the lack of interventions at an organisation level to accommodate both generations in the workplace.

The research found that the manager's reluctance to share information with the millennial may be because the manager feared being replaced by the millennial. The research indicated that organisational changes may not have been communicated to the manager and that the manager's role to develop the millennial was not clear.

An interesting insight that emerged from this interview question was the manager's reluctance to teach for fear of the millennial leaving as this was the trend in that specific company, therefore, the manger felt that teaching would be a waste of resources. Also noted in the findings was that the manager only took responsibility for teaching when the manager was held accountable. This points to the need for managers to adapt to a multigenerational workforce.

Communication

Communication is the delivery of message that may be verbal or non-verbal (Genc, 2017) and can be delivers in various forms such as written communication, digital communication example a presentation or video. Feedback and two-way

communication are important components in ensuring that the message was received and understood (Eke, 2020). The findings indicated that millennials value receiving feedback as this allows them to work on their development areas. Millennials who received feedback were able to assess their gaps and plan a course of action.

The research findings are consistent with literature in that according to Nguye (2020), millennials prefer interactive learning as this allows them to engage with the manager and the learning material more effectively. Millennials want learning to be collaborative and want to be able to contribute to the learning process (Mayangdarastri & Khus 2020).

The findings from Research Question 2 indicate that the enablers for knowledge transfer in terms of the millennials preferences are lacking in the workplace.

6.3.1 Conclusive findings for Research Question 2

In summary, the findings from Research Question 2 indicate that while millennials are taking steps to access knowledge however, they are not benefiting from the knowledge that was developed within the company. The key know-how that was developed through years of investing in training is lost when knowledge transfer is not formalised. The lack of formal systems in place is a risk for companies as knowledge is lost through attrition either by employees immigrating or retiring. Millennials are taking the initiative to develop relationships with their older generation peers and managers however this cannot be sustained as it is dependent on each millennial and how they were informed by their parents. Furthermore, this is not addressing the lack of support from leadership to foster relationship development in the company culture. Similarly, without support from the organisation to support the changes in organisation structures as millennials enter the workforce,

6.4 Discussion of results for Research Question 3

RESEARCH QUESTION 3: What are the preferred methods for knowledge transfer amongst millennials?

Research question 3 attempted to explore the preferred methods for knowledge transfer amongst millennials working in the manufacturing industry in South Africa. Through this question further insights into the communication style preferences and the communication platforms that were used during knowledge transfer were gained. The research findings will be compared and contrasted to the literature review in Chapter 2. The themes that emerged from this research question were Interpersonal relationships, Psychological safety and Learning organisation and are discussed below.

Interpersonal relationships

The research identified that typically the millennial initiated knowledge transfer with the older generation manager to create an environment conducive for teaching and knowledge sharing. By adopting this approach, the manager was made to feel more comfortable with the millennial and did not feel like the millennial was being forceful in their approach to gain more knowledge. The research also indicated that this approach suited the millennial's communication style which was instilled in them by their parents. This is consistent in the findings by Popescu (2019) that while the generation cohorts may develop their own worldviews, beliefs and behaviours are passed down from one generation to the next. In the cases where the millennial took the initiative to show the manager respect, this was based on their own judgement of the situation that developing a relationship based on respect would lead to trust between the manager and the millennial.

The research found that developing a meaningful relationship with the manager allowed some millennials to get to know their manager on a more personal level, thus showing an interest in the manager and an appreciation for the manager's knowledge and

experience. Millennials are social learners and they do not see the difference in how they communicate in a social setting with friends and in the workplace with their managers. Therefore, they want to be able to learn more about the managers and to be able to engage informally to develop a meaningful relationship with the manager Hall (2016)

Psychological safety

Feeling safe in the workplace was also highlighted in the research findings as a factor that influences communication between the manager and the millennial. When some millennials acknowledged that their level of experience was different to the manager, and that they should appreciate the managers for their know how the manger was more collaborative.

Learning organisation

The research found that some millennials are comfortable with different learning platforms, especially platforms that allow them to engage with the manager. Some millennials, however, do prefer to use technology over traditional methods because technology is more efficient in day-to-day operations and allows for the information to be stored for future use. The research highlighted two important factors that hinder the use of technology in terms of the managers reluctance to adopt technology and the lack of systems in place to use technology.

Regarding the former, literature confirms that the older generation prefers to learn using traditional methods such as documented procedures, and millennials preferred electronic platforms (Knoetze & Jantjies 2019). Despite these differences Knoetze and Jantjies (2019) suggest that companies that value knowledge sharing will address each generation's individual learning needs and will ensure systems in place to accommodate knowledge sharing.

Comparing the research findings for interview question 4 to the literature review showed similarities are evident in terms of the South African millennials communication preferences and the use of technology during knowledge transfer.

6.4.1 Conclusive findings for Research Question 3

In summary, the research findings for Research Question 3 point to the importance of intergenerational relationships for knowledge transfer. Millennials prefer to use technology, however company structures do not support this. The literature review indicated that the older and younger generations differ in their preferences when it comes to using technology, however companies are not taking these differences into account when developing learning platforms.

6.5 Conclusion

This chapter compared and contrasted the data from the three research questions from Chapter 3 with the literature review form Chapter 2.

The South African millennial showed similarities to the values and preferences that were outlined in Chapter 2. New findings emerged in terms of the importance that the South African millennial places on developing a relationship with their managers particularly with regards to showing the manger respect which is inherent of their upbringing.

Knowledge management systems are lacking, and knowledge sharing is not prioritised in the companies where the participants. Similarly support structures to facilitate intergenerational knowledge transfer are not in place.

A conceptual framework that will assist mangers to implement knowledge transfer is discussed in Chapter 7.

CHAPTER 7: CONCLUSION AND RECOMMENDATIONS

7.1 Introduction

This section will outline the conclusion of each research question and will present a conceptual framework that consolidates the themes that emerged in the study.

A knowledge management system that supports the growth and development of both generations to harness the skill and experience of the older generation and to retain that knowledge in the next generation was the motivation for this study. The research explored generational preferences through a generational theory lens to understand how these may influence intergenerational on job knowledge transfer.

Chapter 1 presented the business problem in terms of the shift toward a multigenerational workforce as access to tertiary education increases, resulting in a higher number of millennials entering the workforce. The impact of skills loss because of the social and economic factors that led to the migration of skilled workers in the manufacturing industry and the risk that this presents to business to maintain their competitive advantage in a changing business environment was discussed. The study therefore explored the challenges and the factors that enable intergenerational knowledge transfer in the workplace.

Literature highlighted the differences in communication preferences, leadership style preferences, learning preferences and work ethic differences between the generations and reviewed the benefits of knowledge transfer and knowledge managements systems to retain knowledge as an asset. The literature presented a comprehensive overview of the phenomenon of intergenerational knowledge transfer however the attitudes and behaviours of the South African manager and millennial to sustain this, required further exploration.

This chapter presents the research findings, the implications for business and proposes a conceptual framework for sustainable intergenerational knowledge transfer. The

limitations of the research study and recommendations for future research are also presented in this chapter.

7.1.2. RESEARCH QUESTION 1: What are the barriers experienced by millennials in intergenerational knowledge transfer?

The findings of Research Question 1 summarised the various challenges that millennials faced during knowledge transfer sessions with the older generation. Some millennials had to navigate the manager's reluctance to teach because of feeling insecure in terms of job security and unwillingness to learn new ways of working. The millennial with little experience did not feel welcomed in the workplace and sought to developing a relationship with the manager to create a learning environment. These findings negate the millennials need for inclusion in the workplace and inclusion in the learning process (Mayangdarastri & Khus 2020). By developing a growth mindset, the manager will recognise the value that the millennial brings to the workplace and how this will benefit the future growth of the organisation (Dweck, 2016). Further, embracing differences in experience levels coupled with strategic interventions from Leadership, will support a learning environment (Lazányi & Bilan 2017).

Figure 4 below is a representation of the possible countermeasures to overcome challenges that the millennial experienced. The scope of the research was limited to identifying the challenges in knowledge transfer however did not explore the empirical effect of each factor. However, the number of mentions of each factor indicates that they influence knowledge transfer.
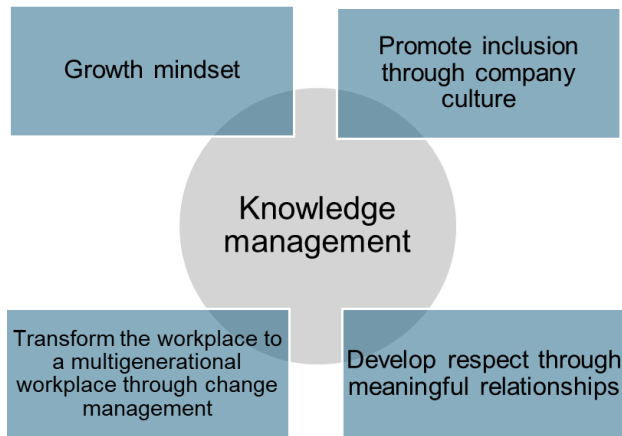
Figure 4. Framework for Research Question 1

The findings of Research Question 1 suggest that managers should have an open mind toward millennials and that companies should address the manager's perception of feeling less valuable to the company. While the millennial takes the initiative to develop a relationship with the older manager, the company cannot rely on this, because as was stated by some participants, they found some millennials to be arrogant and self-centered. The company must take the necessary steps to and must takes steps to transform the workplace into a multigenerational workforce.

7.1.3 RESEARCH QUESTION 2: What are the enablers experienced by

millennials in intergenerational knowledge transfer?

The findings of Research Question 2 summarised in Figure 5 below are the enablers for knowledge transfer as identified by the millennials and calls for urgency for leaders to implement formal knowledge managements systems that will address the sharing of tacit knowledge in the company. Similarly, interventions to align the different generations for greater acceptances of generational differences will benefit the company.
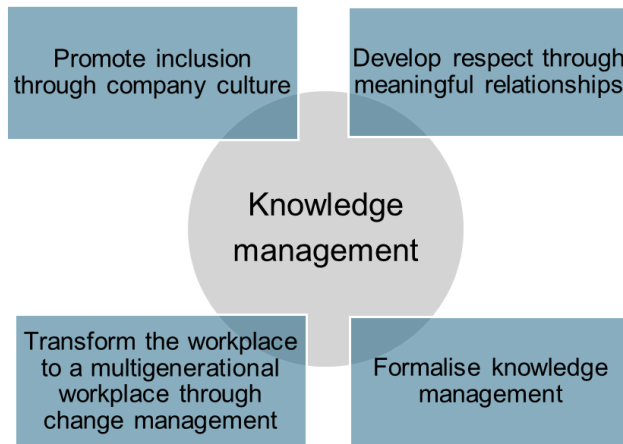
Figure 5. Framework for Research Question 2

7.1.4 RESEARCH QUESTION 3: What are the preferred methods for knowledge transfer amongst millennials?

The findings of Research Question 3 summarise the millennials communication preferences and the millennials preference to use technology. The findings indicate that relationship building plays an important role for the millennial in the workplace as an enabler for knowledge transfer. Showing appreciation for the manager's experience and speaking in a respectful manner had positive results because the manager reciprocated this approach and this was consistent with the research findings by Mayangdarastri and Khusna, (2020). This had further implications to make the manager feel comfortable even in situations that were not familiar to the manager because as posited by Jonck et al. (2017) the older generation also values relationships. The millennial's communication preferences were consistent with what was found in literature in terms of their preference for open and honest communication (Nowsu et al., 2016 and Hall, 2016) and integration of the generations will benefit companies. Some millennials prefer using technology in learning, however companies did not implement systems to support this preference. Companies can benefit from developing learning platforms that suit each generation

(Knoetze & Jantjies, 2019). The concept of respect specifically between the generations was not discussed in the literature review and should be explored in the South African context.

Figure 6 below is representation of the millennial's communication and technology preferences to align the organisation to their preferences.
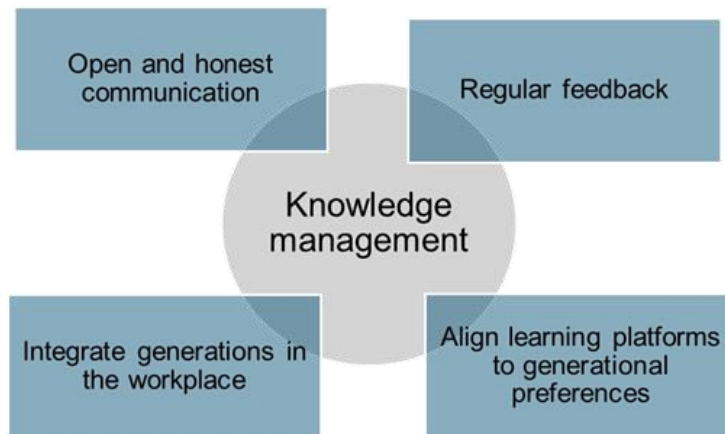
Figure 6. Framework for Research Question 3

7.2 Contribution to Business/Organisation

The research findings showed that successful knowledge transfer can be achieved by adopting a systems thinking approach that calls on different business areas' participation. Figure 7 below is an illustration of how companies can implement knowledge transfer.
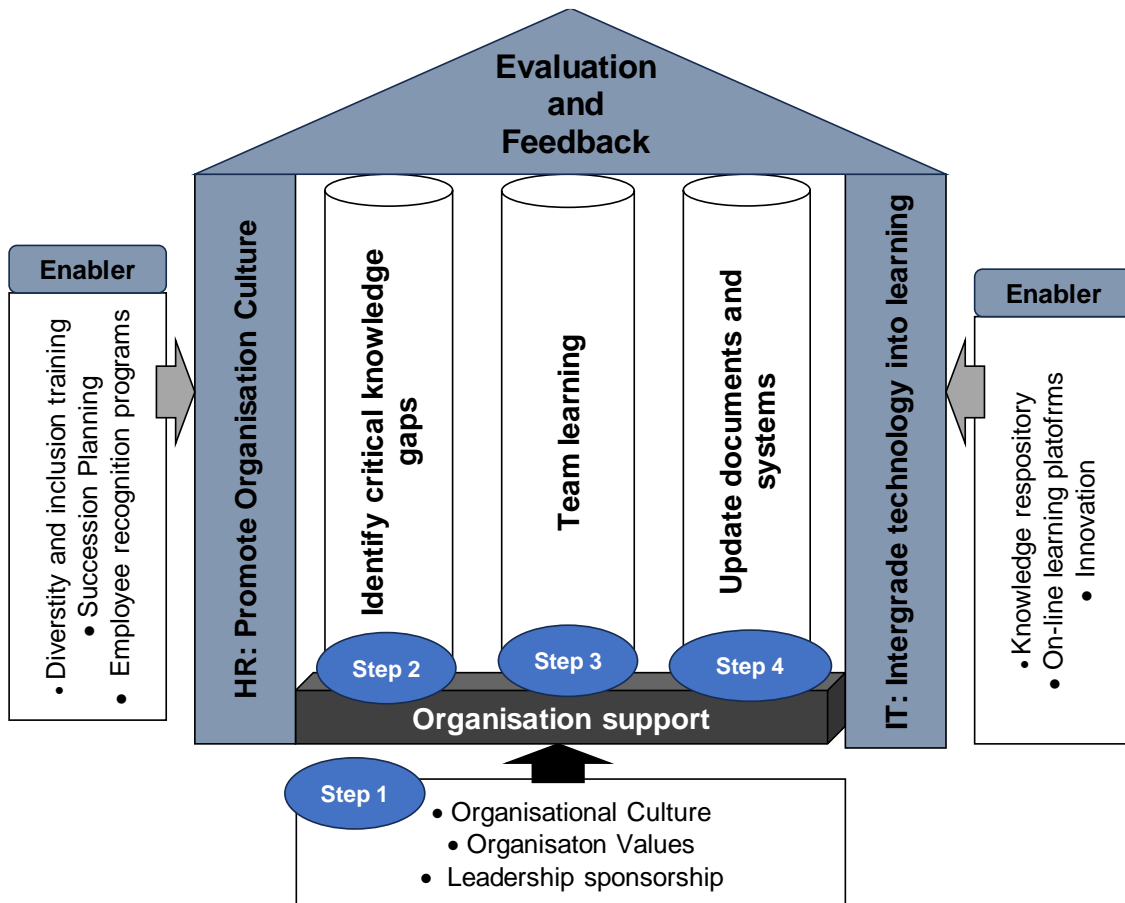
Figure 7. Conceptual framework

The conceptual framework is built on a foundation of organisational support that will prioritise knowledge management (Sumabl et al., 2017) and address issues surrounding the hoarding of information, with two pillars as enablers for continuous evaluation and feedback on how the organisational changes are communicated and executed.

Step 1 in the framework is to set a firm foundation that will mobilise the organisation's culture and values as a learning organisation and will require leadership sponsorship to raise the framework.

Step 2 requires the organisation to identify critical skills gaps, that are necessary to support the company's strategic objectives, while,

Step 3 engages the knowledge and experience of the older generation in team learning where tacit knowledge can be transferred.

Step 4 calls for systems in place to document and make this knowledge accessible.

The role of the enablers, HR and IT, is to facilitate the changes in people development and systems development.

The role of HR

The research findings indicated that the integration of the different generations is an important factor for the generations to understand and appreciate their differences. Addressing the soft skills through Diversity and Inclusion training can be a key enabler for generations to share their lived experiences and to gain a better understanding of their social, political and economic experiences and how these experiences shaped their worldview (Shore et. al 2018). Transparency around succession planning exposes the need to sustain the business and the role information sharing plays in succession planning.

The role of IT

The research findings highlighted the importance of acknowledging the different learning preferences and encourages companies to incorporate this into their planning. Similarly, the need to preserve knowledge as an asset is in the company's best interest. Establishing knowledge management systems removes the dependance on individuals for knowledge as systems in place formalise the processes of acquiring, sharing and documenting knowledge.

Team learning

Team learning plays an important role in knowledge transfer that will engage both the older generation in terms of the knowledge they hold (Zimfir, 2020) and the millennial in terms of their preference for collaborative learning (Mayangdarastri & Khus 2020).

7.3 Recommendations for Managers

The main purpose of the framework is to suggest how knowledge management systems can be implemented in a multigenerational workforce where generational differences can influence knowledge transfer and is not conclusive. While various models on knowledge transfer exist in literature, the main aim of the research study was to explore the South African workplace and to identify the unique factors that influence knowledge transfer that may require a different solution when compared to developed countries. Managers who are concerned about the preservation of knowledge and the role individuals play in knowledge transfer can test this framework.

7.4 Recommendations for future Research

The literature on generational differences in the workplace focused mainly on the differences in values and preferences based on each generation's beliefs and behaviours because of their social, political, technology and economic exposure in developed countries. However, does not focus on the soft issues in terms of the manager feeling insecure in the workplace and the need for developing respectful relationships.

The manager's perspective

The scope of the research was limited to the millennial workforce population with the aim of skills transfer to millennials as the next generation leaders. The study did not consider the challenges that the manager experiences when leading and transferring knowledge to millennials in a multi-generational workforce. Because millennial's value two-way communication and constructive feedback (Nowsu et al., 2016, Hall, 2016), further research in this area may provide the millennial with further insights into the manager's values.

Intersectionality

Two female participants experienced race, gender and cultural discrimination during knowledge transfer sessions. Whilst this was not explored in detail, diversity, equity and inclusion in the workplace and the impact it has on intergenerational relationships requires further study. The transition toward a more inclusive economy in the country through legislation such as The Employment Equity Act and Broad Based Black Economic Empowerment (Department of Employment and Labour, 2023) is taking priority in larger companies. Since the lack of inclusion is causing tension in the workplace, further research on how gender, race and cultural differences influence knowledge transfer can be studied, particularly because the manufacturing industry is a male dominated industry.

The manager's ability to teach

One case found that the manager's ability to coach, mentor and teach is assumed and that the manager may not be trained to do so. The manufacturing industry typically attracts STEM (Science, Tehcnology, Engineering, Math) talent and the personalities associated with these competencies could be further investigated. Similarly, as a learning organisation, to test the effectiveness of the systems for a learning environment.

7.5. Research limitations

Time horizon

Due to time limitation, the research study was cross sectional, and thus did not allow for further exploration of the phenomenon with the sample.

Advantages and disadvantages of qualitative research

A qualitative approach was adopted for this study and hence only one type of data was collected. By adopting a mixed method approach the relationship between the

categories and themes could be studied for example, the relationship between formal knowledge management systems and the millennial's satisfaction with knowledge transfer. A mixed approach will develop a complete picture of the phenomenon through the triangulation of data (Makcey & Bryfonski, 2018).

While the exploratory nature of the qualitative study allowed participants to reflect on their personal experiences at different time spans in their careers, the responses were dependent on the participant's recollection of a significant event. A further limitation to adopting this research method is the researcher's subjectivity in analysing the data to develop codes, categories and themes. While steps were taken to limit bias, it could not be avoided entirely. While qualitative research method is recommended to explore behavioural and social and social factors (Ugwu and Eze, 2023), a mixed method approach, could be adopted to study the relationship between the main findings of the research study and the recommendations made to improve knowledge transfer, thus adding credibility to the conceptual framework.

Transferability

A purposive sampling technique was adopted for the research study and participants were selected from the researcher's network limited to Kwa-Zulu Natal province and Gauteng province in the Automotive, FMCG, Pulp and Paper and Advertising and Printing sectors. Also noting the small sample size of 13 participants, the transferability of the study to other provinces and sectors where demographics may differ will require further study.

Conceptual framework

While a conceptual framework was developed and recommended as tool that can be used by businesses, the themes that emerged from the research were based on the subjective responses of the interview participants. The scope of the research focused on the millennial's perspective and therefore the framework does not include the

manager's perspective. Furthermore, due to the nature of the research study being cross sectional the researcher did not test the framework in practice.

7.6 Conclusion

The research provided rich insights into the challenges and enablers for intergenerational knowledge transfer. Istrucutred and semi structured interview questions were formulated from the literature and interviews were conducted with 13 participants. The findings from the interviews were analysed, compared and contrasted to the literature review.

The findings indicated that formal knowledge management systems will benefit intergenerational knowledge transfer underpinned by Leadership support to transform the organisation through an intentional organisational development process. The core finding highlighted that psychological safety and interpersonal relationships which may be unique in the South African context given the move to a more inclusive workforce.

A conceptual framework was developed by adopting a systems thinking approach to include key drivers for transformation such as Leadership support and the development of processes and systems through Human Resources and Information Technology. This framework will address the soft and hard issues relating to knowledge management and transfer and can be used by managers to formalise these processes in their own companies.

The study contributes to toward literature to share the South African millennial's experiences in on job knowledge transfer.

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9. APPENDICES

Appendix 1: Invitation to Participate in Research Study

Dear Colleague,

I am finalising an MBA at the Gordon Institute of Business Science, and I am in the process of completing the compulsory research report component of the degree. My research project title is 'Millennials' experience of on-the-job knowledge transfer from older generations in the manufacturing industry'.

This refers to millennials who are working in an intergenerational work environment and are receiving on-the-job- training and or knowledge transfer from an individual of an older generation. The aim is to understand the factors that influence knowledge transfer in the workplace, particularly in manufacturing where knowledge transfer is critical for future business sustainability.

I believe that you have the necessary experience needed to provide key insight into this area of study. I would greatly appreciate your participation in this research by agreeing to be interviewed on the subject matter. The interview will be a semi structured in-depth interview and will last approximately 45 minutes. I plan to conduct the interview during the month of November. Please find attached a copy of the consent form that you will read prior to the interview commencing.

The interview will be confidential, and you will remain anonymous. The research questions aim to answer through this process are as follow:

1. What are the barriers experienced by millennials in intergenerational knowledge transfer?
2. What are the enablers experienced by millennials in intergenerational knowledge transfer?
3. What are the preferred methods for knowledge transfer amongst millennials?

Please can you confirm your agreement to take part and indicate your availability to be interviewed during the month of November.

I look forward to hearing from you.

Kind regards

Melody Smith msmith5@toyota.co.za

Appendix 2: Informed consent for interviews

Dear colleague,

I am conducting research on how generational differences and knowledge management influence knowledge transfer in the workplace, with a specific focus on knowledge transfer between older generations to millennials.

Our interview is expected to last about 45 minutes. Your participation is voluntary, and you can withdraw at any time without penalty. All data will be reported without identifiers.

By signing this letter, you are indicating that you have given permission for:

- The interview to be recorded;
- The recording to be transcribed by myself;
- Verbatim quotations from the interview may be used in the report, provided they are not identified with your name or that of your organisation;
- The data to be used as part of a report that will be publicly available once the examination process has been completed; and
- All data to be reported and stored without identifiers.

If you have any concerns, please contact my supervisor or me. Our details are provided below.

Researcher name:	**Research Supervisor name**:
Melody Smith	Dr Lisa Kinnear
Email:	**Email**:
22014731@mygibs.co.za;	lisa.kinnear@twimsafrica.com
msmith5@toyota.co.za	

Phone:

079 501 3529

Signature of participant: _____

Date: _____

Signature of researcher: _____

Date: _____

Appendix 3: Interview Questionnaire

Name: Start time:

Organisation: End time:

Job Title:

Date:

Thank you for agreeing to meet with me today to provide insights into the research.

The title of the research is **Millennial's' experience of on-the-job knowledge transfer from older generations in the manufacturing industry.**

The objective of this research is:

- To explore the millennial's experience during knowledge with older employees during on-the-job training.
- Identify the factors that positively and negatively influence knowledge transfer.

The interview will include structured questions and open-ended questions. Please feel free to speak openly as your personal experience will provide insights into this research. All information that you share during the interview will remain confidential and your identity will be anonymous.

The interview will be recorded using a recording device. If you feel uncomfortable with this arrangement, please let me know.

Question 1:

How have you typically gained on the job knowledge transfer in your role?

Method 1
Method 2
Method 3

Question 2:

When engaging with your manager in knowledge transfer, what was helpful for you?

Experience 1	Why?
Experience 2	Why?
Experience 3	Why?

Question 3:

When engaging with your manager in knowledge transfer, what was difficult for you?

Experience 1	Why?
Experience 2	Why?
Experience 3	Why?

Question 4:

How did you experience the communication style of your manager in interactions around knowledge transfer?

Question 5:

How was technology used during knowledge transfer?

Online training	How easy was it for you to learn using this method?
Videos	How easy was it for you to learn using this method?
Digital simulations	How easy was it for you to learn using this method?
Other	How easy was it for you to learn using this method?

Question 6:

Who takes responsibility for knowledge transfer and how is it implemented?

Question 7:

In your engagements with your manager around knowledge transfer, what differences do you experience in the way you approach work compared to them?

Suggestion 1	Why?
Suggestion 2	Why?
Suggestion 3	Why?

Question 8:

Describe how you feel when you are in a knowledge transfer exchange with your manager?

Question 9:

How do you think knowledge transfer exchange could be improved?

Suggestion 1	Why?
Suggestion 2	Why?
Suggestion 3	Why?

Appendix 4: Ethical Clearance

Gordon Institute of Business Science
University of Pretoria

Ethical Clearance Approved

Dear Melody Smith,

Please be advised that your application for Ethical Clearance has been approved.
You are therefore allowed to continue collecting your data.
We wish you everything of the best for the rest of the project.

Ethical Clearance Form

Kind Regards

Appendix 5: Consistency matrix

Research questions	Literature review	Data collection tool	Analysis
Research question 1: What are the barriers experienced by millennials in intergenerational knowledge transfer?	Hall, 2016. Santoro et al., 2018 Pereira & Mohiya, 2021	Q3. When engaging with your manager in knowledge transfer what was helpful for you? Q8. Describe how you feel when you are in a knowledge transfer exchange with your manager?	Content analysis on closed-ended questions
Research question 2: What are the enablers experienced by millennials in intergenerational knowledge transfer?	Igbinovia & Ikenwe, 2017 Nowsu et al., 2016 Hall, 2016 Ben-Hur & Ringwood, 2017 Kezsei et al., 2018	Q1 How have you typically gained on the job knowledge transfer in your role? Q2. When engaging with your manager in knowledge transfer what was helpful for you? Q6. Who takes responsibility for knowledge transfer and how is this implemented? Q7. In your engagement with your manager around knowledge transfer, what differences do you experience in the way you approach work compared to them? Q9. How do you think your knowledge transfer exchange could be implemented?	Content analysis on closed-ended questions
Research question 3: What are the preferred methods for knowledge transfer amongst millennials?	Nowsu et al., 2016 Chandan, 2018	Q4. How did you experience the communication style of your manager in interactions around knowledge transfer? Q5. How was technology used in knowledge transfer?	Content analysis on closed-ended questions

Appendix 6: Codes for Interview Questions

Codes for Question 1

Codes	Themes
Collaborative learning Experiential learning Experience Formal learning Formal training Hands-on approach Independent learning Informal learning Information seeking Individual responsibility Knowledge sharing Knowledge transfer Learning as you go Learning from experience Learning from others Learning style Lack of support Lack of training Lack of structured learning Lack of structured training program Lack of effective teaching Lack of documentation On-the-job development On-the-job training Skills gap	**Learning organisation**

Codes for Question 2

Codes	Themes
Appreciation Collaboration Humility Relationship building Respect Responsibility Recognition Reciprocity	**Interpersonal Skills**
Information sharing Knowledge sharing Mentorship Professional development Problem-solving Receiving feedback Support Seeking help Seeking clarification Sharing knowledge Technological proficiency Training and development	**Learning organisation**

Codes for Question 3

Codes	Themes
Difficulty adapting to change	**Fixed mindset**
Control Difficulty accessing information Emotional volatility Frustration Feeling isolated Feeling treated unfairly Feeling unsupported Generational gap Hierarchy Inadequate training Reactivity Overwhelm Self-doubt Stability Security	**Psychological safety**

Codes for Question 4

Codes	Themes
Building rapport Building relationships Trust Respect	**Interpersonal relationships**
Confidence Emotional volatility Empathy Humility Independence Transparency	**Psychological safety**
Affirmation Clarity Communication difficulties Communication style Digital communication Effective communication Feedback Seeking clarification Seeking clarification	**Communication**

Codes for Question 5

Codes	Themes
Compliance Innovation Lack of knowledge On-the-job training Online learning Traditional learning Training Webinars Presentation Lecture Preference for virtual communication Preference for real-time interaction Preference for handwritten notes	**Learning organisation**

Codes for Question 6

Codes	Themes
Continuous learning Learning Learning and development Proactive learning Humbling oneself Initiative to learn Receiving instruction Proactiveness Task-oriented Information sharing Proactive learning	**Learning organisation**
Accountability Responsibility Transparency Structure Reliance	**Organisation development**

Codes for Question 7

Codes	Themes
Anger Emotional volatility Frustration Disappointment Respect Admiration Loyalty Conflicting personalities Bargaining Possessiveness Humility	**Interpersonal relationships**
Insecurity	**Psychological safety**
Transparency Work ethic Work-life balance Management style Independence	**Organisation development**
Expertise Growth Possessive over know how	**Learning organisation**

Leverage Mentorship	
Equality Differences	**Inclusion**

Codes for Question 8

Codes	Themes
Aggression Assertiveness Collaboration Competitiveness Confidence Difficulty expressing oneself Disrespect Frustration Gratitude Hierarchy Lack of empowerment Lack of respect Open-mindedness Uncertainty Positive relationship Pushback Respect Trust	**Interpersonal relationships**
Feeling underestimated Feeling excluded Feeling inferior Feeling undervalued Insecurity Isolation Social dynamics Social influence	**Inclusion**
Achievement Inadequate knowledge transfer Knowledge sharing Lack of support Mentorship Performance Performance-oriented Personal development Traditional teaching methods	**Learning Organisation**

Codes for Question 9

Codes	Themes
Coaching Digital learning Information preservation Informal learning Intergenerational learning Knowledge sharing Knowledge transfer Mentoring Learning outcomes Training	**Learning organisation**
Confidence Soft skills Social skills Knowledge management	**Interpersonal relationships**
Evaluation Feedback	**Communication**
Accountability Leadership HR (Human Resources) Process improvement Safety Succession planning Technology implementation	**Organisation development**