The Significance of Interns Trust in Artificial Intelligence Adoption

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ABSTRACT

Internship is a year where graduates who are referred to as interns, who possess theoretical knowledge enters the workplace to gain practical knowledge into the relevant field of study. In the healthcare industry, the pharmacist interns enter the workplace on contractual basis to fulfil the requirements of internship by undergoing standardised training programs. More organisations are introducing technology as part of the organisational strategy. The understanding is that the interns under the supervision of tutors will, during the practical training, learn to trust and adopt technology to be efficient and productive. Therefore, it has become important to understand these constructs by conducting the study in the context of South Africa.

The objective of this study was to investigate the significance of trust in artificial intelligence adoption by the interns during internship. The trust in artificial intelligence adoption is crucial to enabling the interns in achieving the objectives of internship which is to learn and develop into an autonomous pharmacist. This study assumed a qualitative approach and data was collected semi-structured interviews, exploratory and open-ended to ensure participants shared their lived experiences into the phenomenon of technology adoption. Twenty respondents were interviewed following in-depth, semi-structured interviews using Microsoft Teams.

The key findings following thematic analysis revealed that trust in artificial intelligence adoption play a significant role on the learning and development of interns during internship. The findings reveal that the ease of use and the perceived usefulness of artificial intelligence were the key contributors towards interns trusting and adopting artificial intelligence. This study contributed to the existing literature on technology adoption.

KEYWORDS

Artificial intelligence, trust, adoption, intern, tutor, technology adoption theory, task performance

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. This paper has not been submitted before for any degree or examination in any other university. I further declare that I have obtained the necessary authorisation and consent to conduct this research.

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Georgina Molobe Date

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

CHAPTER 1: INTRODUCTION TO THE RESEARCH PROBLEM

1.1. Introduction

The adoption of technology in organisations post-COVID-19 pandemic has increased with more businesses introducing different forms of artificial intelligence (AI) to assist employees in working smarter and more effectively. South Africa has a high youth population, with those completing their studies in the healthcare sector scoring a high chance of entering the workspace as beginners (interns) where AI technology is utilised during task performance. An opportunity was identified to explore how interns trust, use and adopt AI during their internship as they gain more insight into how to execute tasks in the workplace.

This study aims to undertake an exploratory study that seeks to understand the significance of trust in AI in the workplace, specifically for interns. The remainder of the chapter outlines the background of the research problem. The chapter further explains the applied and conceptual focus of the study and the aspiration to explore the context within South Africa.

1.2. Background to the Research Problem

Artificial Intelligence (AI) which is also known as machine learning (ML) traces its origins to 1950 with Alan Turing's seminal work called Computing Machinery and Intelligence. The introduced the concept of the Turing Test, which focused on developing systems that emulate human learning and thinking processes (Holzinger et al., 2019; Kaul, Enslin, & Gross, 2020). AI has progressed rapidly, producing numerous applications that address modern business challenges and models that transform operations (Boma-Orawari & Waribugo, 2022; Leichtmann et al., 2023).

The introduction of new technologies has changed how work is performed in the workplace in recent years. The introduction of technological toy zols has limited the manual nature of executing certain tasks which currently influence how work is performed (Emad, 2010; Gallego & Kurer, 2022). The new technological tools affect the behaviour of the employees and their mental processes of doing the work as the tools reorganise the organisation’s processes thereby reshaping the user’s thinking and cognitive process (Emad, 2010). Wilkens (2020) indicates that in a workplace, the introduction of AI should not be underestimated because AI can complement human intelligence and increase learning and development which can lead to advancement in the quality, and accuracy of the work done by employees. However, it should be noted that the

practical implications of AI are factors surrounding the socio-technical job design to incorporate AI in the workplace in a manner beneficial to the organisation (Wilken, 2020).

The adoption of AI in the workplace continues to spark debate about the consequences of such changes which modify the value of skills and create new job titles raising concerns about employers being able to create sufficient employment and the capacity of workers to acquire the new skills needed to complement the current job demand and the future of jobs (Gallego & Kurer, 2022). AI tools such as ChatGPT, IBM Watson, Supply Chain Management Solutions, Adobe Sensei, Tableau, Power BI, Merative, and Google Translate are beginning to form part of everyday AI use in business operations (Rios-Campos et al., 2023). Researchers have extensively documented the capabilities and widespread adoption of sophisticated large language models (LLMs) such as ChatGPT and Google's PaLM, highlighting their significant impact across various sectors (Soni et al., 2020; Chen et al., 2024; Varma, Pereira, & Patel, 2024; Leichtmann et al., 2023).

Rios-Campos et al. (2023) indicate that during the pandemic businesses across the world began to use AI to improve internal business processes and communication. Currently, the use of AI is beginning to emerge in more business sectors (Rios-Campos et al., 2023). AI's application has notably expanded into the healthcare sector. Studies indicate that many healthcare professionals possess basic understanding of AI principles, are cognisant of available AI technologies, and hold positive views on AI's role in healthcare (Kuwaiti et al., 2023). The integration of AI into healthcare has enhanced patient care efficiency, reduced costs, and improved medication therapy management through tools like ChatGPT, which facilitates drug interaction identification and maintains accessible medication records (Kuwaiti et al., 2023; Roosan et al., 2024). However, researchers have yet to find the exact significance of the use of AI or AI tools in the future of business (Rios-Campos et al., 2023).

In conclusion, past scholars have focused on exploring the moderating factors affecting AI and performance (Alhosani & Safian, 2024; Prentice, Weaven, & Wong, 2020), the mediating effects (Yao, 2022; Duffy et al., 2022), and the moderator-mediator effects (Wahab & Radmehr, 2024; Toumia & Zouari, 2024). Future research is yet to fully explore concepts such as trust, ethics, bias, and the AI talent shortage in businesses (Soni et al., 2020). The growing body of literature suggests that future research should focus on investigating AI trust (Choung et al, 2022). Given this context, and by using the Technology Adoption Model (TAM), this research aims to determine the significance of trust in AI adoption during task performance in the context of South Africa.

1.3. Research Problem

Na et al., 2023 specify that the widespread integration of AI across multiple industries is gaining popularity as a fundamental feature of the modern world, and AI technologies are progressively forging ahead reaching maturity, presenting new capabilities that influence the approaches used to solve complex challenges. Similarly, factors such as ease of AI use are found to influence the individual's adoption of AI technologies while the external and internal factors affecting AI are found to influence the perceived ease of use (Na et al., 2023). Na et al. (2023) asserts that the satisfaction of using AI technology is linked to the influence of the intention to adopt and expand the use of technology.

Organisations are becoming more aware of the benefits of AI, and there is contentment that the use of AI provides accurate and complete work processes; AI machinery enhances human performance by emulating human intelligence (Ogunye et al., 2024). The significance of AI became more evident during the COVID-19 pandemic in South Africa (SA) despite the lack of regulatory frameworks, continuous developments, research, and innovations in the application of AI across various healthcare disciplines (Mohamed, 2020; Oladipo et al., 2024). The concern about data privacy, poor healthcare professional training, and underdeveloped infrastructure including the absence of ethics and legal frameworks are deemed as hindrances to the adoption of AI in SA healthcare (Mohamed, 2020; Townsend et al., 2023).

Scholars indicate that the ability to analyse and interpret complex data sets using AI, such as patient medical records and diverse patient data, assists in improving drug choices and enhance treatment plans that are tailored for individual patient characteristics to reduce the possible emergence of adverse drug reactions and promote a more patient-centered approach by maximising therapeutic efficacy (Oladipo et al., 2024). The use of AI in healthcare can lead to effective treatments by optimising the timing and dosages of medication for individual patients leading to better treatment that saves lives (Oladipo et al., 2024).

AI-advanced technologies bring transformative opportunities in the healthcare sector and society in general; AI has been found to possess significant advantages in extending healthcare access, drug development, and healthcare management (Townsend et al., 2023). The implementation of AI technologies in the healthcare environment is influenced by the adoption of technology by users (Angula & Dongo, 2024). The human-related challenges in embracing AI technology were found to be influenced by the complexity of the AI algorithms, the choice of the suitable model, and other organisational barriers such as corporate governance and collaboration (Angula & Dongo, 2024).

Yet, as many people are joining the workplace in the healthcare industry, there remains a need to understand AI adoption among new employees. Therefore, this study aims to understand AI adoption among healthcare industry interns. The study findings can be used to build a model that will assist organisations in integrating beginner employees (interns) into a working environment through the adoption of a technology model. The research therefore contributes to the underdeveloped literature on AI trust in the context of South Africa.

1.4. Theoretical Contribution

Fred Davis's 1989 Technology Adoption Model (TAM) examines the key factors influencing the system design features, perceived usefulness, perceived ease of use of technology, attitude towards using, and actual usage behaviour. This study applied TAM's conceptual model which has been extensively used in technology adoption studies because of its solid theoretical foundation (Al-Adwan et al., 2023). TAM's convenience is its reliance on the broader insight in predicting technology adoption and usage behaviour of the users. TAM laid a foundation in this study of exploring the significant role of trust in AI influencing the task performance of interns who are supported by tutors in the South African context. Therefore, the study contributes to understanding the relevance of the TAM model in a very specific context of the interns in the healthcare industry that has not been studied before.

1.5. Practical significance

The significance of this study is underscored by the accelerated pace of technology adoption in businesses due to the COVID-19 pandemic, integrating technology as a core component of business strategy (Glikson & Woolley, 2020). The pharmaceutical industry, which has employed computers since the 1980s has recently expanded its use of AI into areas like drug therapy monitoring, drug interactions, and formulary development (Shah, 2022). AI has fundamentally transformed pharmacy systems by enabling more streamlined and personalised patient care. An internship in a pharmacy exposes interns to abundant practical opportunities and a chance to interact with professional experts and participate in real projects (Shah, 2022; Yu, 2024). Organisations provide internship opportunities by offering interns practical experience, employment opportunities, and financial allowances (Shah, 2022; Yu, 2024).

The adoption of digital health systems incorporating AI has been particularly influential in the pharmaceutical profession and education. Literature has mainly focused attention on developed countries namely Western Europe and North America (Jarab et al., 2023; Young et al., 2022). In practice, AI helps pharmacists by reallocating time towards patient-oriented tasks (Jarab et al.,

2023). Studies have shown a high willingness such as 87 percent of pharmacists in the United States to embrace AI technology (Jarab et al., 2023; Young et al., 2022; Alanazi et al., 2021; Ahmed et al., 2022).

The rapid rise in AI adoption highlights the need for professional guidance where AI platforms such as ChatGPT, HealthTab and Diagnosis AI are independently used for medical and therapeutic purposes (Nikitha et al., 2024). Similarly, the implementation of AI in emerging economies faces several challenges which include the absence of necessary AI-related software and hardware, the need for AI supervision of human tasks, high operational costs, software development, and the provision of adequate AI education and training programs (Alsobhi et al., 2022; Goyal & Khatib, 2022; Jarab et al., 2023). Despite these challenges, Chen et al. (2024), advocate for the adoption of AI technology to substantially improve work performance and foster employee innovative behaviour.

Highly competitive organisations are constantly seeking mechanisms to improve their products and to stay ahead of the competition, they are not deterred by the continuous changes in technology which offer both opportunities and threats (Lai, 2017). Highly competitive individuals were also found to be willing to accept and adopt technologies depending on the ease of use, desirability, and security (Lai, 2017). The recognition of AI and certain digital tools in a workplace contributes to the congruency of the processes and revenue generation through the development of new services (Martinez-Caro, Cegarra-Navarro, & Alfonso-Ruiz, 2020), and these developments indicate great changes in the way employees execute work and interact with the environment (Martinez-Caro et al., 2020; Getchell et al., 2022). Some scholars described how digital technologies contributed to important changes for persons, organisations, (Martinez-Caro et al., 2020).

Despite the clear benefits of AI, such as enhanced business capabilities, mechanisation, improved logical proficiency, decision support instruments for human resources, increase in human intelligence through their superior logical proficiency, and their predictive nature, many organisations struggle to fully leverage these advantages due to a lack of understanding, and best practices for integrating AI with human capital, processes, and business strategies (Islam et al., 2021; Davenport & Bean, 2017; Little, 2017). Organisations are yet to develop collective intelligence capability and best practices for the integration of AI, human capital, processes, and business strategy (Chowdhury et al., 2022).

1.6. The Aim and Scope of the Research

The aim of the research study is to explore how the significance of trust can assist interns in adopting the use of AI during task performance in an organisation while navigating internships. Specifically, it seeks to understand how and why the interns trust artificial intelligence in the pharmaceutical context of South Africa. Hence, the research aims to do the following:

- Understand the personal experiences of the interns trusting and adopting artificial intelligence (AI) in the process of learning and development during the internship
- Determine elements of interpersonal trust that enable interns to rely on system-like trust to perform AI-related functions to accomplish task performance creatively
- Understand how technological trust in AI accelerates the intern's personal growth towards autonomous task performance as guided by tutors during the internship

Organisations expose interns during orientation to policies about organisational culture and customer service process, etc. However, the researcher has chosen to focus on the aspects surrounding the ease of use and perceived use of artificial intelligence in an organisation, which impacts the trust with which the interns can adopt AI-related systems to perform tasks and deliver services (Omrani et al., 2022). The scope of the study is limited to private organisations in South Africa that offer internship programs to interns.

According to the objective, the primary research question is:

How does the significance of trust persuade interns to adopt the use of Artificial Intelligence during the internship

The sub-questions are:

Research Sub-Question 1: What are the factors that persuade interns to learn and develop by adopting the use of artificial intelligence during an internship?

Research Sub-Question 2: What are the interpersonal trust factors related to artificial intelligence that enable employees to execute tasks creatively?

Research Sub-Question 3: What are the trust factors that propel tutors to allow interns to execute tasks autonomously with artificial intelligence?

1.7. Research Purpose

Authors such as Soni et al. (2020) indicate that the main interest at the centre of AI development and advancement is in performance improvement which offers new opportunities to transform organisations and their economic state. The study by Soni et al. (2020) suggests that the advancement in the AI rush indicates a climate that is responsive to AI growth. In line with the climate that is responsive to AI growth, the purpose of this exploratory study is to contribute to the body of knowledge relating to the theory of the Technology Adoption Model (TAM) to gain an understanding of how the significance of trust in AI in an organisation drives interns working under the supervision of tutors, to accept and utilise AI technology during internships.

The study also seeks to expand on the work of authors such as Choung et al. (2022) who highlight the need for future research in AI and trust. Aligning with this responsive climate, this study sought to address the gap between the constructs already mentioned, assess the steps taken by interns in trusting and adopting the use of AI during task performance, and explore the perspective of interpersonal trust of AI at work. The focus of this study aims to assist companies in developing strategic HR policies that incorporate AI, thereby accelerating the organisational adoption of AI by beginners (interns) who are new members in the organisations; and ensuring that the interns under the supervision of tutors contribute to enhanced organisational performance by trusting and using AI-enhanced technologies (de Camargo Fiorini et al., 2018). The perspective of both the tutors and the interns were accommodated to create an HR Model that can benefit organisational employees who are meant to adopt the use of AI technology at work.

The findings from the study will further assist businesses in adopting AI technologies to incorporate strategies that ensure that beginners know how to identify AI technology, use and trust AI in executing tasks by creating AI-specific working documents, procedures, and policies that are derived from this exploratory research. The study will contribute to the literature on technology adoption policies that focus on factors such as perceived usefulness and perceived ease of use of AI in the workplace which is currently underdeveloped in South Africa.

Chapter 2 of the study explore the literature review and give context to the constructs that were investigated. The chapter will further extend the understanding that advise how the research questions were constructed.

CHAPTER 2: LITERATURE REVIEW

2.1. Introduction

This section of the dissertation reviews the literature on artificial intelligence (AI), the historical overview of AI development and the theoretical underpinnings of the study. Definitions of AI, trust, and performance are scrutinised. Furthermore, the chapter considers the definition and description of a preceptor pharmacist (tutor) and pharmacist intern (intern) in the South African context, interpersonal trust, and creativity as this is the critical context of the study. Lastly, it examines the relationship between AI and task performance and the theory of TAM.

2.2. Theory of Adoption Model (TAM)

The theory of the Technology Adoption Model (TAM) has been applied extensively in various disciplines in literature where technological acceptance is important; TAM has also been used to explain the behaviour associated with an individual's use of technology (Choung et al., 2022). TAM has been tested widely and proven to be sound and dependable. The Technology Adoption Model (TAM) is graphically depicted below (Figure1).

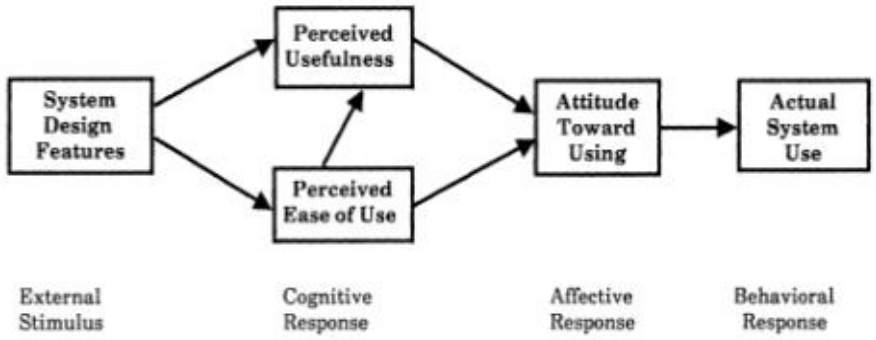

Figure 1: Technology Acceptance Model (Davis, 1987, p.20)

There are two considerations to TAM, i.e., the perceived ease of use and perceived usefulness that guide an individual's intention to use new technology as originally proposed (Omrani et al., 2022; Lai et al., 2020; Davis,1987; Leso & Cortmiglia, 2022). The perceived usefulness and ease of use perception indicate that inherent participation influences the practicality of the idea and the psychological intent to want to use technology (Leso & Cortimiglia, 2022). The study by Omrani et al., (2022) explored the connection between trust in AI, AI usage, and ethics relevant to AI usage by applying an ordered logit model. Various models and frameworks, such as the Theory of Diffusion of Innovation (TDI), Theory of Task-Technology Fit (TTF), and Theory of Reasonable

Action (TRA), have been employed to investigate the acceptance of new technology and the user's intentions to willingness adopt and use the technology (Lai, 2017).

However, recent scholars have expanded TAM by including other external factors such as trust. Choung et al. (2022) supported the notion that trust has become an important consideration for the acceptance of modern technologies. Bae & Han (2020) applied an extended and unified TAM to project the acceptance of user-generated content websites by users. Leso & Cortimiglia (2022) validated the significance of user involvement in system adoption by using an adaptation of TAM that included Exploratory and Confirmatory Factor Analysis and Structural Equations Modeling.

The literature recognises technology as an important component in teaching and learning, and several studies have explored the motivation of individuals in a learning environment to adopt and use technology through the application of the theory of planned behaviour (TPB) and TAM (Cheng, 2019). In an internship setup, it has been noted that an imbalance of students' abilities and industrial needs can contribute as obstacles affecting the internship and can lead to failure in achieving the internship objectives (Dewi et al., 2018). The success of the use of technology is dependent on factors such as the individual's acceptance and use of technology, and in some cases, interns were found to lack an understanding of how the technology is used (Sandi et al., 2022).

There is limited literature that explores the significance of trust in AI by interns in organisations in the context of South Africa. Therefore, this gap presents an opportunity for this research to tackle the underdeveloped literature and is supported by the findings of Choung et al. (2022) which suggested that "future studies investigating the acceptance of AI must include the trust as there is a strong need to understand what facilitates trust in AI and what contributes to the design of trustworthy AI" (Choung et al., 2022. p.g.23).

2.3. Artificial Intelligence (AI)

The term artificial intelligence (AI) was coined in 1956 at Stanford University by John McCarthy, a professor emeritus of computer science, who envisioned technological systems developing human-like intelligence (Soni et al., 2020). During the same year, at the Dartmouth College conference, Allen Newell and Herbert Simon developed the first AI system, called Logic Theorist (Shah, 2022). According to John McCarthy, AI is a branch of technology focused on constructing intelligent machines, particularly advanced computer systems (McCarthy, 2007). AI, as a disruptive technology central to the evolution of Industry 4.0, is capable of simulating human

intelligence and performing tasks that mimic human cognitive functions (Soni et al., 2020; Shah, 2022).

The application of AI managed to expand into the healthcare industry and several scholars have demonstrated that some healthcare professionals possess a fundamental understanding of the principles of AI, are aware of the AI technologies available for their use, are aware of the AI topics in the health community and have a positive view of AI (Kuwaiti et al., 2023). The swift diffusion of AI into businesses has contributed to improved, accelerated, and reduced costs of care for patients where the use of ChatGPT has made possible the identification of drug interactions to improve medication therapy management and keep medication record data accessible (Kuwaiti et al., 2023; Roosan et al., 2024).

Numerous scholars have investigated the adoption of new technologies by users where different models/frameworks were applied such as the Theory of Diffusion of Innovation (TDI), Technology Acceptance Model (TAM), Theory of Task-technology fit (TTF), and Theory of Reasonable Action (TRA) (Lai, 2017). Fred Davis developed TAM in 1986 to explain how the human behaviour linked to the use of computers by user's acceptance of information systems was determined by the behaviour of the user applying the two belief systems called Perceived Ease of Use (PEU), and Perceived Usefulness (PU) (Lai, 2017). This study will use TAM to explore how interns under the supervision of tutors, in the private sector of South Africa learn how to trust and adopt AI during the internship.

In the literature, there lacks a homogeneous definition of AI, and therefore, AI is recognised in terms of its functions that enable machines to display behaviour more aligned with human intelligence (Townsend et al., 2023). Below is the explanation of functional AI, general AI and artificial superintelligence to give more context:

2.3.1. Functional AI

Functional AI, also known as weak AI, is responsible for accomplishing specific tasks and monotonous functions but lacks the cognitive memory to reason or conform to various situations because it possesses a fixed set of functions. An example of a Functional AI model is Alexa (Oladipo et al., 2024). Kim et al. (2021) found that people's attitudes were more positive towards functional AI and people's perception created a more perceived realism towards using functional AI. People engage with AI powered devices where the role of the AI is to help people complete tasks in a more satisfactory and fulfilling way; some of the AI devices that people use daily are for navigation purposes, voice assistance usage, social media connection of people and personalised playlist playing for music and news (Kim et al., 2021). People showed more

satisfaction when some functional AI completed repetitive tasks such as schedule management and ensured that the completion of tasks was prioritized (Kim et al., 2021).

2.3.2. General AI

General AI, also known as strong AI, can imitate human intelligence by thinking logically, understanding, and modifying responses under varying conditions (Oladipo et al., 2024). An example of General AI includes GPT-3 chatbots with an all-inclusive mental ability. Clune (2019) indicates that some scientists are determined to create and achieve general AI models that possess capabilities that are greater than the intelligence of human beings by finding out the pieces required to build intelligence. The process requires the cognitive skill to complete the sections to create complex thinking machines (Clune, 2019). Humans have realised non-existent undertakings such as learning to create computers that can handle tacit knowledge to do things better than human beings (Fjelland, 2020). Supported by Korteling et al. (2021) who indicate that the version of general AI is understood as computers that independently and efficiently achieve complex goals like human beings.

Large Language Models (LLMs) such as GPT-4 demonstrate how the artificial general intelligence (AGI) journey underwent in developing LLMs such as ChatGPT and PaLM (Bubech, 2023). AGI indicates that the GPT-4 models are not perfect but have been developed to closely demonstrate human capabilities which is a great achievement thus far in AI research (Bubech et al., 2023). The general intelligence of GPT-4 is attributed to its ability to comprehend, connect any topic, and perform any tasks exceptionally better than the usual AI (Bubech, 2023). The capabilities of the GPT-4 Model are detected where the AI is helping human beings brainstorm on work-related topics and producing creative graphic designs (Bubech et al., 2023). LLMs such as ChatGPT have been found to perform tasks competitively across most natural language processors and have demonstrated the capabilities of general artificial intelligence to understand questions posed by humans and to respond meaningfully (Amin et al., 2023).

2.3.3. Artificial superintelligence (ASI)

Artificial superintelligence, also known as high-performance AI, possesses unexpected and modern observed human-like intelligence with reasoning and learning competencies that exceed humans and provides innovative solutions such as AlphaFold used in the diagnosis and treatment of genetic illnesses (Oladipo et al., 2024). ASI is reconstructing the world of medical research and healthcare. Artificial superintelligence machines possess experiential learning and continue to learn and improve from their own experiences through self-reflection, adjustments to new

situations, and understanding concepts and correspondence in detail (Alcoforado, 2020). ASI is expected to exceed human intelligence. Saghiri et al. (2022) express that ASI will be superior to human expertise and Bostrom (2020) alluded to the fact that technology development will be accelerated by the superintelligence where computers will become very powerful, weapons will be able to disarm themselves, born capability to travel in space and reversal of the aging processes and diseases. ASI can be delegated to investigate and decide about possible outcomes of situations in a much quicker and faster way than any human being (Bostrom, 2020).

It is predicted that ASI will possess the capability of conducting better scientific research and technological development than human beings, and further envisaged that the ASI will possess the traits of being initiative, and decision-making free from any human intervention (Bostrom, 2020). However, ASI poses a challenge to humanity in terms of complex ethical challenges where ASI needs to be aligned with human values, ensure openness and honesty, take responsibility in decision-making, address stereotype behaviours, and cope with complex moral scenarios (Amalkar, 2023). In healthcare, ASI is potentially envisaged to produce tailored patient treatments and expanded diagnostics (Amalkar, 2024).

2.3.4. Conclusion

In the healthcare industry, AI can benefit pharmacists by sorting client data, identifying medication-related hazards, reducing medication errors, help analyse and interpret polypharmacy and hospital pharmacy (Shah, 2022; Raza et al., 2022). Thus, AI can dynamically assist in decision-making processes and enhance outcomes by improving the efficiency of the workflow and reducing operational costs allowing pharmacists time to engage with more patients (Kaul et al., 2020; Raza et al., 2022).

2.4. Trust

Trust has been defined as a transaction that is directed at two parties where one party accepts vulnerability to another by anticipating that the other party will act in their best interest (Jacovi et al., 2021). Trust is essential for societal, political, and economic functioning (Spadaro et al., 2020). Over the past two decades, research has focused on the determinants of human trust in AI, trust is a key element of the relationship between humans and AI and has been studied as an essential factor in people's acceptance of new technologies (Yang & Wibowo, 2022; Ashfaq et al., 2020; Zhang et al., 2021; Mustafa & Kasamani, 2021; Glikson & Woolley, 2020). Trust is an important component of the interaction between people and AI particularly due to the perceived risk inherent in human-AI association (Omrani et al., 2022; Choung et al., 2023). Trust has an important result

on the intention to use AI which works through the perceived usefulness and attitude of the individual (Choung et al., 2023). Successful AI integration in businesses relies heavily on employees' trust in the technology (Glikson & Woolley, 2020; Tagliaferri, 2023). Glikson and Woolley (2020) have focused their attention on users' perceptions and the pros and cons of trusting and not trusting AI technology and have found that exploring AI integration from a human-centered approach should incorporate features that simplify human trust with employee specific tasks.

Scholars have found that an integral part of the interaction between humans and AI is initiated by trust and that it is critical to understand the goals of the cognitive mechanisms of trust to know how to promote and assess the satisfaction of trust in mitigating possibilities of incorrect levels of trust being used to the detriment of technology usage (Jacovi et al., 2021). Interpersonal trust is known as trust between people implying that trust relies on the trustor's perspective toward the trustee (Jacovi et al., 2021; Tagliaferri, 2023). Over the past 20 years, scholars have investigated the determinants of human trust in AI and found that the integration of AI into a business depends on the ability of the employees to trust in the AI technology (Glikson & Woolley, 2020; Tagliaferri, 2023). According to Choung et al. (2023), different dimensions of trust such as human-like trust and functionality trust exist in AI. Omrani et al. (2022) alluded that trust in AI is enhanced by the technological features found in the AI systems which impact the willingness to try out the AI application. Literature has been focused on trust based on domains such as philosophy (Tallant & Donati, 2020), psychology, sociology, economics, and cyberspace (Hall & McQuay, 2010; Spadaro et al., 2020; Ferrario, Loi, & Viganò, 2019), business (Pirson, Martin & Parmar, 2019), and marketing (Ebrahim, 2020). The growing body of literature suggests that future research should focus on investigating AI trust (Choung et al., 2022), hence the direction of this study is to investigate the significance of trust in AI adoption by interns in the context of South African organisations.

2.4.1. Technological trust

Technological trust is vital for successful AI integration in organisations, as it influences an environment of technology acceptance (Glikson & Woolley, 2020). However, the literature contains more than one definition of technological trust due to its complex nature; Technology trust is an asset that requires business attention during the introduction and implementation phase (Szumski, 2020). Business environments with low technological trust experience technology

disuse and high costs, whereas high trust experienced in inadequate technology can lead to over-trust and misuse, posing safety risks (Glikson & Woolley, 2020).

Trust in technology is experienced in two forms, firstly in terms of human-like trust which incorporates compassion, honesty, and skillfulness; secondly in terms of system-like trust which incorporates reliability, usefulness, and functionality (Szumski, 2020). Trust in technology is regarded as an evolving and dynamic concept that includes trust in both humans and technology because AI technologies have been found to possess capabilities of human beings that vary based on the context and characteristics of the trusted agent (Szumski, 2020)

Trust in AI occurs in addition to performance, and it is based on functional and data security features, technique, cognitive similarity, and the usability of the AI application including the information on purpose developed on application context and design (Omrani et al., 2022). Increasing trust in AI can constantly increase efficiency, performance, and human-AI team success while diminishing the effects of stress and other risks (Gillath et al., 2021).

2.4.2. Human-like trust

Human-like trust in AI is related to the character of the technology, it should be noted that human-like trust in AI differs from humans because humans are regarded as moral agents whereas technology does not possess the ability to choose or make decisions (Szumski, 2020; Choung et al., 2023). Human-like trust incorporates compassion, honesty, and skillfulness necessary for AI reliability and consistency during operation as influenced by the dimension of social and cultural values of the algorithms and values and ethics that form the foundation of AI technology design. The human-like trust is embedded in the agent (Szumski, 2020; Choung et al., 2023).

2.4.3. System-like trust

System-like trust refers to the competency and expertise of the technological features which has a greater total impact on the intention to use AI technology which when TAM is applied, is useful in understanding AI acceptance (Szumski, 2020; Choung et al., 2023). System-like trust refers to a trust that deals with the competency of AI such as reliability, usefulness, and attitude (Szumski, 2020; Choung et al., 2023).

2.4.4. Interpersonal Trust

Interpersonal trust involves individuals willingly engaging in social interactions despite inherent risks (Spadaro et al., 2020). It is more applicable in flexible cultures with fewer regulations, while formal institutions provide a foundation for interpersonal trust (Gunawan & Haryadi, 2022). High

interpersonal trust enhances employee performance, suggesting that fostering such trust can improve overall performance (Spadaro et al., 2020).

Scholars have attempted to define interpersonal trust using multiple criteria which include the user's ability, compassion, and integrity (Yang & Wibowo, 2022; Pickering, 2021; Schmidt, Biessmann, & Teubner, 2020). The existence of Human-AI trust rests upon interpersonal trust derived from sociology which suggests that interpersonal trust exists to mitigate uncertainty and risk of collaboration while trust in AI is said to be dependent on the properties of the user's vulnerability and ability to anticipate the impact of the decisions made by the trusted AI model (Jacovi et al., 2021; Ferrario, Loi, & Viganò, 2019).

2.4.5. Conclusion

Trust works as a tool for decreasing complexity thereby allowing uncertainty to be managed (Lockey et al., 2021). Trust in technology is influenced by technology's capability to perform as required and deliver the service (Lockey et al., 2021). The perception placed on the trustworthiness of the AI influences the user's trust in AI.

This section of the study has shown different types of trust which are essential in determining whether the interns will use and adopt AI during task performance as trust is required for the continuity of AI and in driving the intentions of the interns in adopting AI (Lockey et al., 2021).

2.5. Pharmacist Background

The South African pharmacist has completed a four-year undergraduate degree at a university, completed a year of a graduate fellowship in which preliminary registration learning takes place, completed a year of community service in a government institution as required by the South African Regulation, and is registered with the South African Pharmacy Council (SAPC) which is the governing body that regulates the pharmacy profession in South Africa (Gray et al., 2016). A pharmacist can be employed in one of the seven categories of pharmacies in South Africa which are community pharmacies, public institutional pharmacies, private institutional pharmacies, wholesale pharmacies, manufacturing pharmacies, academic pharmacies, and consultant pharmacies (Gray et al., 2016).

For this study, the pharmacists based in private institutional pharmacies form the preferred group of pharmacists. The pharmacist in South Africa is required to undergo continuing professional development (CPD) and to submit six CPDs each year to the SAPC (van Huyssteen et al., 2020).

The purpose of the CPDs is to ensure that a pharmacist has completed a self-directed learning and recorded the reflections, the learning and the outcomes of the learning each year on the SAPC website to remain registered with the governing body (Knott et al., 2020; van Huyssteen et al., 2020). The scope of practice of a pharmacist includes roles such as pharmacy preceptor as depicted in Figure 2 which is a role wherein the practicing pharmacist serve as a mentor to lead a pharmacist intern in the development of their professional expertise, viewpoint, and practical skills, and has increased the pharmacist's impact in the community (Knott et al., 2020; Blouin & Adam, 2017). The quality of the pharmacist intern's practical training and growth is dependent on the preceptor (Knott et al., 2020). This study will focus on the role of the pharmacist preceptor in facilitating the intern's adoption of AI during internship and to mentor the intern as they learn to trust the use of AI to perform their tasks.

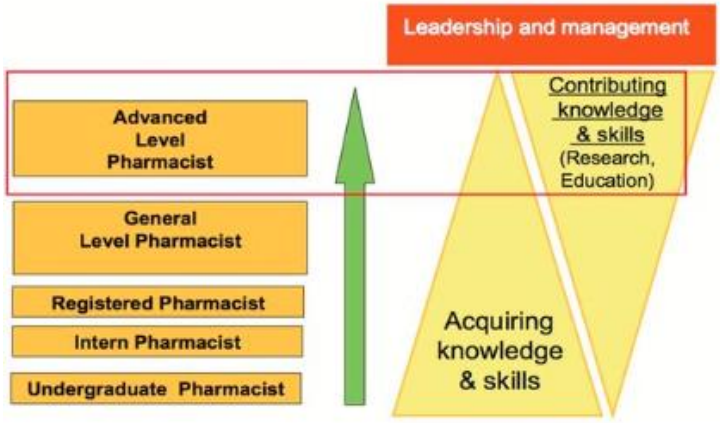

Figure 2: The Pharmacist Development Strategy (Bronkhorst et al., 2020)

2.5.1. Pharmacist Preceptor (Tutor)

A preceptor pharmacist (tutor) is a qualified pharmacist with a minimum of 3 years' experience in the field of pharmacy practice and has completed the required educational program and training courses under whose supervision, the pharmacist intern is expected to work for a period of twelve (12) months (Strawbridge et al., 2019). Pharmacists are acknowledged as patient educators and advisers, tutors and researchers, executives and leaders, creators of new, innovative business plans, and healthcare-related actors and stakeholders (Bragazzi et al., 2020).

Pharmacist tasks and responsibilities have gradually diversified to include new skills and reflect new public demands and challenges which saw pharmacists transition in the decade from

product-range and patient-facing to client-centric and patient-centered. (Bragazzi et al., 2020). According to Bragazzi et al. (2020), pharmacists play a crucial role in inter-professional and inter-sectoral collaboration in health promotion, and from an ethical and professional perspective. The pharmacist preceptor's role is to assess the intern's CPDs, behavioural teaching, facilitate intern's engagement with other healthcare professionals, patients and pharmacy personnel, provide orientation and in-service training (van Huyssteen et al., 2020).

2.5.2. Pharmacist Interns (interns)

Pharmacist interns (interns) are pharmacy students transitioning from university to professional practice, acquiring practical knowledge that supplements their academic education (Yao et al., 2022; Fenn III et al., 2019). This transitional period is often challenging as interns face significant difficulties (Yao et al., 2022). The role of interns involves a blend of learning experiences that shape their perception of the pharmacy profession (Vestergaard et al., 2017). Their responsibilities align with the Fink Model of Significance, which includes areas like basic knowledge, application, integration, people interaction, caring, and re-learning (Fenn III et al., 2019).

Studies on pharmacist interns' transition from students to professionals reveal challenges due to a lack of workplace experience, confidence, and strategies to overcome these issues (Vestergaard et al., 2017; Fox et al., 2019; Noble et al., 2015). In Australia, there is a noted mismatch between interns' expectations and actual experiences, suggesting a need for alternative internship models (Mak et al., 2013). In Saud Arabia, the pharmacy graduates ae deemed to possess good work readiness level with high scores in organisational insights because the last year of the pharmacy curriculum ensures that the students are exposed to advanced pharmacy practice experience which help build confidence required to practice autonomously (Abuhussain et al., 2021).

2.6. Performance

The level of knowledge and skill in an area of expertise determine the performance and accomplishment achieved by an individual at work (Paais, & Pattiruhu, 2020). Performance tends to be measured on a range from terrible to exceptional or satisfactory to unsatisfactory (Murphy, 2019). It is derived from the term "perform," which means to execute tasks to a specified standard (Kartini, Kristiawan, & Fitria, 2020). High performance is seen as a strategy to enhance sustainable competitive advantage of an organisation (Soto-Perez, Sanchez-Garcia, & Nunez-

Rios, 2020). Performance evaluation assesses the value produced by an individual based on an evaluator's assessment (Murphy, 2019).

However, job performance, originating from the psychological field, is important for both employees and organisations, acting as a predecessor of organisational performance and a predictor of employee job performance (Choi, Ha, & Choi, 2022; Giancaspro et al., 2022; Hermanto & Srimulyani, 2022; Wang, Luan, & Ma, 2024). Employee performance is an act by which an employee can ensure that their employment with the organisation remain secure while the employer view performance as a measure of its goal achievement (Andreas, 2022). Originations hope that employees are competent and experienced, willing to put in work and accomplish the best performance results (Andreas, 2022). For the intern to perform they need a clear goal clarity and support to feel valued (Jeske, 2021). In this study, interns' performance is important because the tutors will determine the value the interns are adding to the organisation when they are performing tasks with AI.

2.6.1. Task Performance

Task performance involves carrying out assigned duties under contractual obligations, relying on the employee's effectiveness and efficiency (Aslan et al., 2022). It encompasses both general and specific tasks. General task performance includes daily activities not listed in key performance indicators (KPIs) or job descriptions, while specific task performance pertains to main job activities (Aslan et al., 2022). Perceived high specific task performance can boost general task performance (Aslan et al., 2022).

Studies have researched task performance in terms of team task performance where literature have substantiated that comprehensive planning, well defined mission and clarity of roles and responsibilities including executable alternative plans contribute to team accomplishment of high performance (Siddiquei et al., 2022). Chen et al. (2021) focused on task performance by leaders. Studies on pharmacist interns' transition from students to professionals reveal challenges due to a lack of workplace experience, confidence, and strategies to overcome these issues (Vestergaard et al., 2017; Fox et al., 2019; Noble et al., 2015). In Australia, there is a noted mismatch between interns' expectations and actual experiences, suggesting a need for alternative internship models (Mak et al., 2013).

Organisations’ success is influenced by how well the employees perform their tasks and employees producing high performance indicates how well the employee executes the required tasks as reflected by their measured results (Jimoh & Kee, 2022). Interns, as members of the

organisations are expected to perform and accomplish tasks as per the company's expectations. Interns navigating internship in the presence of AI will have their task performance measured against the organisation's expected results.

2.6.2. Creativity

Creativity stems from the process of organising and altering the existing information and resources to enable employees to complete tasks in an exceptional manner different from the traditional procedures and standards (Chen et al., 2020). The studies across various disciplines since 1961, have defined creativity as the ability to produce rare and useful ideas or products (vom Brocke & Lippe, 2013; Azeez, Nuhu, & Babangida, 2022). Psychology has defined creativity as a human's position to come up with ideas that are authentic and versatile while other scholars have defined creativity as the formation of new ideas that are practical to implement (Jahnke & Liebscher, 2020). Creativity, similar to design takes on performance attributes whose main concern is performance (Leach, 2022). The ability of AI to support creativity is a growing concern, Marrone et al. (2022) indicate that the purpose of AI in learning is to motivate and support skills such as problem-solving and creativity through partnerships with AI which helps to enhance the creative thinking of learners' contentment using AI and to assist students to transition into contemporary employment.

Chen et al. (2020) studied workplace event characteristics i.e., novelty and criticality on employee creativity, and revealed that novelty and criticality of events in a workplace may jointly foster employee creativity due to events that alter employee behaviour. Scholars have traditionally focused on the Big-C prominent creativity type, neglecting the little-c everyday creativity form largely because Big-C is distinguished by unique and genius features that can produce new creations (Ilha Vilanova & Pina e Cunha, 2021; Henriksen et al., 2021). Cohen (1989) introduced four levels of creativity: Mini-c (common learning), Little-c (everyday achievements), Pro-c (professional expertise), and Big-c (exceptional creativity) (Ilha Vilanova & Pina e Cunha, 2021). Studies on creativity focused more on creative processes.

With an increase in digitisation in the workplace, there are many questions raised by managers and scholars about how employee creativity can be stimulated in line with technology advancements at the workplace. Cai et al. (2020) explored the Ability-Motivation-Opportunity (AMO) Model to depict how contextual factors influence individual employees and found that the three human resource management (HRM) dimensions (AMO) are related to employees' creative performance. According to Cai et al. (2020), it will be of great benefit if future research can focus

on digitisation and its impact on workplace creativity i.e., how digital tools influence human creativity.

2.6.3. Creative Tasks

Creative tasks involve collaborative work processes requiring flexibility in time, location, methods, focus, and ample time for investigation (vom Brocke & Lippe, 2013). Flexible working styles and self-motivated individuals are better suited for creative tasks, provided they are managed within set boundaries (vom Brocke & Lippe, 2013). Setting targets for normal tasks can enhance creative task performance by providing the necessary structure.

(Bruggen, Feichter, & Williamson, 2018).

Digital technologies have transformed how people work and create, though their intersection with creativity has been less explored (Henriksen et al., 2021). Technology-driven changes provide new contexts and tools for creative outputs (Henriksen et al., 2021). It is important in ensuring that interns can perform using AI and can apply creativity during performance. The creative tasks add an important element that assist interns in their development while leaning to adopt and use AI during task performance.

2.7. Conclusion

The literature review provided a thorough an overview of the most salient literature on AI, trust, and task performance, and emphasised the role of preceptor pharmacists and pharmacist interns. The chapter demonstrated how previous scholars have researched the topic of technology adoption. The aspects concerning change in the workplace demonstrated how businesses are affected by new technologies such as AI and how employees need to adapt to these changes.

The literature critically discussed how trust plays a significant role in the perceived use and the ease of use of technology adoption. Owing to the nature of the internship, the chapter further elaborated on the role of the preceptor pharmacist in connection with the intern because the intern needs to learn and develop in a work environment where AI can assist in task performance.

Existing studies have explored the significant role of trust in AI and task performance, and from the literature, there is limited research on the topic of the significance of trust in AI adoption by interns under the supervision of tutors in the South African context. This study aims to fill this gap by applying the Technology Adoption Model to better understand the constructs, thereby contributing valuable insights to the field. In the following chapter, the researcher will explain how the research questions emerged from the literature reviewed.

CHAPTER 3: RESEARCH QUESTIONS

3.1. Introduction

This chapter of the study gives attention to the research questions. The purpose of this study is to explore the significance of trust at the level of a pharmacist intern who is learning to adopt and use artificial intelligence under the supervision of a tutor. There is one research question and three sub-questions that emerged seeking to answer the objectives of the study. The questions stemmed from the literature review. The questions are expressed below:

The main research question is as follows:

How does the significance of trust persuade interns to adopt the use of Artificial Intelligence during the internship

Below, the study indicates

Research Sub-Question 1

What are the factors that persuade interns to learn and develop by adopting the use of artificial intelligence during an internship?

This question seeks to identify the characteristics of AI that enable interns to adopt and use AI during task performance to learn and develop in the course of the internship. It is specifically technological trust (Glikson & Woolley, 2020) that the study explores. By understanding these characteristics, the study will reveal how the adoption of AI by pharmacist interns in a healthcare organisation help them to achieve the objectives and goals of the internship.

Research Sub-Question 2

What are the interpersonal trust factors related to artificial intelligence that enable employees to execute tasks creatively?

This question recognises that there also interpersonal trust elements (Spadaro et al.,2020) in the acceptance and use of technology. This question aims to identify the behavioural factors related to employees, such as traits and capabilities, that influence their creativity. Employee traits relevant to task performance (Aslan et al., 2020) include contributions to applicable work activities, and generating, promoting, and implementing tasks in practice. Understanding these factors will help elucidate how employee creative behaviour relevant to task performance in the presence of AI contributes to applicable work activities, generating, promoting, and implementing creative ideas in practice

Research Sub-Question 3

What are the AI trust factors that enable tutors to allow autonomous task performance by interns?

This question aims to identify the trust factors that enable interns to develop autonomy in the use of AI. It will further identify factors that motivate tutors to allow interns to perform intern tasks autonomously with AI. Understanding these elements of interpersonal trust will provide insights into how tutors and interns interact in the presence of AI during internship and how interpersonal trust factors facilitate the process where tutors provide a platform for interns to work autonomously during task performance with AI.

3.2. Supporting Literature

Soni et al. (2020) highlighted the importance of paying attention to AI applications in commercial usage despite the challenges associated with AI. Chen et al. (2024) suggest that enterprises should strive to integrate AI into technology-balanced workspaces where employee trust and collaboration are prioritised. However, it is the study by Choung et al. (2022) that specifically suggested that future studies should focus on AI and trust, this underscores the importance of understanding the factors influencing the relationship between AI, interpersonal trust, and task performance, which this study aims to explore. The next chapter will explain the design of the study and the research approach used to address the study's questions.

CHAPTER 4: RESEARCH METHODOLOGY

4.1. Introduction

This chapter of the study discusses the research design and the explanations behind that defend the chosen methodology to answer the research questions mentioned in Chapter 3. A qualitative, interpretivism research approach was adopted. The data was collected using virtual and face-to-face interview approach with the population of choice (interns and tutors). The measuring instrument was used in a form of pre-determined set of questions that prompted the discussions and gave the researcher an opportunity to probe the responses further. The data collected was analysed using Atlas.TI software where themes emerged to determine the study's findings. Included in this chapter is the details about ethical clearance, quality controls and the study's limitations.

4.2. The Research Methodology

The research focuses on the technology adoption aspect in a workplace and chose interns and tutors as the subjects of interest. The exploratory approach was more suitable than a descriptive approach because this is a qualitative study (Hamaker et al., 2020; Saunders & Lewis, 2018). This phase of the study intended to apply the Technology Acceptance Model (TAM) to explore the AI trust by interns who are supported by tutors. TAM has been extensively tested in literature through its five constructs which are the perceived ease of use (PEU), perceived usefulness (PU), attitudes towards use (ATU), behavioural intention (BI), and actual use (AU) (Alshammari & Rosli, 2020). Oyetade et al. (2024) supported by Alshammari & Rosli (2020) found that when users perceive a technology to be simple and easy to use and deem it useful, they tend to develop the perception that stimulates their behavioural intention towards experimenting with the technology which eventually leads the users to actually use the technology.

The study intended to explore the extent of the intern's perceived interest in trusting and adopting the use of AI in the workplace as guided by the tutor, this is because the modern working world perceives technology and information to be among the important requirements for an organisation to accomplish organisational goals (Alshammari & Rosli, 2020). The interns and tutors were selected in this study from different hospitals belonging to the same business group to bring diversity towards exposure to digital technology and thought-provoking, necessary conditions linked to technology adoption to test TAM's technology acceptance and perceived ease of use during the internship (Oyetade, 2024).

The research topic was informed by the construct of TAM where the willingness to trust and use artificial intelligence during internship by an intern under the supervision of a tutor was explored. TAM has been researched and also extended in literature because it gives an organised and detailed understanding of the sections that guide the adoption of technology (Oyetade et al., 2024. However, its relevance in this study was to use its constructs to conduct qualitative research where participants expressed their experiences and allowing the researcher an opportunity to observe and hear the expressions through minimising the occurrence of findings that are compromised (Saunders et al., 2019; Creswell & Creswell, 2018). The philosophy of interpretivism was applied as a suitable method to draw meaning by conducting semi-structured interviews where the interns and tutors gave unique perspectives because of the diverse nature of their working experiences (Saunders et al., 2019; Bleiker et al., 2019). From the insights received, the researcher could probe for more insights during the engagement.

The purpose of the study was to explore the significance of trust in AI for interns in the context of South Africa. The study design sought to be exploratory, mono-method, and qualitative, involving face-to-face and online interviews and thematic analysis (Sanders & Lewis, 2018). The study became aligned with the research design, previous literature, and concluded with a study contribution.

4.3. Study Population

The study population consisted of pharmacist interns and tutors within the private healthcare industry of South Africa. The other pharmacists who were not tutors were excluded owing to the nature of a tutor role which is linked to the intern. The population was selected based on the findings by Kuwaiti et al. (2023) that there is limited trust in AI research performed in clinical setups and that the healthcare workforce may show reluctance in using AI in addition to reluctance shown by organisations to execute AI-related solutions due to lack of actual reliable quality data.

The research environment being South Africa, an emerging market that is suitable because of the demographic inequality in the exposure of citizens to using AI models for decision making and ability to assess trust in the AI model before use (Kuwaiti et al., 2023). The study drew an interest from the healthcare industry where AI-powered solutions were found to enhance speed, efficiency and quality control and the storage of large amounts of data in smart electronic records powered by machine learning (Guo, 2023; Sharma, 2022; Lamberti et al., 2019).

The population of the study was purposefully chosen to be conducted in a private healthcare organisation where the insights about the use of technology was derived from about ten

institutions to accommodate a variety of voices and to ensure uniformity and high-quality data (Doyle et al., 2019). This selection maintained the study's integrity and relevance (Covin et al., 2020).

4.4. Unit of Analysis

The unit of analysis selected were the pharmacist intern using AI to perform intern tasks and the tutors who were pharmacists guiding the interns during the internship year in the South African organisations (McCartney & Boschmans, 2018). This purposive sampling was appropriate as interns were new to being exposed to work related technology and likely to innovate with and adopt AI technology and the tutors provided more insights into how the interns' trust towards the use of AI technology affects their task performance (Busetto, Wick & Gumbinger, 2020; McCartney & Boschmans, 2018).

4.5. Sampling Method and Size

The study applied a maximum variation non-probability sampling method to select the sample of the study which consist of interns and tutors within the context of technology acceptance (Saunders et al., 2019; Hartwell et al., 2019). The focus was purposefully directed at selected interns and tutors from private sector hospitals under one organisation with exposure to use of technology. The size of the sample could not be predicted which required data collection to be conducted until saturation was reached (Saunders et al., 2019).

A total number of interviews were scheduled and held with twelve interns and eight tutors. The study's minimum criteria were to involve participants who were at least based in a private organisation as interns or tutors registered with the professional body of pharmacists in South Africa. The interns who were conducting their internship outside South Africa even though they were born in South Africa were excluded but the study did not exclude tutors who had acquired part of their tutor experience outside South Africa with the requirement that the tutors were registered and practicing in South Africa at the time of the study.

The study on trust in AI and TAM was conducted by Choung et al. (2023), Oyetade et al. (2024), and Omrani et al. (2022) which all were quantitative studies. The current study is focused on qualitative techniques using TAM to explore and gain a deeper and more nuanced understanding of trust in AI by obtaining insights from interns and tutors situated at different healthcare institutions that fall under one organisational group. The researcher selected the specific sample of pharmacist interns and tutors based on a specific setup which is the private hospital settings to

participate in the study and provided rich diverse opinions and experiences (Saunders et al., 2019). The sample size and diversity were essential for exploring and establishing the significance of the findings (Adams & Webster, 2022; Rodrigues & Rebelo, 2020; Desposato, Levinson & Weller, 2021; Barkhuizen et al., 2022).

4.6. Measurement Instrument and Data gathering

Qualitative interviews were conducted to gain insights into the relatively unexplored topic. The population of the study consisted of first of the pilot sample which included two intern pharmacists, the main study consisted of the participants which included pharmacist interns and preceptor pharmacists employed in a private healthcare organisation offering pharmaceutical services to the population of South Africa. The participants were based in Gauteng province and Limpopo province. Saunders and Lewis (2018) refer to a sample as a segment taken out of the whole population to investigate what is not known about the population or when there are reasons that cause hindrances to engaging with the entire population. The population of interest is important, and it needs to include traits similar to the population to accurately draw conclusions about the population (Ponto, 2015).

Semi-structured, mono-method records of interviews were conducted where one interview was conducted face-to-face and twenty-one interviews were administered on an online platform called Microsoft Teams based on participants' preference which was largely influenced by the online platform used in the organisation, and availability (Saunders et al., 2019). Each engagement followed a semi-structured interview process allowing the participants to share their experience of how trust in AI allowed technology to be adopted; a cross-sectional gathering of data to take place (Al-Ababneh, 2020; Saunders & Lewis, 2018). The data was collected from participants at only one period of time referred to by Saunders & Lewis (2018) as a snapshot. The sample was intentionally selected as a source of data collection, selected based on their profession, experience, and knowledge for investigation (Saunders & Lewis, 2018).

The semi-structured interview allowed participants to answer questions that were critical to the topic and allowed participants to share their insights, attitudes, and views on how daily experiences in the workplace where learning to trust the use of AI enables AI adoption and task execution (Moenandar et al., 2024). The researcher used an interview protocol to prompt participants to elaborate and provide further significant perspectives in relation to the subject matter (Moenandar et al., 2024).

The study design followed an inductive approach. The consent form was distributed using online and telephonic platforms to collect standardised and organised data from the respondents and a second form was distributed using the online platform and WhatsApp to collect the demographic information of the participants. The existing measuring instrument in the form of an interview guide was suitable for the constructs. The interview guide was designed so that the questions were grouped according to the research questions (Saunders & Lewis, 2018). The interview guide is depicted in Table 1 below:

Table 1: The Interview Guide

<table>
<tr><td colspan="2">The Research Question: How does the significance of trust persuade interns to adopt the use of Artificial Intelligence during the internship?</td></tr>
<tr><td>Research Question</td><td>Interview Questions</td></tr>
<tr><td rowspan="6">Research Sub-Question 1

What are the factors that persuade interns to learn and develop by adopting the use of artificial intelligence during an internship?

The objective is to gain knowledge about the intern’s personal experiences using AI</td><td>1. What are your responsibilities as an intern in the organisation?</td></tr>
<tr><td>2. Name the computer programs used at work and what they are used for.</td></tr>
<tr><td>3. What is your understanding of artificial intelligence? Please explain.</td></tr>
<tr><td>4. Is there any benefit for an intern to use AI during the internship?</td></tr>
<tr><td>5. What is your perception of AI usage at work? Can you elaborate on that?</td></tr>
<tr><td>6. Explain the ease with which an intern employs AI during task performance.</td></tr>
<tr><td rowspan="5">Research Sub-Question 2

What are the interpersonal trust factors related to artificial intelligence that enable employees to execute tasks creatively?

The objective is to gain insight into interpersonal trust for AI</td><td>7. What part of intern tasks relies on the use of AI? Please explain.</td></tr>
<tr><td>8. What is required for you to fully trust AI for these tasks?</td></tr>
<tr><td>9. Would you trust AI to help you with creative tasks? Please explain.</td></tr>
<tr><td>10. What ethical guidelines are available for AI use at work and why is it important to have ethical guidelines?</td></tr>
<tr><td></td></tr>
<tr><td rowspan="2">Research Sub-Question 3</td><td>11. Does your tutor allow you to use AI autonomously?</td></tr>
<tr><td>12. When do you involve your tutor during task performance with AI?</td></tr>
</table>

What are the AI trust factors that enable tutors to allow autonomous task performance by interns? **The objective** is to gain insight into AI's impact on autonomous task performance.	13. Is there any personal growth attributed to AI usage? Please explain.

Given the context that the study focused on semi-structured interview processes, the nomological interview process allowed for narrative analysis of insights during the interview process to assess the interpersonal emergent meaning-making and to gauge the role of stories within a particular social context which affects the narrator's design and the development of the story (De Fina, 2021). The interview process allowed for open-ended questions to be used by the researcher to cover broad areas of interest, allowing for interaction and the emergence of unexpected insight (Weller et al, 2018).

4.7. The Pilot Study

The initial step of data gathering was in the form of a pilot study. To test the usability of the interview guide, two pilot interviews were conducted with interns to ensure that the questions were understandable and clear. The exploratory nature of the study used an interview guide to ensure consistency in data gathering, validity and reduce unwanted effects (Hartwell, Johnson & Posthuma, 2019). Comprising open-ended questions allowed the researcher to conduct thorough, in-depth interviews to reveal new insights. The interview questions, validated against existing literature, were aimed at unbiased exploration and gaining of potential insights which counted towards improving the study's objectivity and trustworthiness (Bhalla, Bahar, & Kanapathy, 2023).

The initial pilot study phase involved selecting interns to assess if the research questionnaire was suitable, valid, and reliable and that the objectives of the study would be achievable (Bhalla, Bahar, & Kanapathy, 2023). The pilot study helped to identify technical inconsistencies and any ineffectiveness of the instrument in gathering data (Melnikovas, 2018). The pilot interviews revealed that the questions were clear and did not require adjustments, but the researcher noticed that the interview guide omitted demographic information and that some of the probing questions could be enhanced to create a more relaxed scene for the participants. The insight from the pilot study helped to improve the interview guide which the researcher added the demographic

question as an additional attachment to ensure that demographics were part of the primary data collection (Saunders & Lewis, 2018).

A probing question such as “Please explain your understanding of artificial intelligence” created better engagement as more participants became comfortable to share their understanding which sparked interest in participants to engage further by making the interview process more engaging. Moenandar et al. (2024) indicate that the interview guide that allows a participant to develop and drive the direction of the narrative is what is desired in an interview. The pilot study results were used to add significant prompts addressing any shortcomings and to re-design the form into an acceptable and usable format applicable to the main form of the study (Saunders & Lewis, 2018).

4.8. Data gathering process

The participants of the study were employees of a healthcare organisation in South Africa placed at different hospitals due to reporting structures. The researcher could only schedule interviews with employees from participating hospitals where permission to conduct research was granted by the heads of the hospitals and the organisation’s research committee. Given the inductive nature and limited existing research on the topic in the context of South Africa, semi-structured interviews were preferred for data collection as they allowed both structured and unstructured questions to be used in one interview setting(Bhalla, Bahar, & Kanapathy, 2023).

The invitation to participate in the interview was initially sent during mid-September with the pilot phase. Collection of data spanned over six weeks, following Saunders and Lewis' (2018) recommendation, and participants were contacted via telephone, and email and were followed up using telephone and WhatsApp messaging system as a reminder of the interview request. The invitation to participate in the main study continued until mid-October. The consent form was distributed using participants' email addresses, with the assumption that the respondents were computer literate based on the level of their education and to increase the rate of internet adoption (Saunders & Lewis, 2018). The interns were identified by their job title which indicated pharmacist intern and thereafter the interns could refer the researcher to the tutors. Both the interns and tutors committed to a specific date and time to participate in the interview.

Interviews were conducted with the longest having a duration of 50 minutes. The interviews were conducted face-to-face or online using the Microsoft Teams platform. Participants were informed to sign the consent form before the interview process could take place. Each participant interviewed online via Microsoft Teams. A verbal request by the interviewer was made to the interviewee to reiterate their consent in giving the interview at the beginning of the interview

process and all participants were comfortable to give verbal consent. The participants were requested permission to record the interview to capture their experiences. The process followed the use of semi-structured interviews where an interview protocol was used to probe and provide clarity (Saunders & Lewis, 2018; Bleiker et al., 2019).

One interview was conducted one-on-one and was recorded with the assistance of an audio recording on Microsoft Teams to allow for transcription of the insight shared. All online interviews were successfully recorded on Microsoft Teams and the software allowed for the transcription of the recordings. Only one interview was affected by load shedding however because the researcher had a generator backup, the interview and the quality of the interview process was not affected by the effects of power interruption. The researcher managed to capture the insights and store the recording successfully. The interview process was conducted in English which is viewed as the medium of science and business in South Africa, which assisted in avoiding translanguaging which tends to render the interview process informal and less effective in gathering the experiences (Moenandar et al., 2024).

The researcher created rapport during the interview to render the interview environment conducive to the interview process. The researcher ensured to include an introductory conversation with the participants to ease them into the process and at the end of the interview, the researcher also engaged in closing remarks to ensure that the participants ended the interview feeling comfortable by asking questions about the intern's progress which included report submission and exams during the internship year. The opening and closing remarks highlighted some similarities between the researcher and the participants and created safety moments which took away any perceptions of power distance between participants and the researcher (Tear et al., 2020). This was complemented by the researcher's knowledge of the organisation and the profession which allowed the researcher to take a neutral stance to bring out learned and unbiased insights (von Soest, 2022).

The interviews conducted online were transcribed digitally using Microsoft Teams transcribing function where the interviews were transcribed verbatim to maintain the meaning and validity of the conversations. The participants were provided with a consent letter attached to the meeting invite on email which required participants to attach signatures as confirmation of consent to the interview process. However, some participants could not submit the signed consent before the interview. To mitigate this encounter, the researcher obtained verbal consent from the participant at the start of the interview process which was recorded followed by a signed consent sent via email after the interview. The principle of informed consent is to safeguard the freedom of

volunteers by creating an environment of trust and integrity embedded in the research's ethical guidelines (Klykken, 2022).

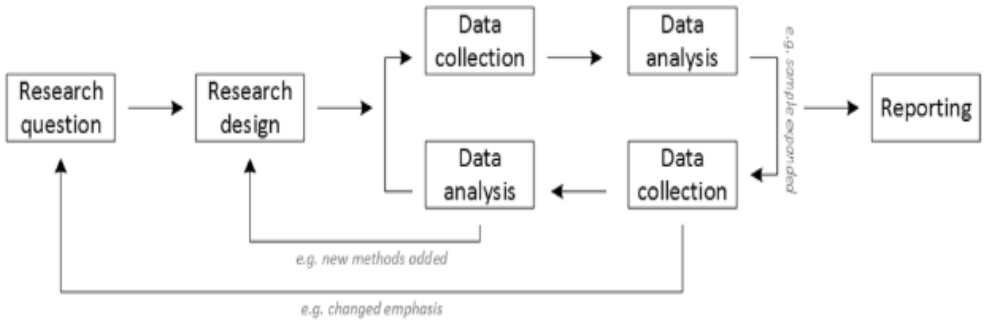

Figure 3: Iterative research process (Busetto et al.,2020)

4.9. Data Analysis Approach

The qualitative study is deemed subjective and requires the researcher to refrain from being influenced by personal preferences and minimise biases by ensuring and maintaining credibility (Kakar et al., 2023). To ensure the credibility of the study, the researcher relied on the participants' insights and the interpretation of information as detailed by participants from probing and clarifying questions. The credibility is recognised through data triangulation and transferability of the findings capable of demonstrating dependability as depicted in Figure 4 (Kakar et al., 2023).

The recordings obtained during the interview process and the transcripts were anonymised by removing personal information that could be linked to the participants thereby ensuring the maintenance of confidentiality. The researcher was able to store the recordings and the transcripts of the interviews in a secure storage location on Google Drive encrypted with a password to ensure that only authorised people have access to the information. The researcher was able to retrieve the transcripts for analysis and interpretation of data to understand the context of the research and to improve the credibility of the study (Kakar et al., 2023). The transcripts were analysed using a data management tool called Atlas TI which aided in thematic analysis. The data was coded and themes that emerged from participant responses were aligned, a frequency analysis of themes ensured the trustworthiness of the findings (Saunders & Lewis, 2018). The data collected was stored on Google Drive, a secure cloud service that is password-protected to ensure that privacy is maintained.

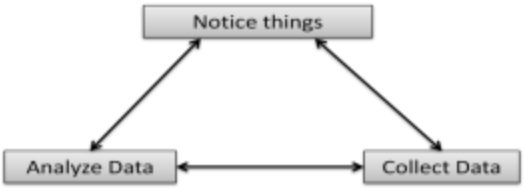

Figure 4: Workflow of Qualitative Data Analysis (Khandkar, 2009)

4.9.1. Atlas.TI

The Atlas TI software is software that requires access to be granted to the researcher. The researcher sent an application request to the information and technology department of the University of Pretoria. The department replied by sending a link that needed to be downloaded to install the software on the computer. The researcher successfully installed the software and was ready to begin the process of analysing data.

Step 1 The audio and transcripts from the interview were prepared. The researcher became accustomed to the recorded data that was transcribed using the Microsoft Team.

Step 2 The researcher revisited the actual data several times, giving each interview data an equal amount of time and ensuring that any identifiers that could be linked to the participants were removed from the transcripts. The transcripts were cleaned, and identifiers were replaced by Intern 1, Intern 2, et cetera, and Tutor 1, Tutor 2, et cetera.

Step 3 The cleaned transcripts were submitted to Atlas TI software which analyses qualitative data. The process of analysing and breaking down data into its elements began. From the participants' responses, the researcher examined the data closely for any analogy, relationships, and differences (Khandkar, 2009). The codes emerged and were marked appropriately for further analysis, a process called open coding which the codes are informed by data emanating from the literature review. Coding from Atlas TI ensures the validity of the codes. However, this process is time-consuming, and the researcher might have to repeat the process several times if important concepts are missed (Khandkar, 2009).

Naming Type	Description
In vivo codes	Wording that participants use in the interview
Constructed codes	Coded data from in vivo codes, Created by the researcher, Academic terms

Figure 5: Different naming strategy for codes (Khandkar, 2009)

Step 4 The researcher identified the significant facts that represent data and labelled them, a process known as concept building which allowed the researcher to group comparable data for better understanding. The concepts can be arranged depending on different attributes or features of Figure 5 (Khandkar, 2009) known as themes or axial coding and selective coding

Step 5 The themes were scrutinised to ensure they answered the research question in Chapter 3. The progressive data coding process gave meaning to the collected data.

Step 6 Figure 6 visualises the creation of theory emanated from open, axial, and selective coding of collected data, leading to the construction of deeper theoretical meaning.

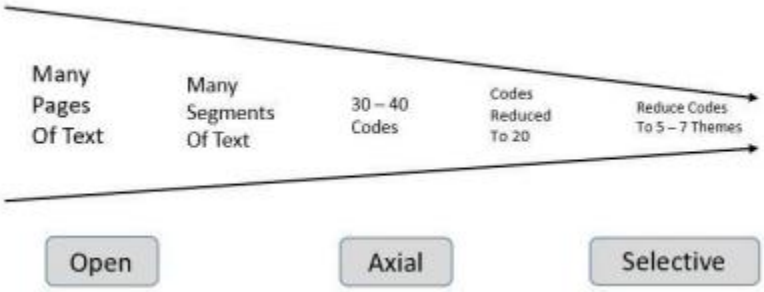

Figure 6: Overview of coding process: Open, Axial, and Selective Coding (Williams & Moser,2019)

The coding process created shorter descriptive labels of data points that were relevant to research objectives. The process was repeated three times before the final and relevant codes emerged. This was influenced by the immature knowledge of the researcher in knowing how to use Atlas TI software. The final codes were filtered, and duplications were removed, a stage that was followed by the interpretation of the meaning and the significance of the datasets. The analysis of the dataset led to the consolidation of data into sub-themes and lastly, the final themes. The researcher linked the sub-themes and themes were linked to the research questions, and the naming of the themes took place. A thematic map was developed that presented the relationships between the themes and lastly, a detailed report of the findings of the study was produced. Chapter 5 presents the findings of the final report.

4.10. Quality controls

The process of establishing credibility, validity, and reliability, the study must demonstrate that it adhered to established procedures, ensuring coherence with the research question and existing

literature. For a qualitative study to be deemed trustworthy it should detail the methods used to establish credibility, validity, reliability, and transferability (Lim, 2024) used during the interviews with the interns and tutors. These are discussed in the section below.

4.10.1. Credibility

Credibility refers to the correctness of a description, conclusion, explanation, and interpretation of qualitative data and becomes credible when it is appropriate for the study (Coleman, 2022). The researcher used the digital recorder to capture the essence of the interview process with each participant, each participant was checked by sending a meeting request online using the participant's email address The researcher resorted to using the telephone, and the cellphones to follow up the appointments with the participants. The digital recorder allowed for the raw data to be captured and carefully examined, and the use of the verbatim interview transcripts called rich data provided a significant and detailed meaning of the interaction.

The researcher applied an interview guide to ensure consistency. Where the participants needed clarity about the questions, the researcher paraphrased the questions to the level of the participant's understanding. The researcher engaged the participants to seek clarity on ambiguous comments and the participants were given an opportunity to clarify the researcher. The researcher paid attention to the tone of the participants' voices and the emerging changes.

Some of the participants responded with similar answers while others gave different views on the same questions which gave the study an interesting perspective on the study's constructs. The report of the findings is included in Appendix 1.

The researcher created rapport with the participants to ensure neutrality during the process. The researcher applied triangulation which is known to display the perceived value of rigour (Coleman, 2022). Triangulation offered a corresponding viewpoint that assisted with establishing patterns of convergence on the construct that assisted in verifying and drawing up conclusions.

4.10.2. Transferability

Qualitative uses and interpretive approaches usually contain small samples that are not representative of the population, hence the findings cannot be generalised when compared to quantitative study (Nassaji, 2020). Transferability examines the degree to which the qualitative study's findings can be transferable to other comparable contexts (Nassaji, 2020). Transferability in qualitative studies is equivalent to generalisability in quantitative studies however transferability requires an extensive and well description of the research undertakings and assumptions (Nassaji, 2020).

The researcher ensured that a specific sample in a specific setup was selected for the study ensuring that the accurate population for the study was selected. To ensure the transferability of this study, the researcher oversaw the interview checks to validate the appropriateness of the participants by ensuring that the participants fit the criteria of being interns or tutors registered with the South African Pharmacy Council. This ensured that the participants best represented the essential quality of the research, the scope, and the research approach critical in collecting data that answered the study's questions. The researcher made use of an interview guide in which the researcher ensured that all the participants were asked the same questions as the interview guide to ensure that these questions remained within the scope of the research and that consistency was maintained in the data collected from interns and tutors.

4.10.3. Confirmability

The researcher realised and acknowledged that to maintain the confirmability of the study, was to exercise objectivity during the interview process. The researcher realised this during the interview process where the researcher led the participants to the desired answers to some of the questions. The pilot assisted the researcher to prepare and approach the main study with a different approach. During the main study, the researcher engaged in a reflexive dialogue, recognising their interpretive role and the influence of their context on the research. The researcher further applied transcendental phenomenology to ensure that the participants provided detailed, impersonalised descriptions of the individual experiences through maintaining the process of epoché, which refers to a process that ensures the preconceived ideas and biases were set aside in the process (Lim, 2024).

In this study, it was important for the researcher to reserve their preconceptions and biases to secure the essence of the experiences in their truest form (Lim, 2024), because of the researcher's knowledge of the field under study. The data and the findings established were captured ensuring that other researchers could confirm their accuracy, interpretations, and conclusions drawn from the study by reporting the results in a narrative manner which can be confirmed by the verbatim codes from the transcripts (Nassaji, 2020). Boundaries were established by the researcher between the observations and participants while maintaining an active role of engagement in the research by impartially taking notes recording the outcomes, and ensuring a reflective journal was kept noting personal reflections. The findings also showed the notes that compared and contrasted the similarities and differences in the findings. (Nassaji, 2020)

The audit trail in the form of digital recordings, transcripts, and supporting documents such as those generated from Atlas TI for constructing the codes were submitted as supporting documents with the final research report.

4.10.4. Dependability

The merits of qualitative research remain an ongoing topic of debate in research where Carcary (2020) refers to them as an extent to which the results and conclusions of a study are found to resonate and serve as a foundation on which other researchers can evaluate their value. The researcher in this study ensured that the tangible and all critical stages, the theoretical, methodological, and systematic decisions including the documentation, and how the researcher's thoughts emerged throughout the research project are kept safe and have an auditable trail. The dependability of this study relies on the fact that this paper provides critical reflections across all the stages of the study and the researcher's logic can be traced to provide other researchers with a basis for assessing the study's findings as a source for further research (Carcary, 2020).

4.11. Research Ethics

The process of obtaining ethical clearance approval was undertaken with the support of the supervisor to ensure that the study would abide by the ethical guidelines and requirements as set by the University of Pretoria's Gordon Institute of Business Science (Mbabe et al., 2021). The approval of the ethical clearance was received from the institution as can be seen in Appendix 2 – Ethical Clearance before any data collection could be initiated by the researcher.

The researcher provided the participants with the consent forms before the interviews took place to ensure that the participants could make an informed decision to participate voluntarily or to withdraw should the need arise during the interviews without penalty. At the beginning of the interview process, the researcher went through the consent form to ensure that the participants could seek clarity where needed again and to emphasise that the process was voluntary and that there would be no penalties should they opt to withdraw from participation. The consent forms were stored safely for confidentiality on Google Drive secured with a password.

The principles of confidentiality were exercised by removing the identifiers from the transcripts and replacing them with general identities before reporting the findings to ensure that the research process was conducted acceptably, free from harm and negativity to the participants (Mbabe et al., 2021). This is done because the face-to-face interviews cannot guarantee the participant's anonymity. The researcher ensured the participants that the report would not reveal the identities of participants in line with the ethical clearance approval. The participants returned a signed copy of the consent forms as an indication of their agreement to voluntarily participate in the research.

4.12. Limitation

Time constraints necessitated a cross-sectional approach, and as a result, it limited the study's contextual scope. The researcher's time became limited as supported by McCracken (1988) who indicated that qualitative studies are constrained by the scarcity of time. The researcher had to wait for the final approval of obtaining permission to conduct a study in the organisation. When the approval was granted, there were only seven weeks left before the submission date of the thesis for the entire study to begin and be finalised. This process had a huge impact on the study as the researcher ran out of time.

Secondly, the modest sample size, confined to pharmacist interns and tutors in a South African private healthcare organisation restricted the findings as these findings cannot be generalised for the pharmacy profession in South Africa. Most of the participants were interviewed during working hours and most opted to be interviewed during their lunch break. The researcher noticed that some participants had a one-hour lunch break while others had only thirty-minute lunch breaks in which they had to have their lunches and participate in the research. This limited the amount of time to be able to conduct a 45-minute to one-hour interview with the participants.

Some participants had indicated that the environment where they sat to undertake the interview included noise which became a barrier as the participant struggled to concentrate fully on the research process. In one interview, the researcher experienced load shedding during which a generator kicked in as a backup, however because of the noise from the generator, the researcher could not effectively concentrate fully. Other participants at work struggled to have a device assigned to them to participate in the research, which compelled the participants to use their cellphones devices, which limited the researcher's ability to engage them on camera to observe and note signals from their body language while some participants were allocated a computer device that was not fitted with a camera, posing the same challenge where the researcher could not determine the participant's cues from the body language.

While semi-structured interviews provided in-depth insights, they also have limited reach compared to questionnaires used in quantitative studies (Saunders & Lewis, 2018; Busetto, Wick & Gumbinger, 2020). Some participants during the interview process, indicated that they were not familiar with the term or the use of artificial intelligence at work or in their personal experiences, this had an influence on the ability of the researcher to extract the necessary information from the study as some of the questions had to be skipped or paraphrase several times before a meaning or understanding could be made by the participants.

The qualitative interviews are conducted until data saturation i.e., a point during the interviews where little or no new ideas, themes, or codes are reached (Weller et al., 2018). The study's sample consisted of interns and tutors in a private healthcare organisation which excluded interns and tutors in other sectors of pharmacy such as manufacturing, academia, wholesale and distribution, consultancy, and the public sector. The sample size was considered sufficient to reach the saturation point during the qualitative studies based on the findings by Hennink & Kaiser (2021). The study's sample consisted of twenty participants, which is a relatively small sample to represent the interns and tutors of South Africa. The study was undertaken in the context of South Africa which was limited as it excluded pharmacists and tutors from other countries.

A pilot study in the form of cognitive interviews will precede the main interview process to refine techniques and address any shortcomings (Bhalla, Bahar, & Kanapathy, 2023), however, the number of participants in the pilot is limited to give a broad perspective that could assist in refining some of the interview questions as experienced during the main study where some participants could not answer the questions. This, coupled with the researcher's inexperience in conducting exploratory studies, failed to determine the gaps promptly.

It should be noted that the researcher is a manager who is currently employed in a private healthcare organisation, is a tutor, and was once an intern, and may have influenced the responses of some participants. Because of the knowledge of the healthcare industry, these may have prevented the researcher from listening attentively to gain valuable insights. As Creswell (2014) advised, the researcher should avoid influencing the responses from the interviews and should focus on understanding participants' points of view on the issue under investigation.

4.13. Conclusion

The chapter described the acceptability of the qualitative methodology given the exploratory nature of the study. The in-depth, semi-structured interviewed were conducted and data was gathered from interns and tutors from a private healthcare organisation who are engaging with AI and seeking to trust and adopt AI during task performance.

Twenty participants were recruited, broken down into two groups of twelve interns and eight tutors, who were purposively selected to ensure that the relevant participants were selected to offer valuable insights into the topic. An interview guide was used to ensure consistency during data collection, and interviews continued until data saturation i.e., a point during the interviews where little or no new ideas, themes, or codes are reached (Weller et al., 2018).

Interviews were scheduled, participants gave consent by signing and handing over the consent letter. Nineteen participants were conducted online using Microsoft Teams platform and one

participant interview was done face-to-face. Data was securely saved online and encrypted with a password to ensure the maintenance of confidentiality.

The data was analysed using Atlas TI, codes were identified, themes emerged, and the final report was presented. Data triangulation ensured that biases were minimised and the quality of data was maintained (Busetto, Wick & Gumbinger, 2020). Measures such as credibility, transferability, confirmability, and dependability were uncovered to improve the trustworthiness of the data. Limitations were identified that are suggestive of future research. Chapter 5 will explain in detail the study's findings.

CHAPTER 5: FINDINGS

5.1. Introduction

This chapter presents findings obtained from 20 interviews with interns and tutors in the private healthcare sector of South Africa to explore the research question: How does the significance of trust persuade interns to adopt the use of Artificial Intelligence during the internship?

This chapter begins with a summary of the interviews conducted and a discussion of the interview methods applied to collect the data. This is followed by a discussion of the data saturation reached and processes applied during interview transcription. A review focused on identifying themes that emerged from the interview transcriptions informed the development of coding themes to ensure data validation in the form of accuracy and trustworthiness follows. Thereafter a discussion of key themes that emerged during the qualitative data analysis process takes place.

5.2. Overview of Study Sample

As discussed in Chapters 4.1 and 4.5 respectively, data was collected through semi-structured and mono-method structured interviews through face-to-face and virtual online interviews with Microsoft Teams being the preferred online platform of choice. This study's participants were selected based on the consent received as specified in section 4.5. The pharmacy managers in each participating hospital pharmacy were instrumental in pointing the researcher to the relevant sample. With respect to the Protection of Personal Information Act (POPIA Act), an anonymous participation code has been assigned to each participant and the use of any real-world people and organisations mentioned by the participants has been substituted with dummy ones

Table 5.1: Sample description

Date	**Industry**	**Participant**	**Gender**	**Age** (Yrs)	**Experience** (Yrs/Months)	**Length (min)**	**Word Count**
03/10/2024	Healthcare	Intern 1	Male	18-25	10 months	20m0s	2387
03/10/2024	Healthcare	Intern 2	Female	18-25	7 months	29m10s	3403
03/10/2024	Healthcare	Intern 3	Female	18-25	9 months	27m34s	3234

05/10/2024	Healthcare	Intern 4	Female	18-25	10 month	43m56s	6708
05/10/2024	Healthcare	Intern 5	Male	18-25	10 months	38m7s	5075
06/10/2024	Healthcare	Intern 6	Female	18-25	10 months	25m39s	3622
07/10/2024	Healthcare	Intern 7	Female	18-25	10months	25m19s	3857
09/10/2024	Healthcare	Intern 8	Female	26-34	10 months	36m9s	4549
10/10/2024	Healthcare	Intern 9	Female	18-25	10 months	50m4s	7433
10/10/2024	Healthcare	Tutor 1	Female	26-34	04 years	35m14	4671
11/10/2024	Healthcare	Tutor 2	Female	45-54	28 years	36m56s	5102
11/10/2024	Healthcare	Intern 10	Female	18-25	10 months	30m36s	3845
11/10/2024	Healthcare	Tutor 3	Female	26-34	28 years	29m10s	4350
11/10/2024	Healthcare	Tutor 4	Female	35-44	16 years	41m42s	5837
11/10/2024	Healthcare	Intern 11	Female	18-25	10 months	46m14s	6281
12/10/2024	Healthcare	Tutor 5	Female	35-44	20 years	27m55s	4068
14/10/2024	Healthcare	Tutor 6	Female	26 -34	05 years	31m29s	3868
14/10/2024	Healthcare	Intern 12	Male	18-25	11 months	35m9s	4944
15/10/2024	Healthcare	Tutor7	Female	35-44	12 years	62m57s	4195
15/10/2024	Healthcare	Tutor 8	Female	35-44	17 years	26m56s	4341

The information that defines the transcription and the recording process during the interviews is introduced in the Findings under section 5.

5.2.1. Demographics of the participants

This section describes the demographic information of the participants. The relevant information was collected from the participants on a form that they completed. All forms were analysed, and the data is included in Table 5.1. above. The tutors' experience conforms to the rules of SAPC.

The youngest tutor had accumulated 4 years of experience post-qualification, and the most experienced tutor had 28 years of experience. The information suggests that the tutors were well-grounded in their roles as pharmacists and tutors.

The researcher planned all interviews, and all interviews were conducted within one month. The two pilot interviews were held two weeks before the main study's commencement and excluded from the main study's findings. The interviews for the main study relied on the availability of the participants. The twenty participants were interviewed, with at least one to five interviews scheduled per day. The researcher conducted all interviews, and nineteen interviews were conducted virtually using Microsoft (MS) Teams except for one interview which was conducted in person.

The participants held at least a bachelor's degree in pharmacy, and all were employed in different private hospital pharmacies belonging to one private healthcare organisation. All participants were not purposefully selected for the study, but it all occurred after the researcher's attempts in trying to include a wide sample in other sectors of the pharmaceutical industry failed, but only one organisation could grant the researcher approval to conduct the study.

5.2.2 Interview summary and methods

The researcher held all the semi-structured interviews in person where nineteen were held virtually and one was held in person. the virtual audio and transcripts were stored on cloud storage at the end of each interview. The interview guide was used to ensure that the discussions were focused.

5.2.3. Data saturation

Mwita (2022) supported by Saunders & Lewis (2018) indicated that data saturation happens when the researcher has collected data to reach a point where no new information can be collected. Saturation was reached when the new information became less than five percent available to generate new themes.

5.2.4. Relevance of Empirical Data

The transcripts were uploaded to Atlas TI where the word list could be generated to determine the relevance of research-based data. Analysing the wordlist indicated that the following words were dominant, intelligence, think. Trust, guideline, growth, information, and intern. The research-based data collected was applicable in determining the credibility and rigour of the results. **Figure 5.2** shows the dominant words below:

5.3. Themes of the study

Empirical data coding produced 510 quotations and 376 codes. Some of the codes that appeared repeated were removed such as “Receive stock from the supplier” and “receve stock from the supplier”, the latter was deleted. Some codes were merged to give precise meaning. The codes such as “Wellness Day poster creativity” were merged with “Use creativity on wellness day for poster making” to a new code: “Use AI for creative work on wellness day”. Another example is “Tutor is involved in everything I do” and “Tutor is involved in CPDs and intern day to day activities were merged to form a new code: “Tutor is invested in intern’s learning” and lastly “There is a policy on data security” and “There is a policy on patient privacy became “There are policies on data security and patient privacy”. The list of refined codes is attached as Appendix 1. The next step ensured the codes were merged, producing the final 31 code groups and giving rise to six themes.

Table 5.3: The research question, the research sub-questions, the themes, and the sub-themes

How does the significance of trust persuade interns to adopt the use of Artificial Intelligence during the internship?			
RSQ	**Sub-Categories**	**Categories**	**Themes**
RSQ1	**Learning and Development in an AI environment** • Gain practical knowledge • The need to learn from someone • Intern benefit from exposure • Trustworthy pharmacist • Used it to help complete assignments • The need to learn from someone else	• AI use in completing assignments • Gaining practical knowledge	• Trust and Adoption of AI in Internships

	Learning and Development in an AI environment • AI guide interns with CPDs • AI helps you understand concepts better • Check medicine doses • Confirm drug information • use AI dispensing program • work on computer systems that are interlinked	• Working on computer systems that are interlinked • AI guides interns with CPDs	• Practical Applications and Learning with AI
RSQ2	**Trust in AI** ▪ AI can help with creative ideas for meeting agendas, and roster creation ▪ AI creativity improves efficiency ▪ intern checker pushes interns to be creative ▪ use AI for creative fun ▪ use AI for visual arts	▪ AI creativity improves efficiency ▪ The intern tracker pushes interns to be creative	▪ Enhancing Creativity and Efficiency through AI
	Trust in AI ▪ AI trust factor for interns is a 60/40 ratio ▪ I could trust if AI information came from a reliable source ▪ Test the credibility of the reference source ▪ To use AI with caution	▪ The reliability of sources determines AI trust ▪ AI to be used with caution	▪ Trust and Caution in AI Usage

RSQ3	**AI contributes to work autonomy** ❖ Allow autonomy only under supervision ❖ Be able to get the information ❖ Gain confidence in patient counselling ❖ The information will be used to work on their own ❖ Validating the work	❖ Allow autonomy under tutor supervision ❖ Gain confidence in patient counselling	❖ Building Trust for Autonomous Work
	AI contributes to work autonomy ❖ Involve a tutor to double-check my work ❖ Step up and figure things out under supervision ❖ The need for a hybrid system of learning ❖ Tutor is involved in everything I do ❖ Yes, my tutor allows me to work autonomously with AI	❖ Step up and figure things out under supervision ❖ The need for a hybrid system of learning	❖ Supervision and Guidance in AI-Driven Work

5.3.1. Research Question: How does the significance of trust persuade interns to adopt the use of Artificial Intelligence during the internship?

This is the main question of the study. Three sub-questions emerged which will be used to answer the main research question.

5.3.2. Research Sub-Question 1: What are the factors that persuade interns to learn and develop by adopting the use of artificial intelligence during an internship?

There are six questions in the interview guide that emanate from the research sub-question 1 with the intention of understanding how the participants learn to adopt and use artificial intelligence

during task performance. The questions were further intended to find out if the participants would learn to trust the use of AI during task performance.

5.3.2.1. Theme 1: Trust and Adoption of AI in Internships

What is your understanding of artificial intelligence? Please explain.

Theme 1 of the Research Sub-question 1, focuses on understanding the personal experiences of the participants when using AI. There are categories attached to the theme which explore the adoption and use of AI, and the possible learning and development derived from such use.

- **AI use in completing assignments**

The use of AI depends on the technology proficiency of the users. Not all participants were confident in their understanding of AI and its use at work. Other participants explained their ability to use AI in their personal and work-related spaces. Various responses emerged. The questions were intended to understand how the interns were getting familiar with the use and adoption of AI during the year of internship in which they are expected to learn and develop into competent pharmacists. One intern explains the understanding of AI as follows:

(Intern1) "I think it's like the use of Computer Systems in order to get like…, in order to use computers and systems or robots to sort of help you with information"

The same question was asked the tutors and here is the response the tutor gave:

(Tutor 2) "Artificial intelligence is generated by algorithms that are built into a program to automatically identify certain markers or be prompted, you know in terms of blockchain and machine learning where it doesn't take a human intervention to predict an outcome."

The responses of both the intern and tutor indicate a slight difference in the understanding of AI and its use.

- **Gaining practical knowledge**

The participants, both interns and tutors expressed positive sentiments of AI use in gaining practical knowledge. The use of AI to search for general information was found to be quick and fast with AI. The interns described how AI has made internship easy as they can quickly refer to it when they need quick information. The interns working in busier pharmacies indicated that AI helps them as they do not have time to page through manual reference books for information because of time.

(Intern 6) “Personally, I found it a bit more efficient. It works better, it's easier for me.”

The tutors notice the benefits that are derived from the use of AI in the workplace. The tutor explained that when it comes to new information, the AI provides recent information faster which can be useful for learning.

(Tutor 3) “I feel like the artificial intelligence programs give them a much bigger platform for information. If, like for instance, I said to you that when I was doing my research or when I was doing my internship, I was using Wikipedia and its information that has been lying there for years and years, and some of them they don't even update or they're not even like recent information. So, I believe that the use of artificial intelligence gives up-to-date information then and there. I mean with this new I see also on our phones there's a little button for artificial intelligence on, on WhatsApp and Facebook and also on those fields. the apps that are up to date.”

5.3.2.2. Theme 2: Practical Applications and Learning with AI

The interns learn using AI at work need a skill to work on multiple programs to be competent and efficient. Most participants agreed that it is important to know how to operate multiple programs with AI.

- **Working on computer systems that are interlinked**

The learnings are that interns are competent and can navigate the world of technology, use technological tools to execute their tasks. This help build confidence and trust. Tutor 6 indicate below the significance of working on interlinked systems:

(Tutor 6) “The programs that we use are set that they're linked. They're interlinked. So whatever we do on one system also reflects on another. And it's also linked to when we do ttos like when you process a TTO it pulls through to without you doing the manual process
of entering the name of the medication, the dosage, and the instructions. Once you do it on one system it reflects on another. So I think that is where they are interlinked.”

- **AI guides interns with CPDs**

Interns are expected to pass their tear of the internship by submitting 6 assignments to the SAPC. Using AI to complete these tasks helps them to comply with internship and workplace requirements as set forth in their curriculum.

(Intern6) “Definitely, I wouldn't have it any other way because it has helped me to be competent in all of my CPDs. I'm one person who is like, very, how do I say this?
I'm very OK English is not my first language, so I struggle a lot with like English like pronunciation and that kind of words. Having AI to actually put, you know, my thoughts together for me, that's how I rely on it. It just makes things easier for me.

This shows how the intern learns from applying AI in their assignments.

5.3.3. Research Sub-Question 2: What are the interpersonal trust factors related to artificial intelligence that enable employees to execute tasks creatively?

Trust in AI is dependent on the ease of use and the perception the user places on it. The sub-question seek to understand how trust in AI enable interns to perform their tasks creatively.

5.3.3.1. Theme 1: Enhancing Creativity and Efficiency through AI

The theme that emerged seeks to understand how creativity and efficiency can improve at a workplace through the use of AI.

- **AI creativity improves efficiency**

Most participants, the tutors, and the interns agree that AI is helpful with creativity. The participants highlighted calendar events on the health calendar which through the use of AI, are able to present interesting topics to the public and other healthcare professionals as indicated below:

(Intern 9) “Yes, definitely. I believe that AI truly has come to make our lives easy.
That's what I believe and I truly believe that. Because. AI is agenda if I would put it that way. A is agenda is to make life easy. It would be less stressful for me to make critical decisions because part of the work has been done by AI. So, I have a free flow of thought and my work ethics and my work, my excellence of work. Can also improve because of AI because this thing, I'm not stressed when I'm working because a part of the burden that I was going to carry is actually being carried by a machine. So, I believe that it can improve our work efficacy definitely.”

The intern tracker pushes interns to be creative

The interns indicated that part of their progress is being tracked through the intern tracker which stimulates them to participate in activities that involve AI creativity that benefit the public. Interns present to the public to offer education and advise on the correct use of medicines.

(Intern 4) “ So, we the organisation has that intern checker which pushes us to take part in you know pharmacy month. I know vaccine day was recent, so we had to make posters and you know to spruce up the pharmacy and also we had to I was tasked with presenting to the public as well so I also had to create. Posters that were you know. Easily accessible if you know what I mean to the general public and not just health care professionals I did make some mainly for health care professionals. Then, you know with more advanced medical terminology so on and so forth. You know something. A medical professional would more so understand and appreciate and also make simpler ones for the general public. Because if I go on about all these funny proteins and or, you know, spike proteins and the sub vaccines. They're not going to know the difference.”

5.3.3.2. Theme 2: Trust and Caution in AI Usage

The benefit of AI is acknowledged by most participants, but most indicated that AI is not to be used without caution.

- **The reliability of sources determines AI trust**

Most interns and tutors agreed when it came to trusting the AI sources. They both cautioned the fact that AI can give the wrong information. In healthcare dealing with patient lives, it should be noted that AI cannot be trusted fully. Tutor 3 has highlighted the caution below:

(Tutor 3) “Going back and restudying or doing extensive.
Searches on which credible sources to use, so I believe that it will be. It is one of those platforms that will give us the most recent information, that's how I feel about the usage of AI in the workforce. So, for instance, if our world is in such a way that we need to constantly be able to refer to a certain studied refer to a certain book or a certain article for us to be able to say my source is credible”

- **AI to be used with caution**

Intern 7 also believes that AI should be used with caution like Tutor 3’s concerns above

(Intern 7) “I think it can be used, but it should be used with caution. So for me, I think I don't think in pharmacy you can necessarily use it like that unless you're asking a very basic question. Basic ingredients question, which I think you'd be able to find the answer in literature. So, I don't necessarily think AI is really used in pharmacy. In our pharmacy.”

Both tutors indicated that AI is a good tool to have at work, however, it is not well understood yet at work. There is caution that needs to be exercised when it comes to its use.

5.3.4. Research Sub-Question 3 : What are the trust factors that propel tutors to allow interns to execute tasks autonomously with artificial intelligence?

The research sub-question 3 seek to understand how AI use can help interns to work more independently and make decisions in the management of their internship workplace challenges.

5.3.4.1. Theme 1: Building Trust for Autonomous Work

Human connection with AI is important in ensuring that there is adoption. The manner in which the interns perceive AI will determine they will use or not use AI.

- **Allow autonomy under tutor supervision**

The intern's view on work autonomy was split almost 50/50 with some feeling confident to work with AI unsupervised whereas others felt that they needed tutors to guide them. Others were very cautious about using AI. Intern 6 was optimistic about AI prospects at work:

(Intern 6) “It does allow us to work independently, yes, but I still do believe that we need to get it fact-checked, especially in this field that we're working in.”

- **Gain confidence in patient counselling**

Interns such as interns 6 and 7 were more likely to use AI in their learning. The participants, both tutors, and interns indicated that AI is useful in assisting interns during patient counselling because they can get the answers quickly and advise patients. Here is what Intern 7 said during the interview:

(Tutor 7) “When we do the retail side, we are expected, and you know the full capacity of what maybe you say post basic scope. So, we will receive the script. Interpret the script. And if we need help, obviously we have the other pharmacist to assist us and then dispense and counsel as well. We do use AI to refer for patient counselling”

5.3.4.2. Theme 2: Supervision and Guidance in AI-Driven Work

Interns work under the supervision of a tutor in an AI environment and need to be guided to ensure they use AI effectively.

- **Step up and figure things out under supervision**

There is an expectation for tutors to see interns develop and grow more independently. Intern 4 highlighted the importance of being able to work autonomously in an AI environment.

(Intern 4) “Like I said with the making posters and preparing for the events. She pretty much just says do something. I know that sounds a bit harsh, but she obviously gives me a bit more guidance but yeah, she's basically telling me to step up and figure something out.”

- **The need for a hybrid system of learning**

In a modern technological world, post covid-19 there are more ways in which patient care can be delivered.

(Tutor 2) “So part of you will always say, in that situation, I learned this and that and that is how it benefits me going forward. So, I don't quite see that it will take over the role in its entirety depending on what that artificial intelligence is, you know. I don't. I think the real real-life experience. I think it needs to be almost a hybrid-type situation, where they can use bits of it to fulfil certain practical needs that they need to achieve.”

Conclusion

Chapter 6 will explain the theoretical implication of the findings in chapter 5.

The thematic analysis was used to analyse the findings of the interviews. The researcher noted the various responses to each question as the participants attempted to answer the sub-question linked to the main research question as discussed in Chapter 3. The themes that emerged from the analysis are related to the research question through the interview questions as shown in Chapter 4: The Research Guide. From the interview guide, a thematic map was developed to show the research questions connected to the research sub-questions and the interview questions in a consistent manner

CHAPTER 6: DISCUSSION OF FINDINGS

6.1. Introduction

The purpose of this study was to investigate the significance of trust in artificial intelligence adoption by interns. The aim of the study was to determine the significance of trust that persuades interns to adopt and use artificial intelligence during task performance in a private healthcare organisation in South Africa as presented in Chapter 1.

Chapter 5 presented the findings of semi-structured interviews documented in Chapter 4. Chapter 6 aims to discuss the findings that emerged from the data analysis of chapter 5 organised around the research question, key findings, and relevance to the existing literature. To deepen the current understanding of the significance of trust in the adoption of AI during task performance, the findings are compared and contrasted with the existing literature as mentioned in Chapter 2. An investigation into whether trust in AI persuades interns to adopt the use of AI during task performance at work or not will be explored. The flexibility of the tutors to lead the interns during internship and their ability to guide the interns to apply trust during the adoption of AI at work will be explored with the advice of what literature has already documented.

6.2. Discussion of findings for the Research Question

Research Question:

How does the significance of trust persuade interns to adopt the use of Artificial Intelligence during the internship?

The Research Question aimed to determine whether the significance of trust persuades interns to adopt the use of artificial intelligence during task performance in fulfilment of the scope of a pharmacist intern. To provide a detailed view of the meaning of the research question, the researcher developed the sub-questions to answer the study's overarching question. The following sub-questions will give a deeper understanding of the concepts:

6.2.1. Discussing the findings of Research Sub-Question 1

Research Sub-Question 1:
What are the factors that persuade interns to learn and develop by adopting the use of artificial intelligence during an internship?

In response to sub-question 1 above, the researcher noted that through the literature review done in Chapter 2, an intern is a new graduate or a learner who is employed by an organisation on a twelve-month contract to acquire the relevant practical skills necessary to fulfil the requirements as set by the pharmacy professional body (SAPC) of South Africa and workplace goals as set by the organisation. The pharmacy professional body sets the guidelines and assessments that are expected to be completed throughout the year of internship. One of the requirements being that interns must complete online progress reports using the reporting system set by the SAPC. Interns are required to write online exams using the SAPC assessment platform and upon successful completion of the internship, interns become registered qualified pharmacists (Eksteen, 2020).

The literature review in Chapter 2 defined the understanding of artificial intelligence (AI) in this study. This study was conducted in eight private hospitals that are governed by one private healthcare organisation in South Africa. The healthcare organisation in play, is fully digitised and offers yearly training opportunities for interns making this organisation suitable for exploring the research topic that seeks to explore the significance of trust in AI adoption by interns. The interns in this organisation are exposed to the use of technology and digital tools daily in the process of task execution. However, it is not known if they will learn to trust and adopt the use of AI during and beyond the internship. Choung et al. (2022); Soni et al. (2020) and Chen et al. (2024) suggested conducting future research on the existing gap between trust and the adoption of AI to improve work performance and foster effective employee behaviour. Table 1 depicts information that was gathered for the study using the interview guide presented in Chapter 2. Semi-structured interviews were relevant to the study.

Interview data was analysed using the inductive approach. Themes that emerged during the coding process with Atlas TI software revealed consistency. The themes that emerged under research sub-question 1 were Trust and Adoption of AI in Internship and Practical Applications and Learning with AI. The process led to categories emerging under each theme. The above mentioned themes and the categories are discussed below to inform research sub-question 1.

Theme 1: Trust and Adoption of AI in Internship

The responses from the participants gave rise to the creation of themes. The theme: Trust and Adoption of AI in internships emerged with key categories, firstly – AI use in completing assignments and secondly – gaining practical knowledge as discussed below:

6.2.1.1. AI use in completing assignments

Findings reveal that interns were competent in using AI to complete assignments in the presence of tutor guidance. Intern 5 highlighted that interns were content with the value that AI offered during the completion of the assignment (CPDs). Intern 8 revealed that AI use helped with sources useful during assignment completion. Comparing interns' findings with tutors' findings, it is revealed that tutors concur with the intern as specified by Tutor 3, who highlighted that interns are provided with AI learning opportunities. Tutor 5 indicated that interns rely on the trustworthiness of the pharmacists during learning. The interns and the tutors support the notion that AI is useful during learning and development.

Seeing that one of the main words used in the research topic of the study is AI and that the topic alludes to trust in AI and AI adoption, the researcher included a question in the interview guide that sought to understand the participants' understanding of AI. During the findings of chapter 2, the researcher recognised that there was no readily available universal definition of AI which led to AI being described in terms of its functions that allows AI to mimic human thinking (Townsend et al., 2023). Therefore, the researcher requested participants to answer a question that sought to find out their understanding of AI. The researcher realised how challenging it was for some participants to give their viewpoints regarding AI owing to the nature of the healthcare industry that requires one to be more concerned with emotional intelligence in the form of patient care and patient well-being. The researcher noted that most participants equated AI with human intelligence, which followed what Townsend et al. (2023) alluded to. Some participants referred to AI as a computer system that gives answers to every question asked as seen in some responses from participants in Chapter 5, which delves into the realm of anthropomorphism and implied that AI possesses traits of human intelligence.

Most participants emphasised the usefulness of AI at work for development and to assist with task performance. They highlighted that AI should be used with caution because there is an element of risk associated with its use, especially in the healthcare sector where patient information and data privacy breaches are a concern. Monye (2023) highlighted the risk associated with electronic health records (EHRs) where the EHRs can interconnect, transmit, and extend patient information to other sources thereby increasing the risk of data privacy breaches. The concern was highlighted by both tutors and interns who emphasised trust issues around the adoption and use of AI. The concern stems from participants' perception that associated AI with a powerful machine such as SkyNet as depicted in the Terminator franchise wherein which they are uncertain about who the custodian of AI is, who develops the AI rules, and ethics governing the use (Watts &

Bode, 2024). These finding created an awareness in the researcher's mind that there seems to be a lack of adequate employee education regarding AI and how employees can trust AI and understand its application for it to be adopted.

Townsend et al. (2023) spoke about issues surrounding ethical AI guidelines that are absent in Africa to guide users on the AI applications used and the lack of regulation or policy that can be enforced through the court of law. Townsend et al. (2023) raise concerns and are supported by Monye (2023) in highlighting the risk associated with the use of AI in the healthcare industry citing issues of liability and emphasising the significance of AI health data that is yet robust and could have a potential to lead to faulty algorithms that misdiagnose patients. However, both tutors and interns were satisfied with the use of AI during the completion of intern assignments at work which suggests the level of acceptance of trusting and adopting AI usage.

6.2.1.2. Gaining practical knowledge

The study finds that AI is a valuable tool that assists interns in gaining practical knowledge during the internship. The pharmacy professional body anticipates interns to learn and develop during the internship into competent pharmacists in the future. From the transcripts, Intern 11 described AI as providing a greater exposure to learning and Tutor 5 concurs that the use of AI helps interns to gain more knowledge. Both tutor and Intern agree that through AI, interns acquire technological skills to meet the internship objectives, ensuring that interns develop and gain knowledge that prepares them for real-world growth and problem-solving.

Eksteen (2020) highlighted that an internship in South Africa must be completed in a pharmacy setting that is registered and approved for training by SAPC. An intern must work under the direct supervision of a qualified and registered pharmacist. The pharmacist intern must successfully complete the pre-registration evaluation which comprises online submissions of the CPD portfolio, the pre-registration exam, and the submission of a quarterly progress report. Qualified pharmacists are required to comply with the submission of compulsory 6 CPDs online. During the pandemic, pharmacy education became transformed and adopted the use of virtual learning and other variety of online offerings such as virtual webinars and symposiums that allowed access to the learning content and material as the preferred approach (Eksteen, 2020).

Since then, the strategy implemented in learning comprises initiatives to develop competencies and skills in graduate students for jobs in the knowledge economy. The organisations are becoming more furnished with software applications, computers, automation, workspaces, and communication networks needed for problem-solving to help interns gain active participation in

the use and adoption of AI (Cantú-Ortiz et al., 2020). The programs maintain quality, develop competencies, and learn from experiences and interactions with specialists in the industry (Cantú-Ortiz et al., 2020). Through internships, AI has become an integral part of human life where companies have developed robust AI training frameworks that expose interns to emerging technologies because the trend toward digital transformation requires the development of growth opportunities where humans and machines interact more closely in an environment where work processes transform business processes within an organisation (Cantú-Ortiz et al., 2020). Interns as part of the working environment benefit from the knowledge gained though AI.

Theme 2: Practical Applications and Learning with AI

The categories that emerged from theme 2 under sub-question 1 are working on computer systems that are interlinked and AI guides interns with CPDs.

6.2.1.3. Working on computer systems that are interlinked

The findings from the responses revealed that the participants acknowledged that technology in the workplace had changed how companies conduct business. The participants signified the importance of being able to work on multiple computer programs in a digitised environment to be able to execute tasks. Interns highlighted the importance of support needed from the tutors and the tutors also confirmed the need to support the interns in the first three to six months of training to ensure that interns adapt to the workplace processes. The researcher noted that there were no guidelines on how the tutors should support the interns effectively to bring them to speed with efficiently adjusting to the use of multiple interlinked programs. Each tutor was applying their judgment in deciding where and when the interns should begin in the learning journey which was not always the best option when comparing the sizes of the institutions where the intern is placed.

In the larger hospitals, where the volume of patients is high, the intern's exposure to multiple interlinked systems became limited because the interns highlighted that the workload in the pharmacy required them to be more hands-on in picking the medication for the pharmacists than interacting with the systems. When compared to the views of the interns who were placed in medium to small hospitals, these interns felt more supported and confident to work on the multiple interlinked systems. The interns who are placed in medium to small-sized hospitals described confidence in using the systems to make informed decisions about patient care, medication use, and drug-drug interactions. The tutors in the middle to small-sized hospitals described their involvement in the intern support processes to ensure the interns were familiar with the AI function of some of the systems that involve patient safety and medication usage.

The use of multiple interlinked systems in pharmacy has become important and the use of AI to enhance medication safety, pharmacy operations, and patient-tailored intervention post-COVID-19 has become more beneficial in analysing huge amounts of data to create patient-specific insights beneficial for patient counselling, and medication efficacy in ensuring patient safety profile is maintained (Wong et al., 2023). Wong et al. (2023) emphasise the future training of pharmacy personnel on the role of AI.

6.2.1.4. AI guides interns with CPDs

The findings revealed that there was a strong agreement between interns and tutors about the use of AI in assisting interns in completing CPDs. Most interns who were interviewed had already spent more than six months of internship training in a hospital and the researcher recognised during the interviews that most interns had already passed the six CPDs required during the year of internship, while half of them had successfully passed the exam written in August, the remaining half was going to write the exam in October later in the year. It should be noted that an intern can only sit for the examination after being marked successfully competent in all six CPDs by SAPC after six months of practical training and the majority of the interns in the study were found to be competent in that aspect.

Eksteen (2020), described that the SAPC requires interns to submit a CPD portfolio during internship and that a pre-registration exam should be written before the final exam can be undertaken by competent interns. Eksteen (2020) emphasises that The Ministry of Health in South Africa published a regulation that mandated pharmacists to comply with the yearly CPD requirements. Aligning with what Eksteen (2020) alluded, the interns in this organisation demonstrate a commitment to achieving competence standards as set out by the regulation. From this finding, it can be stated that the interns demonstrated a level of technology adoption during the internship. The phenomenon of CPDs has been long adopted by developed countries as the role of pharmacists is continuously changing, the South African pharmacist is learning to adopt a lifelong learning approach as explained in Chapter 4, where the levels of the pharmacists were displayed and the knowledge and skills acquired, Saba (2020) concur with the view that CPDs should be implemented in developing countries.

6.2.1.5. Summary of sub-question 1 findings

The findings revealed how trust in the adoption of AI is significant in ensuring that the interns complete the internship assignments while acquiring practical knowledge which is crucial for interns to be competent in their field. The findings also revealed that the use of AI in helping interns complete the CPDs places interns in a better position to successfully complete the internship year.

The findings emphasise the key role of using technology in the process of learning and development during an internship. The findings revealed that interns need to comply with the regulatory requirements governing the rules of undertaking an internship in South Africa.

The busier the pharmacy is in terms of patient volume limited interns' ability to acquire the necessary skills to execute tasks in the multiple interlinked systems. The intern's ability to gain the necessary knowledge depends on the involvement of the tutor. Interns must complete CPDs and be declared competent in all six CPDs opens an opportunity for interns to write the internship exam which upon successfully passing the exam and spending twelve months of practical training, that the intern will be registered as a qualified pharmacist.

6.2.2. Discussing the findings of Research Sub-Question 2

Research Sub-Question 2

What are the interpersonal trust factors related to artificial intelligence that enable employees to execute tasks creatively?

The findings from sub-question 2 attempted to assess whether trust between interns and machines enables employees to execute tasks creatively during the adoption of AI usage in the internship. This was an important finding and the themes that emerged were enhancing creativity and efficiency through AI and, trust and caution in AI usage.

Theme 1: Enhancing creativity and efficiency

The categories that emerged from the theme were AI creativity improves efficiency, and the intern tracker pushes interns to be creative. Leach (2022) poses a question that seeks to understand whether creativity exists or if it is a tale that can be exposed through AI. The computers have recently found exposure through scholars seeking to understand their capabilities of executing innovative ideas (Leach, 2022). Lee (2020) defined creativity as innovative, beneficial, and amazing while AI can be programmed to generate new and astonishing concepts with programs that have codes that can override the old and replace them with the new transformative ones. Chapter 2 of the literature review described trust in AI.

6.2.2.1. AI creativity improves efficiency

The findings revealed that some interns and tutors considered AI to improve work efficiency. Some of the participants could attest to the benefits of the changes that they experienced after the manual dispensing programs were replaced by the digitised system that was fitted with AI prompts

that alert the user about unfamiliar medication doses allowing tutors and interns to intervene on the spot. The participants described their appreciation of the creativity function of AI which provides lists of substitutable generic and similar medicines allowing them to intervene where the cost of treatment is concerned. The participants highlighted the benefit of being able to generate the patient information leaflets during dispensing where the creative AI function automatically delivers the leaflet in real time to the patient's personal phone ensuring that the patient can access the medication information anywhere providing additional patient safety initiative. The views of the participants are supported by Choudhury & Asan (2020) emphasising that the use of intelligent decision support systems can help refine patient safety by improving error detection, patient experience, and medication management when executed effectively.

Moodley and James (2024) support the views of the participants and describe the need for the South African pharmaceutical industry to improve efficiencies and competitiveness by embracing information technology (IT) and automatic dispensing robots jointly. South African pharmacies face challenges such as ineffectiveness and the manual drug search for correct medications causing delays with an increased possibility of dispensing errors occurring (Moodley & James, 2024). Moodley and James (2024) highlighted the need for South African pharmacies to rationalise functions and improve general pharmacy efficiency by supporting integrated technology systems. The participants concur with Choudhury and Asan (2020), as well as Moodley and James (2024) seem to suggest that the participants are employed in an organisation that has embraced the integrated technological systems and the interns have an opportunity to trust the use of AI during task performance. In Chapter 2, the literature review highlighted trust as a precursor to the perceived use and usefulness of technology. The integrated system in the organisation is an enabler of the adoption of the use of AI. This sentiment was boosted by Tutor 4 in Chapter 5.

6.2.2.2. The intern tracker pushes interns to be creative

The researcher was made aware by Intern 4 as discussed in Chapter 5, that the organisation makes use of an Intern Tracker System, which is an online system that tracks the progress of the interns and requires self-reporting of activities including public health promotion activities undertaken by interns during the internship. The system tracker is a tool that the organisation uses to track the competency of the public engagement by interns.

In the findings, most interns highlighted that they were content with the use of AI for the generation of creative ideas at work. Most interns described that interns were required to participate in public health promotion activities that promote the role of a pharmacist. During this period, the interns

are allowed to be creative and to gather ideas to be presented to the general public and other healthcare professionals. The interns highlighted events that appear on the South African health calendar such as Pharmacy Month, Patient Safety Day, and Antimicrobial Stewardship Day as some of the events where their creativity can be highlighted, and they are allowed to use digital tools including AI to find creative ideas for the presentations. The interns indicated that during the preparation they have to be cognisant of creating ideas that speak to the general public in a language that is unambiguous to ensure that the message presented reaches the targeted audience.

Malik et al. (2018) described pharmacists as creative beings, who can identify problems and suggest possible solutions to the problems. Malik et al. (2018), link with the finding that confirms that interns were more eager to be involved in creative activities during internship which was the same sentiment shared by tutors. There was a strong agreement between the views of the tutors and the interns.

Theme 2: Trust and Caution in AI usage

The categories that emerged from the theme were the reliability of sources determines AI trust and the AI to be used with caution. A high level of trust in AI use has been a subject of interest in literature as indicated in the literature review in Chapter 2. Transparency can lead to enhanced trust in AI that mitigates the risks and AI biases however transparency does not predetermine that trust will be built (Mensah, 2023).

6.2.2.3. The reliability of sources determines AI trust

The findings revealed that interns and tutors held the same view when the trust in AI question was asked. They both indicated that their trustworthiness in the use of AI references would be determined by knowing that the sources found by AI were credible. This was important because the interns indicated in in Chapter 6, Theme 1 that the use of AI helps them complete assignments and CPDs which was a view that was supported by tutors.

Sallam et al. (2024), highlighted that healthcare AI technologies have been employed and found useful in learning, operational decisions and healthcare however, they bring the risk of unforeseen outcomes because they offer information gathered from multiple sources (Sallam et al., 2024). This view supports the views of interns and tutors on the findings. The researcher noted that while the participants and the literature review find AI useful, they are of the view that AI sources used in critical decision-making involving patient lives should have a valid audit trail.

6.2.2.4. AI to be used with caution

The findings revealed that tutors were more concerned about the trust associated with AI use by interns during internships. Some tutors e.g. Tutor 2 indicated that interns did not need to use AI because they completed their internship in the absence of AI. Tutor 4 highlighted the fact that interns do use AI on their personal devices to complete CPDs, and Tutor 8 mentioned that interns need to dig deeper to ensure that there are no plagiarism consequences for interns using AI that generates content that cannot be verified, as discussed in chapter 5 of the findings. The findings found that the views of the interns differed among themselves, and some intern views did not agree with the views of the tutors. This finding here represented a very diverse view of AI use with caution. Chapter 5 demonstrated the disparity view more in detail.

Vora et al. (2023) support the view that cautions users of AI to exercise vigilance in AI use to ensure that overreliance on AI does not develop without considering the possible barriers to its use. Hakimi et al. (2024) emphasises that the adoption of AI requires the introduction of AI CPD to educate the pharmacy personnel on the correct application of AI and to carefully pay attention to matters that assure responsible AI use such as ethics, data privacy and the management of sensitive patient information. The varying views on trust in AI can be attributed to factors such as AI anxiety, AI beliefs, anthropomorphism, and types of AI. Transparency is perceived as a bridge connector between AI use and trust with AI security features contributing to barriers leading to a lack of full AI adoption and use (Gong et al., 2024). The viewpoint from Gong et al. (2024) is supported by some interns who mentioned security concerns associated with AI use as a deterrent to the full adoption of AI. This notion was supported by the literature review in Chapter 2 which contrasted and compared scholars' views about trust, AI trust, and Interpersonal trust and was ratified by the participant's views in Chapter 5. The researcher noted that there was no consensus when it came to trusting AI use fully which impacts the perceived use of AI towards its adoption, based on the aforementioned findings.

6.2.2.5. Summary of the findings of Sub-Question 2

The research study concluded that the interpersonal trust factors associated with using AI to enable creativity are enabled by the acceptance of AI by the interns. The study highlighted that when efficiencies are better managed, the interns can focus better when using AI during task performance and deliver good pharmaceutical care under the supervision of the tutor. This contributes to the learning and development of interns as evidenced in research sub-question 1.

The study, furthermore, revealed that interns are eager to participate in tasks that promote creativity. The interns indicated that they use AI to assist in planning and executing the creative

idea. These healthcare events equip interns with skills such as public speaking. The creative interns ensure that public health is promoted while ensuring that the AI sources are credible and trustworthy. The interns and tutors do not trust AI fully which has a bearing on interns' acceptance and perceived usefulness. Tutors and interns use AI, but they may not fully support its use because of fear of security issues concerning patient information safety and data breaches.

6.2.3. Discussing the findings for Research Sub-Question 3

Research Sub-Question 3

What are the trust factors that propel tutors to allow interns to execute tasks autonomously with artificial intelligence?

The aim of research sub-question 3 is to explore the factors that drive tutors to trust interns to perform tasks independently with AI. Jacovi et al. (2021) suggested that contractual trust between humans and AI is an important part of human-AI interaction. This question seeks to further establish whether trust between humans and AI has been established or justified by investigating variables such as autonomy and the reasons for tutors to grant interns AI use with autonomy. The findings revealed the two themes under sub-question 3 which are building trust for autonomous work and supervision and guidance in AI-driven tasks. These terms are discussed below:

Theme 1: Building Trust for Autonomous Work

Under this theme, the categories for discussion that emerged are autonomy allowed under the tutor's supervision and gaining confidence in patient counselling. Autonomy is considered motivational to learner development as it plays a motivational role (Sawatsky et al., 2021). The support of learner autonomy is considered to provide the learner with an opportunity to interpret and understand the values and norms of the profession that lead to integrated behaviour and actions. Supervision and autonomy support seek to motivate learner development by balancing ideal challenge and support while combining autonomy support with practical approaches to supervision (Sawatsky, 2021). Cho et al. (2021) highlight that the interaction between a supervisor and a learner's job autonomy impacts the learner's self-assessment of feeling trusted.

6.2.3.1. Allow autonomy under tutor supervision

The findings revealed that tutors do not doubt the fact that in a pharmaceutical setup, interns should work under the direct supervision of a pharmacist who is registered under the category of a tutor with the SAPC. The findings reveal different tutor opinions about the question of

supervision of interns and autonomy. Some tutors explained with ease the process they allow interns to work with AI autonomously while others were quick to allude to the fact that interns are not allowed to work autonomously. The views of tutors were complemented by the views of the interns who shared the same understanding. The findings were split between those who would prefer autonomy to be granted and those who do not agree to grant autonomy. This view is not surprising considering that pharmacy rules for internships specify that internships should be conducted under the direct supervision of a tutor, and this impacts the findings.

Recently, there has been an increase in several research that seek to understand trust from an ethical perspective, the literature review in Chapter 2 has extensively investigated trust however, in a patient care setting, the debate about AI strives for AI-improved processes and the practical application of ethical guidelines affecting the profession. Starke & Ienca (2022) discussed reasons that lead to misplacing trust and causing distrust in AI, which results in a mismatch between the trusting sources, however, they highlight the importance of availing the guidelines to formulate AI systems 'conditions for law, ethics, and robust-AI trustworthiness. The literature also gives perspectives of authors who advocate for AI trustworthiness in a patient care setting based on elements of verification, validation, robustness, and successful AI implementation. Formosa (2021) highlighted that the advancement of AI adoption has important ethical considerations as AI begins to impact human interaction however, AI has strong potential to enhance human autonomy equally so by inhibiting and undermining it. This view is supported by the findings where tutors and interns presented mixed views about AI trust and work autonomy.

6.2.3.2. Gain confidence in patient counselling

The findings revealed that most interns who use AI during task performance feel that AI helps boost their confidence during patient counselling. The interns highlighted that having AI on smartphones or the main work on a computer assists in finding medical information faster and quicker than using books or Google engines. The views of the tutors were in check with those of the interns as they explained the positive change the interns showed during patient counselling and the improved knowledge of medicine information shared with the patients.

The findings also revealed that one intern had a negative experience with inaccurate medical information sourced from a generative AI and has since lost confidence in the use of that AI as a reliable source of medical information, however, the intern through the guidance of the tutor has been introduced to reliable work-related AI tools that provide credible and trustworthy medical information related to the safe use of medicines and dosages.

Owing to the nature of the vast methods available that are used for patient counselling in an attempt to improve medication adherence and health outcomes, patient counselling is one of the fundamental tools that a pharmacist intern should engage in during the internship to gain the necessary skills and to build confidence. Showande & Laniyan (2023) describe patient medication counselling as pharmaceutical care aimed at increasing the use of medication treatment by patients and it includes providing information on medication use, patient safety, and improved treatment outcomes. This view supports the view of tutors and interns who highlighted patient counselling as an integral part of intern learning. Patient counselling forms part of the pharmacy curriculum, however, in a workplace, it is important for the intern to build the counselling skills to become an effective counsellor of medication. The literature review in Chapter 2 highlighted the role of the pharmacist as a custodian of medicine, hence, the findings are supported by the literature review and by Showande & Laniyan (2023) description of patient medication counselling.

Theme 2: Supervision and Guidance in AI-driven Tasks

The categories that emerged under the theme are stepping up and figuring things out under supervision and the need for a hybrid system of learning. Sawatsky et al. (2021) highlighted that the supervisory role is dynamic, and it shifts between practical and open-minded (easy-going) strategies to complement specific circumstances. Supervisors provide learners with choice and support in the learning process which needs to be balanced with the supervisor providing opportunities for choice and sound decision-making (Sawatsky et al., 2021).

6.2.3.3. Step up and figure things out under supervision

The findings revealed that the interns working under the supervision of tutors in a technology-adopted space strive to learn so they can accomplish work autonomously by the end of the internship. This was highlighted by interns who had already completed six months of the internship of their less reliance on other pharmacy personnel for support. The interns' views were supported by the findings under tutors who indicated that the interns need to learn so that they can become independent pharmacists in the future.

The literature review in Chapter 2 described the roles of a pharmacist. The nature of the work of a pharmacist involves interaction with individual patients, mediating health-related matters, expediting public health services, and providing other health and health-related services (Showande & Laniyan, 2022). Pharmacists engage in the pharmacist-initiated therapy of diseases, prevent poor adherence to treatment, and limit wastage of resources (Showande &

Laniyan, 2022). The provision of patient medication counselling is compulsory and mandated by the law governing the pharmacy profession in South Africa. The literature review and the perspectives of interns and tutors are supported by the findings. A pharmacist intern needs to learn to work autonomously in figuring things out including adopting AI tools valuable in knowledge sharing that will benefit the pharmacist in the future.

6.2.3.4. The need for a hybrid system of learning

The findings revealed that both the interns and tutors agree that internship learning can be tailored to take place using a hybrid approach where part of the learning is focused on the conventional approach and the other part on technology involving AI and AI tools. The perspectives of the interns and tutors stem from their realisation that COVID-19 period has enabled organisations to adopt the use of technology. The technology adoption by organisations has changed how processes within organisations take place. These changes have enabled possibilities for hybrid models to be considered for internships, this is supported by interns who described that they have the capability to be competent in adopting and using AI autonomously. However, in the context of South Africa, the suggested model will be limited by regulations that stipulate that internship should be conducted under the personal supervision of a tutor.

In the literature, the researcher found a study about internships for medical doctors in the context of South Africa; van Niekerk et al. (2024) emphasise the need for policy development and review of the Health Professional Council of South Africa (HPCSA) rules and the requirements of the organisations offering an internship to create a balance between intern work, personal life, and thesis completion. The adoption of digital technology in the medical field after the pandemic has enabled hybrid and virtual work to create a work-life balance to reduce the many psychological stressors experienced by interns while completing the internship (van Niekerk et al., 2024). This study supports the views of the participants, and it highlights how technological adoption is influencing other health professionals to transform how internships are offered.

6.2.3.5. Summary of Sub-Question 3 findings

The findings of research sub-question 3 presented the views of the participants about AI trust and have revealed mixed views related to AI trust during execution of tasks specifically, those tasks that involve patient care. The study revealed that the participants cautioned that the information from AI needs to provide sources that are credible and trustworthy for it to be trusted. The participants have acknowledged that AI enables them to work autonomously, however, the internship is required to be conducted under the direct personal supervision of a tutor, which limits their ability to learn to make autonomous decisions and independence. The findings revealed the

need to adopt a hybrid learning model for internship because most organisations have adopted technology and that changed how businesses are conducted as more technological tools such as AI influence how businesses are conducted.

CHAPTER 7: CONCLUSION

7.1. Introduction

This concluding chapter synthesises the empirical findings from previous scholars, 20 semi-structured interviews reported and discussed in Chapters 5 and 6 respectively with the study's research question established in Chapter 1. The principal conclusions from this study will be presented, followed by implications for management, educational institutions and stakeholders with the field of AI integration where employee buy-in and integration is critical. This chapter concludes by outlining the limitations of the study alongside recommendations for future research to advance the areas of trust, AI adoption and dynamics of workplace learning and digital transformation.

7.2. Principal Conclusions

This study sought to analyse three sub-questions examining how trust by interns affects AI adoption for enhancing task efficiency, fostering creative problem-solving using AI by interns and balancing autonomy with technology dependence by addressing the main research question: How does the significance of trust persuade interns to adopt the use of Artificial Intelligence during the internship. This chapter explores the development of key themes developed in chapter 5 based on the most frequently occurring patterns and concepts that provide more insight into the three sub-questions answering to the main research question. The findings are presented below.

7.2.1. Findings of factors that persuade interns to learn and develop by adopting the use of Artificial Intelligence during an internship

The aim of research sub-question 1 was to determine how trust influences interns' willingness to adopt AI in their day-to-day tasks for learning and development during their internship. This exploration between trust, AI and adoption by interns sets out to answer the research question: How does the significance of trust persuade interns to adopt the use of Artificial Intelligence during the internship?

The key findings highlight that interns may benefit from the exposure to AI under supervised and trustworthy conditions. This is due to the element of risk associated with the use of AI in healthcare where patient data and lives are at stake as noted in chapter 6. Consequently, both interns and tutors are in agreement that the presence of a trustworthy pharmacist was essential in boosting interns' confidence to build reliance on AI and in being able to use these technologies autonomously. These findings are in accordance with existing literature regarding trust in AI, which

emphasize that the development of trustworthy AI systems is necessary for fostering confidence amongst its users (Choung et al., 2022).

7.2.2. Findings of interpersonal trust factors related to artificial intelligence that enable employees to execute tasks creatively

The goal of research sub-question 2 was to identify the interpersonal trust factors that enable employees, mainly interns, to leverage AI for the creative execution of tasks.

The key findings in chapter 5 and 6 suggest that trust in AI significantly contributes to the willingness to use AI for enhancing creativity and task efficiency (Choung et al., 2022). In chapter 5, tutors noted that AI was particularly useful in producing creative solutions for activities such as meeting agendas and roster creation. Due to the trust shown by tutors to leverage AI for creative tasks, interns begun to appreciate AI's ability to streamline these processes, thus allowing them to focus on the more innovative aspects of their roles such as the creation of Wellness Days posters. These findings align with Marrone et al. (2022), that exposure to AI can be used to support problem solving, improve comfortability in the use of AI and beat a creativity slump.

Despite AI being acknowledged for its creative potential, there was still a cautious approach with regards to its use. Interns emphasised the need to question any AI-generated outputs and verify the credibility of the information before applying it to critical tasks due to AI's potential to hallucinate and ability generate information out of anything. The trust factor was described as a delicate balance that required the use of personal discernment with many participants rating their trust in AI at a **60/40 ratio**, reflecting a cautious optimistic mix of reliance and caution.

7.2.3. Findings of trust factors that propel tutors to allow interns to execute tasks autonomously with artificial intelligence

Research sub-question 3 explored understanding the factors that build trust in AI, specifically in enabling tutors to allow interns to perform tasks autonomously using AI.

The study found that mutual trust between interns and their tutors/supervisors is a necessary enabler for allowing autonomous use of AI technologies. Interns reported in chapters 5 and 6 respectively that tutors were more likely to allow the autonomous AI use if there was proof of

competent and reliable outcomes from previous supervised tasks and proof of discernment when interacting with AI derived results. The findings also revealed that a hybrid system of learning, combining the supervised use of AI in an environment teeming with opportunities for independent task execution, fosters a gradual increase in trust in interns gaining independence and the use of AI. Interns highlighted the value of being able to validate their work and gain confidence in patient counselling and other critical areas needed to successfully meet the requirements of the internship. The involvement of tutors in day-to-day activities, especially in reviewing AI-supported outputs by interns, was seen as essential in building this trust. As a result, interns were allowed more autonomy in tasks such as patient information management and medicine dispensing once they demonstrated their proficiency.

7.3. Implications for Management and Relevant Stakeholders

The study found two implications for the management of healthcare organisations in the context of fostering trust in the adoption of Artificial Intelligence (AI) by interns, as well as for stakeholders involved in integrating AI technologies within workplace learning and development training sites.

7.3.1. Enhancing AI Adoption through Trust-Building

One of the main implications emerging from this study, is the importance of establishing a trustworthy AI environment in the private healthcare sector in South Africa that is conducive to encouraging interns to adopt AI tools effectively. The results in chapter 5 demonstrate that when tutors perceive AI as reliable and supportive, it boosts interns' willingness to engage with these technologies, thereby enhancing the creative use of AI to meet performance outcomes. For organisations, especially those where human lives are at stake such as healthcare and pharmaceuticals, it is essential to invest in robust AI systems that offer verifiable data and accurate outputs (Choung et al., 2022). Choung et al. (2022) notes that the reluctance to adopts AI may stem from its ability to mimic a human generated response without adequately explaining the underlying process. Therefore, ensuring that AI tools are integrated with transparent mechanisms to validate information can instil greater confidence among users (Choung et al., 2022). By fostering trust in AI, organisations can optimise the benefits of AI leading to improved performance and skill development among interns.

Recommendations for management that came from the findings of this study include implementing training programmes that focus on introduction to AI and building trust in AI,

providing clear guidelines on its ethical use, establishing mentorship structures where experienced employees in the form of registered pharmacists/ tutors guide interns in a supervisory role in AI adoption can further increase confidence in these technologies. This approach not only enhances intern performance to meet the requirements of the internship, but also supports the professional growth of interns by allowing them to leverage AI tools safely and effectively.

7.3.2. Balancing Autonomy and Supervision in AI-Driven Work

The second implication found in this study relates to the need to use a balanced approach in granting interns autonomy when using AI technologies. The findings in chapters 5 and 6 revealed that while AI can significantly assist interns in performing complex tasks independently, it remains responsible crucial to supervise interns in its use as well as verifying AI generated response regardless of how advanced it becomes (Abbass, 2019). Organisations that allow interns to autonomously use AI systems under direct supervision, can foster a hybrid learning environment that encourages both independence and accountability.

For stakeholders, particularly those in training sites such as pharmacies, it is necessary to design internship programmes that incorporate AI tools whilst maintaining a readily available support system for interns. In doing so, organisations can nurture future professionals who are adept at using AI responsibly for patient care, thereby enhancing both their competence and the overall innovative capacity of the workforce.

Recommended strategies that came through in this study include the periodic assessments of AI usage among interns, establishing clear protocols for when human supervision and intervention is needed, as well as creating opportunities for feedback loops to refine the integration of AI systems. These measures can assist in balancing the benefits of AI-driven autonomy with the need for ethical oversight, thus ensuring that AI technologies are used to complement rather than replace critical human thinking.

7.3.3. Limitations of the Research

As detailed in Chapter 4, this study provides valuable insights into the significance of trust in AI adoption among interns, however certain limitations related to the study's methodology should be acknowledged. The research was conducted using a qualitative methodology with a relatively small sample size of 20 respondents. Although the sample size aligns with qualitative research

standards, for the size of a healthcare industry such as South Africa's that provides healthcare to South African's and its neighbours, a larger pool of respondents would be necessary to provide further insights that may be used to generalise the findings of the healthcare industry and other sectors or industries. Future research could explore the dynamics of AI trust or AI adoption across a broader spectrum of organisational contexts to validate and expand upon these results.

7.4. Suggestions for Future Research

7.4.1. Comparative Studies Across Different Sectors

A potential area for further research is a comparative analysis of AI adoption and AI trust across another high stakes industry that makes use of interns such as healthcare, finance and education. The current study focused on the perceptions of interns within pharmaceutics in the healthcare sector, but expanding this research to other interns could uncover unique trust factors relevant to different organisational contexts.

7.4.2. Longitudinal Studies on AI Adoption

The rapid introduction and evolving nature of AI tools and technologies suggest that trust dynamics in AI may change over time. Therefore, based on the responses by both tutors and interns in this study it is worth exploring longitudinal studies as the interview in this study took place in a period of six weeks. Longitudinal studies could provide deeper insights into how trust in AI develops as interns gain more experience with these tools and move from being interns to qualified pharmacists. This could inform organisational strategies for maintaining trust beyond the initial adoption phase and integrating AI into long-term professional development.

7.4.3. Exploring Alternative Research Methodologies

While this study utilised mono-method and semi-structured interviews to gather qualitative data, future research could benefit from a mixed-methods approach such as observational studies. Observational studies in hand with longitudinal studies as suggested in section 7.4.2 would provide a more comprehensive understanding of how AI trust factors and AI adoption influence both individual attitude and behaviour and organisational outcomes. For instance, observing how interns interact with AI in real-time scenarios could yield insights that are not easily captured through interviews alone.

7.5. Conclusion

The study's findings were analysed, and conclusions were reached by comparing and contrasting the available literature with the 20 semi-structured interviews to make recommendations towards relevant stakeholders. The findings have provided critical insights into the role that trust plays in the adoption of AI technologies by interns, particularly in in the health sector where accuracy and ethical considerations are of high priority. Organisations and their leaders must prioritise the development of robust and trustworthy AI systems to foster a positive hybrid learning environment that encourages the responsible use of technology. As AI continues to evolve and become further integrated in the workplace, it is crucial for management to invest in measures that foster trust building in AI that not only enhance individual performance but also drives organisational growth.

Further research is necessary to explore the long-term implications of AI adoption in the workplace, particularly in a post-pandemic context where digital transformation in AI is accelerating and being used to enhance autonomy, creativity and learning and development in the workplace. Therefore, it is concluded that this study has contributed to bringing attention to the complexity associated with trust and AI adoption by interns in the workplace. It has contributed to the existing body of knowledge and aims to serve as future point of refence to build on.

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APPENDIX 1: CONSENT FORM

The Informed Consent Letter

I am currently a student at the University of Pretoria's Gordon Institute of Business Science and completing my research in partial fulfillment of an MBA. I am conducting research on "**The significance of Artificial Intelligence (AI) for interns"** and am trying to find out more about the Pharmacist Intern's ability to trust the use of Artificial Intelligence (AI) during the internship.

You are invited to participate in this study by completing this consent form. Our interview is expected to last about an hour and will help us understand how a South African Pharmacist Intern under the supervision of a tutor navigates an internship in the presence of Artificial Intelligence (AI).

Your participation is voluntary, and you can withdraw at any time without penalty.

All information will be kept confidential, and data will be reported without identifiers. By completing this form, you indicate that you participate voluntarily in this research study.

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

Researcher: Georgina Molobe
Email: 97271323@mygibs.co.za
Phone: 0721965346

Researcher Supervisor: Prof. Charlene Lew
Email: lewc@mygibs.co.za
Phone: 011 7714100

Signature of Participant: _____ Date: _____

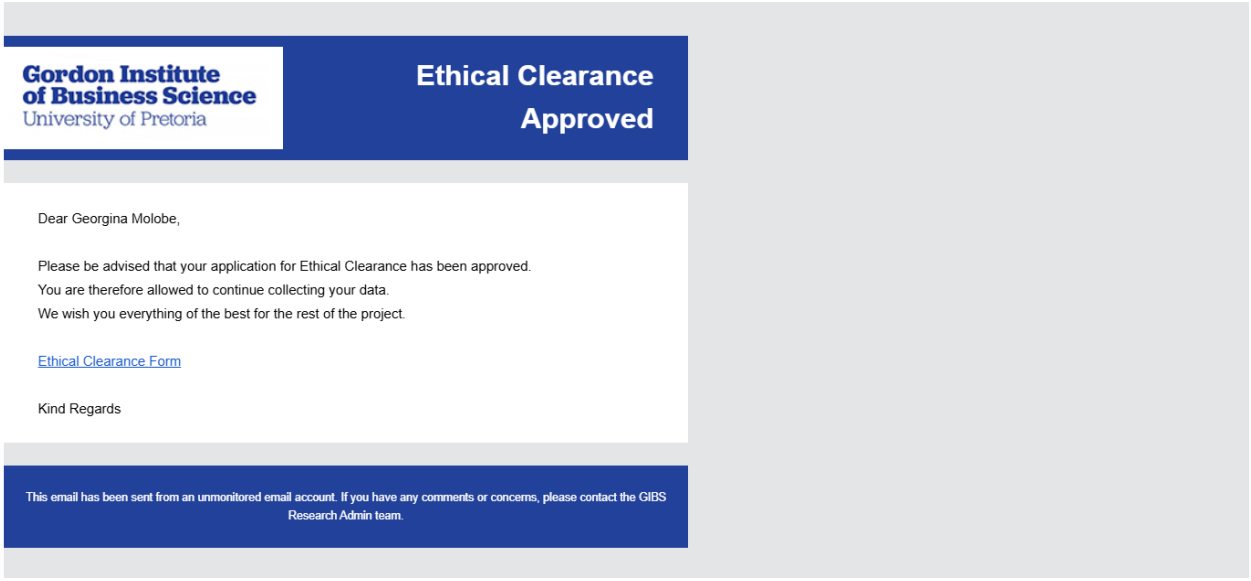
Signature of Researcher: _____ Date: _____

APPENDIX 2: THE INTERVIEW GUIDE

The Interview Guide

Dimension	Interview Questions	Potential prompts
Artificial Intelligence (AI)	What do you believe are the benefits for interns using AI?	What are your responsibilities as an intern in the organisation?
		Explain the computer programs that you are familiar with at work, the differences and similarities if any
		Explain your understanding of Artificial intelligence
		Is there any benefit for an intern to use AI during the internship?
		Name the AI programs used at work and what they are used for.
		What is your perception of AI usage at work? Can you elaborate on that?
		Explain the ease with which an intern employs AI during task performance
Interpersonal Trust	Do you trust AI to help you with executing your tasks?	What part of intern tasks relies on the use of AI? Please explain.
		What is required for you to fully trust AI for these tasks?
		Would you trust AI to help you with creative tasks?
		What ethical guidelines are available for AI use at work and why is it important to have ethical guidelines?
Work Autonomy	Do you believe AI can help you to work more autonomously? Why?	Does your tutor allow you to use AI autonomously?
		When do interns involve tutors during task performance with AI?
		Is there any personal growth attributed to AI usage, please explain.

APPENDIX 3: ETHICAL CLEARANCE APPROVAL



Gordon Institute of Business Science
University of Pretoria

Ethical Clearance Approved

Dear Georgina Molobe,

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

This email has been sent from an unmonitored email account. If you have any comments or concerns, please contact the GIBS Research Admin team.

APPENDIX 4: CODES GENERATED

Code
3-6 months before giving autonomy
Act as a tutor
AI called Meta for social media use
AI can help to reduce script mistakes
AI can help with creative ideas for meeting agenda, and roster creation
AI can provide automated dispensing
AI cannot be trusted 100%
AI cannot be used to look information on patient treatments
AI come up with solutions to situations
AI computer system learning problem solving
AI concept is new
AI contain colourful content
AI contribute only 5 percent personal growth
AI create an autopilot mode
AI creativity improve efficiency
AI data may not be accurate
AI does a lot of thinking for me
AI enable questions to be asked and gather resources
AI enabled pop up warning or alert messages
AI gives you the world overview
AI growth come with better decision making
AI growth in being efficient and precise in my searches
AI guide interns with CPDs
AI has limites mistakes and errors
AI help lead to the correct answer
AI help me to work faster and more efficiently
AI help to make processes faster

AI helps you understand concepts better
AI is a code that is developing in learning
AI is a field of computer science
AI is a program on the phone that can give you answers
AI is creative around time management during wellness day
AI is gathered data that guides you
AI is generated by algorithm
AI is just an idea currently
AI is like advanced technology
AI is like Google search engine that give you results
AI is man made and can have errors
AI is not accurate coming to patient treatment
AI is quick and fast
AI is really fast
AI is susceptible to data leaks
AI is technology took over
AI is technology used to find information
AI is the ability of computers to think like man
AI is the use of computers, systems and robots to give you information
AI is user friendly
AI is using computers that use human intelligence
AI is when you ask a phone a question and it gives you an answer
AI makes people lazzier as they expect everything to be available
AI Monica help with school related issues
AI needs a lot of Wi-Fi to run effectively
AI populate information without a person
AI provide 50/50 benefit
AI provide stepping stones to find correct answers
Ai robs me of an opportunity to grow if i rely on it
AI to assist with calculations
AI to bring awareness to drug dosing mistakes
AI trust at 6/10
AI trust factor for interns is 60/40 ratio

AI trust factor for tutors is 80/20 ratio
AI trust is at 50/50 score because it's still developing
AI turn abbreviations into full sentences
AI use outcomes to learn
AI was programed by human being
AI will give us recent information
allow autonomy only under supervision
Allow interns know what to do at work
allowed to spend time with other pharmacists
antimicrobial stewardship
ask AI the righ questions
Ask tutor for more information on drugs
automate script writing
automatically pick allergies or contraindications
background and practical experience is important
balanced learning, manual and digital
be able to get their information
Be able to give reference
Be mindful of being honest
book referencing is not sufficient anymore
bring credible referencing
broaden their skillset
build up confidence
can be creative during pharmacy week
can help make creative customised pictures
can use AI for creating presentations and posters
cannot trust ChatGPT because it contain vast data
cannot trust it to give correct treatment information
care on is linked to micromedex
care on uses a dashboard system
charge prescriptions
ChatGPT has helped with safe use of medicines
ChatGPT is not a recommended trusted source

ChatGPT spew info from the internet
check medicine doses
Check stock levels
coding is putting human intelligence into machine
compare it with credible sources
compounding
computers are thinking for us
Confirm drug information
connected and updated
consider AI for future stock management
core business is caring for humanity
Correcting
Create a standard
Create structure
credit capture
decision maker
definately at the end of internship
detect parameters which are a call for concern
digital scheduled medicine register
digital scripts from doctors and telephonic scripts
digitally scan medicine out of the pharmacy
digitised intervention of patients
direct generic substitution
Discuss doctor prescriptions
dispense electronic prescription
dispensing prescriptions
distribution of medication is AI reliant
Do not have relevant data about ethical gudelines
do not trust AI because it is still developing
Doctor to re-prescibe
easy access to information
easy to use
easy workload

EM Guidance contain South African medicine information
EM Guidance medicine reference App
ensures patient safety
ensures patients do not receive medicine they are allergic to
ethical guidelines for sensitive patient information
ethical guidelines helps with consistancy
ethical guidelines to maintain order
exposed to machine picking medicine
filing can be assigned as an AI automated task
follow institution rules
follow pharmacy council rules
for structure and monitoring
future AI to detect errors more often
gain confidence in patient counselling
gain practical knowledge
Get up to date information with AI
Google give bunch of sources and links not direct answer
Grammarly halps with creative writing in combination with ChatGPT
Have not interacted with AI
help them with CPDs
help to track patient drug history
help you keep in mind all the drug alerts
help you to stay within the law
hen i am struggling, i involve my tutor
hugely irritating
I completed my CPDs autonomously
I could trust if AI information came from reliable source
i do not know
I do not know what can be done for me to trust AI
I do not trust AI so i prefer scientifically proven evidence
i do not trust AI with creative tasks
I do not use AI
I feel like it helps with personal growth

I have grown in terms of confidence and use of technology
i have not used AI called ChatGPT
I know AI called ChatGPT
I need some form of credibility to trust AI
i now know trade names of medicines
I trust AI because of its clear explanation
i trut literature that you can read
i will need to test AI function first before trust
I would not trust AI over someone to work independently
I wouldn't know if i can be allowed to work autonomously
ICD-10 code App used during dispensing
ICD-1O code specifies kind of diesase associated with the medicine
if AI could perform automated tasks under supervision
important to work without AI assistance
improve pharmacy workflow
in charge of paediatric ward stock
information from everywhere makes it unreliable
intern ask for tutor intervention
intern benefit from exposure
Intern cannot work independent of a pharmacist
intern checker pushes interns to be creative
Intern is required to be competent in 6CPDs
interns do not need AI
interns lack work exposure
interns perform scope of practice of pharmacist
interns should be ethical, reliable and independent
internship is entry level
Internship is performed based on pharmacy council structure
introduction of digital nurse at IFP
involve turor to double check my work
Involve tutor to confirm information
involved tutor to confirm dose of medicine
Issues with systems hacking

it does all the creative work for you
it does not give accurate results
It gives you guidelines to working autonomously
it has to be restricted
it needs regular updates to be trusted fully
It provide faster information
It regurgitate information
it's limited
it's much quicker and easier
it's not creative
Learning AI is not complex
Lessen curiosity
lessen productivity
lessened the workload
lexicomp drug referencing software
lexicomp give new facts about babies
liaise with other healthcare professionals
list brand names, and trade names of medicines
Load manually patient details
Look alike and sound alike medication
look out for patient allergies
look up certain medical conditions
look up drug caution
look up drug side effects
look up paediatric and infant dosing
Made things easy
maintain integrity and ethics within limits
maintain the legal requirements by SAPC
make information posters look presentable
make them accountable
Make them independent pharmacists
manage scheduled medicines
massive future impact on patient care with IMT and care on

medication risk factors
medicine adherence
medicine management
medicine safety management
Medscape drug reference software
micromedex drug referencing software
micromedex have international drug information
micromedex is a form of AI
micromedex is gold standard
micromedex is integrated into dispensing program
monitor stock expiry dates
more supervision needed
need to attend AI training to gain access
need to know how to manage downtime
Never asked my intern if they utilise AI for CPDs
New dispensing system
no AI systems at work
No copy and paste of information
No personal growth
not allowed to copy and paste
not easy to keep abreast with changes
Not generate false prescriptions
Not keen on using AI for CPDs
Not so much personal growth because of the lazziness that come with AI
not sure if there is ethical guidelines
not to fiddle with prescriptions
Old dispensing system
Order TPN
orderwise ordering
pack stock on shelves
participate in stock takes
patient counselling

Patient details already loaded
people do not have to think for themselves
perform AI sampling as a trustworthy test
personal growth daily with patient care and CPDs
pharmacist have a final say on what interns do
pharmacist use AI to sign off prescriptions
pharmacy admin
picking of scripts can be assigned as AI task
presenting to the public during pharmacy month
prevent drug temepring
protect patient information
proven to be convenient
provide indirect supervision
provide patient information
receive stock from supplier
recommend interventions
Referring to EM Guidance allow me to do things on my own
reliable
rely on AI to help with reliable articles for pharmacy week
rely on credible sources
remain interns for a year
reputable
responsible for packaging material
Saw how Abby machine works at wellness day
Scrutinise prescriptions
sensitivity of medicines
Share opinion
should not rely 100 percent on it
should not share your passwords
spits out answers
Stanford Guide for dosing reference
step onto Abby machine and it capture vitals
step up and figure things out under supervision

stock management
Stock replenishment
stuck with the system
submit good quality CPDs
system helps you to think
system shows you what to take
Task completion within expectation
temperature recording
Test the credibility of the reference source
The information will be used to work on their own
the need for hybrid system of learning
the need to learn from someone else
the system is easier and quicker
The use of AI is part of the system
the use of EM Guidance is allowed
There is a standard in the organisation
there is a benefit to using AI for interns
there is a digital dispensing program
There is No benefit for intern to use AI
There is policy on data security and patient privacy
they learn on the floor and the pharmacist
they need to pass
time efficient
time to focus on other things
to be equipped with experience
to use AI wwith caution
training was provided about the digital system
trust AI to creatively cite resources
trustworthy pharmacist
TTO function uses AI interlinked systems
Tutor is invested in intern's learning
tutors help when dosages are not correct
unfamiliar dose lookup will rely on AI for guidance

update backup firewall
use AI called Monica
use AI for creative fun
use AI for visual arts
use AI dispensing program
use AI creatively to create posters on wellness day
use of AI language to be creative checking spelling
use personal AI on my phone to check drug mechanism of action
use pre-approved computer programs
Used AI about 20 percent since start of internship
Used information from ChatGPT to complete CPDs
Used it as a guide to point me to the right direction
Used it to help complete assignments
used Quibot website for my CPDs paraphrasing
utilise creative presentation planning
validating their work
verify script anomaly
very broad global answers
very risky to trust AI during patient treatment
voice system to spell out instructions
wants me to function at a high level independently
we need AI experts to work efficiently
we rely on other healthcare professionals for advice on patient care
when you are looking for a quick answer plus a bit of research
work on computer systems that are interlinked
Yes, my tutor allow me to work autonomously with AI