Chatbot – friend or foe? Investigating employee adaptation to HR chatbots within a professional services firm in Ireland.

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# Abstract

Title: Chatbot – friend or foe? Investigating employee adaptation to HR chatbots within a professional services firm in Ireland.

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The use of Artificial Intelligence (AI) in Human Resources (HR) has been steadily increasing in recent years bringing fundamental change to the way in which organisations work. A key component of AI, and the focus of this study, is artificially intelligent chatbots. While research in this area is extensive among other countries across the world, there is a dearth of research on adaptation to chatbots, their benefits, and risks in Ireland which is why it is imperative further research is carried out in this area.

This study aims to investigate employee adaptation to chatbots. It hopes to develop an understanding of the influences on employee adaptation, and why employees may or may not be inclined to use chatbots to address their HR concerns. It also aims to explore the benefits and understand the risks associated with using chatbots, to both the employee and the organisation, within a professional services firm in Ireland. The aim of this research is to contribute to the chatbot literature from an Irish perspective and attempt to apply previous literature here.

A qualitative methodology approach was applied to this study. Semi-structured interviews were conducted with ten HR professionals from a professional services firm in Ireland where a HR chatbot is currently in use. The data was collected and analysed using thematic analysis. Most of the research findings replicated previous literature and as a result all null hypotheses were accepted. The research however yielded several interesting findings that were not mentioned in the literature, those of which were mostly specific to an organisational setting. Therefore, future research is recommended in these areas to develop a holistic understanding of chatbot usage within a business setting.

# Declaration

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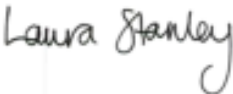
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# Chapter 1: Introduction

## 1.1 Introduction

Industry 4.0, otherwise known as the fourth industrial revolution, is a phenomenon that is currently embedding widespread digital transformation across organisations globally. This includes the rise of advanced robotics, heightened cyber security, big data analytics, machine learning and artificial intelligence (AI). Research has shown that management are turning to Human Resources (HR) to drive Industry 4.0, by encouraging technology implementation, nurturing innovation, all the while attracting, developing, and retaining the workforce of the future. It is crucial therefore that those employed within HR harness the innovative, imaginative, and ingenious potential of employees so that their organisation can successfully adopt and deploy these new and emerging technologies (Verma and Venkatesan, 2022). They must also transform their own department to be digitally apt and agile to manage the highly technical workforce of the future (Rana and Sharma, 2019). AI has been coined the stepping-stone of Industry 4.0 (Pereira et al., 2021), which promises to bring radical change to the way in which organisations worldwide function, thus accelerating our learning and how we work (Levy and Hanlon, 2019).

## 1.2 Research Aims, Objectives and Hypotheses

This research will focus on artificially intelligent chatbots, specifically the influences on employee adaptation, their benefits, and risks, within a professional services firm in Ireland.

The aim of this research is to contribute to the chatbot literature from an Irish perspective and attempt to apply previous literature here. This research aims to investigate why employees may or may not be inclined to use chatbots to address their HR concerns. It also aims to explore the benefits and understand the risks associated with using chatbots, to both the employee and the organisation, within a professional services firm in Ireland.

The professional services firm, for confidentiality reasons, shall be called "Company X" for the purposes of this study. Company X is a large firm employing over 3000 employees, with a HR team of over 60 people. It specialises in Accountancy and Consulting services. The firm has projected high growth plans for the next five years and as such has a focus on implementing

key technological advancements that will help to support this growth. This will allow the firm to continue to provide the best possible service to its clients and a continued exceptional experience to its employees. Company X was an appropriate choice for this study as a HR chatbot is currently in place to address employee queries. Although the chatbot has had success in other countries globally, uptake in Ireland is low and this research will endeavour to understand the rationale behind this. The researcher in this study works within the HR Services/People Operations team of Company X. This team are responsible for the implementation and maintenance of the chatbot across the firm. Therefore, the conclusions, insights, and recommendations drawn from this research will allow the researcher to further improve the chatbot at Company X and educate the business to optimise their experience in using same. In this study, the researcher will review employee adaptation to HR chatbots from a HR professional's perspective. Previous academic research in this area has shown that chatbots are both time and cost-saving, accessible, efficient, and an always available alternative to human service provision (De Cicco, Silva, and Alparone, 2020). They can reach large audiences instantaneously and provide valuable insights and intelligence analytics into users' needs (Balakrishnan and Sankar, 2018; Raj, 2019; Johnston, Stone, and Lukaszewski, 2021). Noted risks associated with chatbot usage have been found to include potential bias, privacy, accountability, transparency, and ethical issues (Tambe, Cappelli and Yakubovich, 2019; Qamar, Agrawal, and Samad, 2020; Vrontis et al., 2021). While the research in this area is extensive among other countries across the world, there is a dearth of research into influences on chatbot adaptation, benefits, or risks in Ireland which is why it is imperative further research is carried out in this area here.

The research can be summarised in the below research questions:

1. What influences employees to use chatbots?
2. Why might employees prefer not to use chatbots to address their HR concerns?
3. What are the benefits associated with using chatbots, to the employee and to the business?
4. What are the risks associated with using chatbots, to the employee and to the business?
5. How can insights from chatbot data be used to influence the future of the organisation and/or the employee experience?

The research aims to address the following research objectives:

1. To understand what, from HR professionals' perspectives, influences employee adaptation to chatbots.
2. To understand and explore the benefits and risks associated with using chatbots to the business and the employee.
3. To understand and explore how insights drawn from chatbot intelligence can be used.

The proposed hypotheses for this research include the following:

1. H01: Employees prefer the immediate response of a chatbot and are comfortable using chatbots so long as the performance is as expected, and the information given resolves their query.

   HA1: Employees prefer directing HR queries to a human, as their expectation is to have information provided to them and resolved on their behalf as opposed to utilising self-service options.

2. H02: The benefits of using chatbots far outweigh any drawbacks or limitations, thus making chatbots an integral part of HR in the future.

   HA2: The limitations of using chatbots outweigh the benefits, thus meaning there is little place for chatbots in HR in the future.

3. H03: Although risks associated with chatbots do exist, they are limited and can be managed effectively thus making chatbots a safe option to use.

   HA3: The risks of using chatbots are difficult to manage making chatbots unsafe for many aspects of HR service provision.

4. H04: Insights can be used to better both the future employee experience and business by analysing re-occurring requests and proactively addressing them.

   HA4: Insights can be used to infringe on employee privacy and mis-used by the business.

## 1.3 Research Methodology

This research is based on ontological assumptions and employs an interpretivist subjectivist philosophy. As is recommended in subjective ontology and for research within a business setting where variances are complex and unique, an inductive interpretivist approach is adopted (Cunliffe, 2010). This aims to explore the difference in narratives, thoughts, and opinions of the HR professionals being interviewed. It aims to develop a rich understanding of the reality behind employee adaptation to chatbots, and what this means to HR professionals.

Data will be collected through semi structured interviews with ten HR professionals currently employed in Company X. Analysis of data will be conducted following the guidance of Braun and Clarke's (2006) thematic analysis. Key ethical considerations and limitations of the study are outlined in Chapter 3.

## 1.4 Research Structure

This dissertation is broken into six chapters.

1.  Chapter one includes a broad introduction and background to the area of research. It explains the rationale behind the study, and why it is a worthwhile area of investigation. It also discusses research aims, objectives and proposed methodology.

2.  Chapter two features an extensive literature review of the area. Discussion will develop from the broad uses of AI in HR, to focusing on chatbots specifically - their uses, influences on user adaptation, impact on the business, and benefits and risks associated with using same. This section will close with the constraints/limitations of the available literature on chatbots and why this study is important to try and bridge these gaps.

3.  Chapter three focuses on research methodology. It discusses the research aims, objectives, and hypotheses as well as research philosophy and design. Data collection, population and sampling, data analysis, ethical constraints, and limitations to the study are also discussed.

4.  Chapter four includes data analysis and discusses research findings from the primary research conducted – semi-structured interviews with 10 HR professionals across varying teams within Company X.

5. Chapter five features a discussion of the research findings, in response to each research objective and hypotheses. This chapter makes reference and comparison to previous literature in light of the results found in this study.

6. Chapter six includes a conclusion of the research, recommendations for future research, implications of findings for Company X and other organisations considering chatbot implementation, and a personal learning statement.

# Chapter 2: Literature Review

This chapter includes an extensive literature review of the research surrounding Chatbots. It will begin with an introduction to artificial intelligence which will discuss the broad uses of AI, both in general and within HR. It will then go on to focus on chatbots specifically - their uses, influences on user adaptation, impact on the business, and benefits and risks associated with using same. This section will close with a discussion on the limitations of the available literature on chatbots. It will explain why this is a worthwhile area of study and why it is important to bridge these gaps in the literature and provide a contribution from an Irish perspective.

## 2.1 Introduction to Artificial Intelligence

With the emergence of AI in recent times, several industries have adopted new technologies to automate and improve their services, for example, in banking and insurance AI has been trained to detect fraud and prevent cyber-crime (Kshetri, 2020). In online shopping and organisations in the form of virtual assistants/chatbots to assist with frequently asked queries (Balakrishnan and Sankar, 2018). It is used by Gmail to filter spam emails and by Netflix and Instagram to suggest personalised content based on previous preferences (Sugumar and Chandra, 2021). This has now spread to the use of AI in HR and has been steadily increasing in recent years bringing fundamental changes to organizational structure, how it functions, and the nature of work (Vrontis et al., 2021).

As with all technology in its infancy, the development of AI comes with a host of potential advantages that are novel and exciting. These however are also not without their difficulties. AI is currently used in several areas across HR. In recruitment, through advanced tracking systems for large volumes of applications, and in identifying from large pools of candidates matches for certain roles. AI in the form of big data algorithms has been instrumental in allowing organisations to expand the breadth of their searching processes. Coined e-recruitment, this has led organisations to reduce costs, access more applicants, and put in place faster response times (Vrontis et al., 2021). However, the reduction of cost is a long-term return on investment, in the short-term, the AI technology can be expensive, and the implementation requires manpower, time and commitment. For smaller, or less tech-focused companies, this makes the development of AI technology for their organisation more difficult,

if not redundant. Even for large technology giants the implementation of AI has its shortcomings. This was seen in Amazon's initial use of AI in recruitment screening where the technology developed a gender bias based on the volume of male applications used in creating the algorithm. This meant that it developed a preference to male candidates over female, unbeknownst to the organisation (Asher Hamilton, 2018).

Businesses are also now using AI in their branding which enables interaction with a larger population of consumers with a reduced need for an employee-based service. This allows the organisation to implement its guidelines across a large consumer base while also enhancing the user experience. Instagram and Twitter, for example, use AI to flag potentially harmful content that goes against their ethos while also using separate AI algorithms to enhance the user experience through preferences and related content (Harrison, 2019). Through AI, an organisation can monitor and influence preferences to a much larger scale. This is not without its complications however as was seen in Microsoft's AI chatbot "Tay" which was launched on Twitter to learn from and engage with the online community as a teenage user. Within 24 hours, a vulnerability within Tay was exploited by a coordinated attack fuelled with racist, misogynistic, and anti-Semitic slurs. As Tay had not been programmed to filter this abuse as flagged content, it began posting the slurs itself. This shows the complexity in designing an AI system so that it is not susceptible to external manipulation.

If used in employer branding, AI has been found to have a positive contribution to employer attractiveness and enhanced employee perception of the organisation (Kot et al., 2021; Weinert et al., 2020). In talent development AI is used, through customised virtual reality-based learning systems and learning programs that link individual work tasks and experience. IBM, for example, uses AI to advise employees what trainings they should take based off experiences of employees in similar roles (Tambe, Capelli, and Yakubovich, 2019). In performance management and review, to enhance accuracy and reduce concerns regarding validity, reliability, and bias. AI powered systems in the form of natural language processing takes data from several sources and compiles it, allowing managers to review the content holistically all the while saving them time in gathering the information themselves (Toerien, 2018). As a means of managing retention, AI is used to identify patterns that lead to turnover or recognise absenteeism patterns before they may even become an issue (Zhao, 2018). In resource allocation and management, to assist with volumes of administration and optimise

productivity. Lastly, in machine learning and chatbots, to reduce time-consuming repetitive queries so that talent professionals can focus on more strategic, meaningful, value-add tasks (Stavrou et al., 2007; Andrejczuk, 2018; Hmoud, 2021; Pereira et al., 2021; Vrontis et al., 2021).

It is clear from the above that the impact of AI in business and HR is far-reaching, albeit not without its difficulties, however, its potential continues to grow. This study will now turn its focus to artificially intelligent chatbots specifically.

## 2.2 Chatbots

Chatbots are human-like artificially intelligent agents that simulate human behaviour through natural social interaction (Johnston et al., 2021). Their development has been driven by new developments in the field of AI and machine learning (Brandtzaeg and Følstad, 2017). Chatbots perform two basic tasks, they analyse the user's request and provide an appropriate response (Shawar and Atwell, 2007). They are a question-answer system (Higashinaka et al., 2018) and carry out pattern matching, by accessing information and providing a pre-defined acknowledgement (Dahiya, 2017). They complete interpretational tasks, i.e., understanding the needs of the requestor and providing the most appropriate response from their repertoire of answers (Brandtzaeg and Følstad, 2017). Chatbots use natural language with the assistance of messaging applications, mobile applications, and websites (Jain et al., 2018). They can communicate via text, image, or voice. The chatbot market has been projected to grow from $2.6 billion in 2019 to $9.4 billion by 2024 (De Cicco et al., 2022) and their full potential has yet to be reached. There are several key themes which emerge when reviewing the literature surrounding chatbots and these will be discussed in sections below.

## 2.3 Chatbot Uses and Impact on the business

The most frequently reported motivational factor for using chatbots is productivity (Brandtzaeg and Følstad, 2017). Chatbots are an efficient alternative to getting the information one needs instantly. As the war for talent wages on, organisations need to be mindful of providing the best possible service and ensuring that information is clear and easily attainable to employees (Sudhakar, 2022). Chatbots have been proposed as a potential replacement for existing service provision roles, where the support is transactional in nature, be it in retail, banking, insurance, health, transport, or HR (Xu et al., 2017).

From a business perspective, chatbots are accessible, efficient, and available 24/7 (De Cicco, Silva, and Alparone, 2020). Chatbots are available to respond to users when they are at home or at work. Users can ask a question from their work or personal devices, late at night or at the weekends/during holidays. This contrasts with human-operated services, which typically run from 9am-5pm, Monday to Friday. Chatbots can increase the scalability and reach for responses as they can manage large volumes of requests for information (Johnston et al., 2021). For example, one bot can address the queries of thousands of requestors instantaneously, whereas a human would take much longer to address these queries individually. When working efficiently, chatbots can reduce the administrative burden for organisations and increase the amount of time available to spend on more complex, strategic, and value-add tasks (Toerien, 2018). This allows employees to focus on more meaningful and rewarding work. It also reduces margin for human error and wasted time. It is important to note however that chatbots can only use the data that they have been trained to answer, this can limit their responsiveness but also reduce their performance efficiency (Garg, Gaur and Sharma, 2021; Majumder and Mondal, 2021). For example, if the user asks a question that is not in the chatbot's catalogue of answers, the chatbot will be unable to respond. Therefore, to work efficiently and effectively from a productivity perspective, a great deal of time and effort needs to be taken to ensure the chatbot is designed to address the queries it is expected to answer.

Self-service through chatbots has been linked to higher rates of employee engagement and increased organisational reputation which also positively impacts the business (Koebel et al., 2022). Chatbots also have the potential to reduce cost for the business and provide valuable insights and intelligence analytics into the needs of the requestor (Raj, 2019; Balakrishnan and Sankar, 2018). Organisations can analyse the data from the chatbot to understand what common queries are being asked, how they could improve, and what is important to their employees. As noted in the next section, this also has an impact from the user's perspective as research has shown that performance expectancy of a chatbot has substantial effects on the intention to adopt chatbots (Sugumar and Chandra, 2021). Like a human, a chatbot needs to be properly trained to successfully perform its role (Summers, 2018).

## 2.4 The user perspective – peaks and pitfalls

From a user perspective chatbots are accessible and easy to use, provide an instant response, and are private and non-judgemental. There are several noted factors on user's intention to use a chatbot; these include perceived usefulness, perceived ease of use, perceived enjoyment, and performance expectancy (Lei, Shen and Ye, 2021). If a chatbot is difficult to use, or confusing, it is likely this will impact the user's future intention to use the chatbot and increase the likelihood of a negative evaluation (De Cicco et al., 2022). It is imperative chatbots are built to be fit for purpose, they must provide the correct response to the queries asked. There is huge importance in ensuring good design and technical functioning so that users do not experience incorrect or out-dated responses which could create distrust, stress, or boredom in the ability of the chatbot to complete its role. This in turn could create a hesitance or reluctance for repeated use on the user's part (Gifford and Haughton, 2019; Majumder and Mondal, 2021; Pereira et al., 2021).

There are key design points that must be considered by an organisation when implementing a chatbot in the business. It is essential to understand the expectations and consider the needs of the employee, to optimise use of the chatbot in the business. Research in this area has shown that the more a user perceives a chatbot to have a mind, the stronger their intention to use (Lee, Lee and Sah, 2020). This was replicated in the financial services industry which showed that people were more inclined to use the chatbot if they liked the machine they were interacting with (Sugumar and Chandra, 2021). This is coined anthropomorphism, a tendency to infer human characteristics from a non-human object (Epley, Waytz and Cacioppo, 2007).

Further research is needed to understand in what scenarios a human is preferred over a chatbot, or vice versa. It is possible that this could be dependent on the person, and how comfortable they feel in asking their query. A key limitation of chatbots is that they lack the judgement or social awareness that humans hold, and they remain unable to manage ethical decisions or social situations (Hislop et al., 2017). Chatbots are limited in this regard as they are unable to decipher severity of situations, and do not have the skills to address them. On one hand, employees can feel free to ask a chatbot as many queries as they like, without having to worry about imposing on HR's workload. In a similar vein, employees may feel more comfortable asking the chatbot queries of a sensitive nature. For example, in a study examining

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the efficiency of Woebot, a health chatbot developed to assist patients suffering from depression and anxiety, results showed that some people preferred the bot over a human therapist (Castelluccio, 2019). In contrast to this, other research has found that human service is preferred when the requestor requires empathy or a more personalised service (Lei, Shen and Ye, 2021). The level of empathy or understanding that humans offer remains unmatched in a chatbot.

## 2.5 Risks and how to overcome them

The increase in the demand for and development of AI powered agents brings with it a responsibility to understand how these technologies can be used, and to address ethical questions and challenges associated with them (Qamar et al., 2020). Privacy, accountability, bias, and transparency are key points of ethical concern that are continuously raised in the literature surrounding AI and Chatbots (Tambe, Cappelli and Yakubovich, 2019; Vrontis et al., 2021).

Chatbots are a direct reflection of the business, and as such, their design should be tailored accordingly (Harris, 2016). Organisations need to consider retention policies and the privacy of their employees when handling the data from the chatbot. The insights derived from the data produced need to be handled with care so as not to interfere with employee autonomy and privacy. It is imperative that fairness and ethical practices are maintained when analysing the insights from the chatbot (Qamar et al., 2020). Management must remember that human and artificial intelligence are interdependent and should work alongside one another as opposed to in siloes. It is important employees are also aware of when they should use a chatbot and when they should speak to a human. Education is key in informing how the chatbot should be used, its capacity, and what types of queries it is built to answer.

As mentioned above, chatbots can only use the data that they have been trained to answer. Therefore, consideration of the chatbot designer and monitoring needs to be taken so that the chatbot does not adopt the biases of its maker (Giermindl et al., 2021). For example, it may be beneficial to have multiple inputters and separate reviewers of the content to ensure its validity. If not monitored, any insights or analytics taken from the chatbot history may reflect the internal bias of the inputter. Chatbots also have the capacity to learn from the questions they are asked. Therefore, technological singularity whereby a machine develops higher levels

of intelligence than its maker, is a phenomenon to bear in mind (Hislop et al., 2017). This gives further weight to the importance of continuous monitoring to maintain and assess the chatbot's content to ensure it is acceptable.

The above-mentioned risks can be mitigated by adhering to Castelluccio's (2019) five principles for designing responsible and ethical chatbots. These include (i) transparency, i.e., let the user know if they are speaking with a chatbot, (ii) determine from the outset what the chatbot will be used for, (iii) be aware of the circumstances when it's inappropriate to use a chatbot, (iv) enable the chatbot to communicate with diverse and inclusive audiences, and (v) ensure the chatbot is not learning the wrong things. The last noted vulnerability has been coined the 'unsupervised child', a chatbot's activities and development need to be continually monitored to maintain and assess acceptable and unacceptable standards, adherence to policy, and risk management. For example, changes to policy, legislation, or conduct and procedures. Continuous monitoring will ensure that the chatbot, or it's makers, continue to hold themselves accountable for its content.

## 2.6 Limitations and Constraints – bridging the gap

There are several key limitations to the success of the chatbot in business. The organisational culture where it is to be implemented is an important factor to consider. The larger the company the less cost it will incur as a result of implementing new technology, and the larger return on investment they will attain. Smaller companies, perhaps in less tech-focused industries, might see that the cost outweighs the benefits of new technology implementation or they might be less likely to allocate budget to the development of AI in the workplace. Another vital consideration is that employees are trained, upskilled, and digitally developed so that they feel comfortable and confident in accepting the introduction of artificially intelligent technologies in the business. The attitudes, opinions, and preferences of an employee are likely to hugely impact their acceptance of new technologies, and the more support they receive from management and HR the higher this acceptance rate is set to be. A key study in the field put forth by Taule, Følstad, and Fostervold (2022) highlights the importance of HR professionals in acting as internal marketers for the chatbot technology, with respect to system functionality, advocacy, and positive word of mouth, all of which have been found to maintain enthusiasm for the technology and thus increase the chatbot's success.

Although there are certainly many noted benefits associated with chatbot usage in an organisation, much of the research in this area notes that the advancement of chatbot technology is still at a very early stage. There is a severe lack of research on chatbot implementation from an organisational perspective (Taule, Følstad, and Fostervold, 2022), and uptake of chatbot usage for internal business purposes is not prevalent in organisational settings (Brachten, Kissmer, and Stieglitz, 2021). The Chartered Institute of Professional Development (CIPD) commissioned research at Loughborough University and found that only 40% of the academic literature on the impact of new technologies, including AI, robotics, and automation on the service sector in the UK included original material, and over 50% consisted of literature reviews only. They concluded that robust evidence was embryonic, and as most of the research was from the transport/healthcare industries it could not be generalized to the wider economy or the field of HR specifically (CIPD, 2018; Hislop et al., 2017). Other studies have noted that rates of chatbot adoption are low even in the most technologically advanced countries, like the US, (LivePerson, 2019) and that user acceptance of existing chatbots is still less significant than expected (Simonite, 2017).

## 2.7 Conclusion

Research on the topic of chatbots in Ireland remains virtually non-existent. This means there is very little understanding regarding influences on adaptation, benefits, risks, and limitations here. This makes it extremely difficult to comprehend whether any of the relatively scant global literature can be applied to Ireland. This is a huge gap in the literature to fill, which is majorly problematic if chatbots are to be successful in an organisational setting in the future. There is so much room for potential, the possibility for optimisation of productivity is limitless. This goes hand in hand with the potential risks and possibility of manipulation of the AI as a novel technology without a roadmap. Therefore, it is imperative further research is carried out in this area.

This research will focus on developing an understanding of artificially intelligent HR chatbots, specifically influences on employee adaptation – why employees may or may not be inclined to use chatbots, and in what cases they would prefer a human over a Chatbot or vice versa. It aims to understand the benefits and risks associated with chatbot usage within professional services firm, Company X, in Ireland where it is known that a HR chatbot is currently in use. The

aim of this research is to contribute to the chatbot literature from an Irish perspective and attempt to apply previous literature here.

# Chapter 3: Research Methodology

## 3.1 Introduction

This chapter will discuss the research methodology of this dissertation. Its purpose is to provide the reader with further background to the area of study. It will begin with a summary of the research questions, objectives, and hypotheses. It will go on to discuss the research philosophy and design of this study. It will then discuss methods of data collection, population and sampling, data analysis, ethical considerations, and limitations. It will close with a brief conclusion on the chapter.

## 3.2 Research Questions, Objectives, and Hypotheses

The aim of this research is to contribute to the chatbot literature from an Irish perspective and attempt to apply previous literature here.

The research can be summarised in the below research questions:

1. What influences employees to use chatbots?
2. Why might employees prefer not to use chatbots to address their HR concerns?
3. What are the benefits associated with using chatbots, to the employee and to the business?
4. What are the risks associated with using chatbots, to the employee and to the business?
5. How can insights from chatbot data be used to influence the future of the organisation and/or the employee experience?

The research aims to address the following research objectives:

1. To understand what, from HR professionals' perspectives, influences employee adaptation to chatbots.
2. To understand and explore the benefits and risks associated with using chatbots to the business and the employee.
3. To understand and explore how insights drawn from chatbot intelligence can be used.

The proposed hypotheses for this research include the following:

1. H01: Employees prefer the immediate response of a chatbot and are comfortable using chatbots so long as the performance is as expected, and the information given resolves their query.

   HA1: Employees prefer directing HR queries to a human, as their expectation is to have information provided to them and resolved for them as opposed to utilising self-service options.

2. H02: The benefits of using chatbots far outweigh any drawbacks or limitations, thus making chatbots an integral part of HR in the future.

   HA2: The limitations of using chatbots outweigh the benefits, thus meaning there is little place for chatbots in HR in the future.

3. H03: Although risks associated with chatbots do exist, they are limited and can be managed effectively thus making chatbots a safe option to use.

   HA3: The risks of using chatbots are difficult to manage making chatbots unsafe for many aspects of HR service provision.

4. H04: Insights can be used to better both the future employee experience and business by analysing re-occurring requests and proactively addressing them.

   HA4: Insights can be used to infringe on employee privacy and mis-used by the business.

## 3.3 Research Philosophy and design

Research philosophy is defined as a system of beliefs and assumptions about the development of knowledge (Saunders, Lewis, and Thornhill, 2007). Applied to this study, it refers to the beliefs and assumptions which underpin the development of knowledge surrounding chatbot usage within Company X in Ireland. At every stage of the research process assumptions are being made, whether ontological, epistemological, or axiological. These assumptions shape further stages of the research process such as research questions selected, methodology used, and how findings are interpreted (Crotty, 1998). Therefore, strong, and coherent assumptions will inform and develop a strong and coherent research study.

This research will interview HR professionals to try and delve deeper into understanding why an employee may or may not utilise a chatbot for HR queries. It will endeavour to understand the benefits and risks associated with chatbot usage from a HR professionals' perspective. The assumptions being made are all ontological in nature as they concern the nature of the world and reality from the HR professional's viewpoint. As a result, it's clear this research is underpinned by an interpretivist subjectivist philosophy as it aims to develop a rich understanding of the reality behind employee adaptation to chatbots, what this means, and how HR professionals make sense of this. The researcher understands that within an interpretivist subjectivist philosophy their role is key, and their own beliefs and values play an important part – with an aim to understand the area of interest from the HR professional's point of view (Saunders, Lewis, and Thornhill, 2007).

In subjective ontology, induction is recommended as it is focused on context that emerges following experiences, whereby theory is informed by the data collected (Cunliffe, 2010). This research will be inductive and qualitative in nature, adopting an interpretivist approach to yield rich, insightful, and meaningful data. This is an appropriate design for this study as the data collected will be subjective in nature. The research aims to explore the difference in narratives, thoughts, and opinions of the HR professionals being interviewed, which may help to account for the difference in social perceptions of the phenomena being studied. Furthermore, interpretivist approaches are recommended for research within a business setting, like Company X, as they are not only complex but unique, with high levels of variation (Cunliffe, 2010).

## 3.4 Data Collection

Data collection, irrespective of philosophical underpinnings or method of collection, is simply explained as the generation of large amounts of data from which a researcher hopes to meet the research objectives of their study (Sutton and Austin, 2015).

Semi-structured interviews will be conducted in this study as they are most appropriate for an interpretivist subjectivist approach (Cunliffe, 2010). A semi structured interview includes a pre-determined list of open-ended questions which are informed by the literature of the research at hand. The open-ended questions allow further probing and discussion which gives the researcher the opportunity to delve deeper into the themes which arise (Adams, 2015). The

semi-structured interviews in this study will investigate perceptions of influences on employee adaptation to chatbots, as well as possible benefits and risks, from a HR professionals' perspective. This approach will allow for probing and follow-up in areas of interest that come to the fore during the interview, thus allowing the researcher to develop an in-depth understanding of the experiences of those being interviewed. The interviews will be conducted via Microsoft Teams. Interviews will be recorded with pre-confirmed consent of the participant. The questions that will be asked are outlined in the Appendices below.

## 3.5 Population and Sampling

The target population within research refers to a segment of the wider population that are best placed to act as a primary data source for the research. The sample then refers to a selection of people within the target population who can contribute to the research (Dudovsky, 2011).

The researcher works within the HR team of Company X where a HR chatbot is currently in use to address employee queries. As a result, the researcher will adopt a non-probability sampling technique and select, through snowball or purposive methods, 10 HR professionals of varying levels of seniority across different HR sub-teams within Company X. As each of the participants within the sample will have had exposure to a HR chatbot, the researcher believes that they will be a representative sample of the population.

The breakdown of participants is listed below:

Table 1. Participant profile

| Participant No. | Level | Gender | Sub-Team within Human Resources |
|---|---|---|---|
| 1. | Senior Associate | Male | Talent and Organisational Development |
| 2. | Senior Manager | Female | HR Services/People Operations |
| 3. | Associate | Female | HR Services/People Operations |
| 4. | Associate | Female | HR Services/People Operations |
| 5. | Senior Manager | Female | Talent/Business Partner |
| 6. | Assistant Manager | Female | HR Services/People Operations |

| 7. | Manager | Female | Talent/Business Partner |
|---|---|---|---|
| 8. | Assistant Manager | Male | Recruitment |
| 9. | Senior Associate | Female | Talent/Business Partner |
| 10. | Manager | Female | Talent/Business Partner |

## 3.6 Data Analysis

Interviews were conducted via MS Teams and recorded with pre-confirmed consent from the participant. Due to the nature of the data the researcher intended to collect; a thematic analysis of the qualitative interviews was adopted in this study. Firstly, identifying relevant codes by clustering data/quotations from the semi-structured interviews. Secondly, deriving these codes into themes and sub-themes of key areas of concern. The researcher followed the guidelines of Braun and Clarke (2006) to conduct this thematic analysis. The data was interpreted and analysed with the research objectives and literature review in mind, ensuring to take note of links which supported or rejected the hypotheses of this study.

## 3.7 Ethical Considerations

The use of qualitative data requires ethical consideration with regards to voluntary participation, informed consent, anonymity, confidentiality, and the role of the researcher as a data collection instrument (Sanjari et al., 2014). Participation in this research was entirely voluntary. If a participant was identified as part of the researcher's sample and consented to partake, they were free to opt in or out of the study at any point in time. Participants were briefed ahead of the interview to clarify purpose, aims, and benefits of the study thus allowing informed consent. Due to the nature of this research and to protect the anonymity of Company X, the selected HR professionals' identities will remain confidential. It is also important to consider the role of the researcher and the impact or effect they may have had on the data collected. Observations made and questions asked were objective and informed by previous literature. The researcher wished to identify effects impacting user adaptation to chatbots, as well as benefits and risks associated with same, so all attempts necessary were made to remove internal bias from the data collection process.

## 3.8 Limitations

There are two key limitations to this study. The first being the researcher interviewed HR professionals' perspectives on employee adaptation to chatbots. In an ideal world, it would be beneficial to also attain perspectives on adaptation to chatbots from employees directly. This would allow the researcher to also develop an understanding on their adaptation to chatbots, the benefits and risks associated with using same from their point of view, and if they feel the business could potentially drive insights, positive or negative, from chatbot data.

The second limitation to this study is one that is consistently tied to qualitative research, i.e., that although the interviews conducted allow the researcher to develop an understanding of the phenomenon being studied, analysis of results is undoubtedly impacted by the researcher's own agenda, personal point of view, and opinion. As a result, it would be beneficial for the research to be replicated in other similar organisations and by different researchers so that the results may be generalised to the population.

## 3.9 Conclusion

This chapter discussed the aims of this dissertation and summarised the research questions, objectives, and hypotheses being studied. The research philosophy chosen, and design of this study are an appropriate choice for the area of research and the type of data being collected. As they are strong and coherent, the research methodology of the study can be classed similarly. Despite two key limitations in this study, the researcher is confident that the research methodology chosen will meet the objectives and aims of the study.

# Chapter 4: Data Analysis

## 4.1 Introduction

This chapter will discuss research findings from the analysis of interviews conducted with 10 HR professionals within Company X. It will show the similarities and differences in opinion between the sample regarding Chatbots. The chapter will be structured by presenting a set of codes and themes in response to each research question posed within this dissertation, and then discussing each theme in detail.

## 4.2 Research objective 1 and 2: What influences employees to use chatbots? Why might employees prefer not to use chatbots to address their HR concerns?

During the interviews, many similar influences on employee adaptation to chatbots were mentioned. What is interesting, however, is that some of the influences mentioned could be both positive and negative, depending on the participant in question and their opinion on or prior experience with the chatbot. Influences were also found to strongly inform future use of the chatbot. The below table describes each of the key themes drawn from the coding and analysis of interview transcripts in relation to research objective 1 and 2 which aims to understand what influences employees to use chatbots, and why might employees prefer not to use chatbots to address their HR concerns.

Table 2: Research Objective 1 and 2 – Coding and themes

| Codes | Theme |
|---|---|
| Quick, instant response, no wait time, easy to use, ease of access, available 24/7, outside of business hours, accessibility, self-service, how easy it is to find, how easy it is to use | Accessibility & Efficiency |
| Reliability, accuracy, usefulness | Accuracy |
| Confidentiality, anonymity, sensitivity, privacy | Confidentiality & Anonymity |

| | |
|---|---|
| Previous experience with similar tools, previous experience with the chatbot in question (positive or negative), familiarity with tool, trust in tool | Prior experience with the chatbot in question or similar tools |
| Preference to speak to a chatbot over a human, lack of human element/inability to address the grey, lack of culture/human touch, no personal touch or human contact, reliance on human interaction | Preference for human over artificial intelligent interaction |
| Type of query, seriousness of query or if it needs escalation, complexity of the query, specificity of query, type of the query (transactional vs conversational), nature of the query | Nature and complexity of the query |
| Data security i.e., where the query will be held and concerns surrounding GDPR | Data Security Concerns |
| Other: Knowledge of the Chatbot's existence/ HR need to back the chatbot, comfort with technology, interactivity, generational differences, | |

### 4.2.1 Accessibility and Efficiency

The most common influence on employee adaptation to chatbots, and what was mentioned by each participant, was accessibility and efficiency. There was a consensus that employees would be influenced to utilise chatbots rather than contacting a human if it meant that they would receive the same information much faster – participant two noted "*I think the main reason why people would use a chatbot is to get instant access to the right information, so not having to wait for people to respond*". There was also agreement that chatbots offer much more flexibility than human assistance as it is available 24/7 and outside of business hours – participant six noted "*It's not, I guess within business hours like, they can ask a question outside of business hours and they'll get the answer to the question straightaway as well*".

### 4.2.2 Accuracy

Another key influence which was mentioned by all participants related to chatbot accuracy. Where the chatbot can offer a response that is accurate, reliable, and useful, it is clear this would influence employees to utilise the chatbot over a human to address their HR concerns. What is interesting here however is that the same theme can negatively influence an employee to use a chatbot, i.e., that if the chatbot is inaccurate, unreliable, or not useful or helpful in addressing their concern, this would negatively influence the employee to use the chatbot. Participant two covered both aspects of this theme in her response – *"As long as the chatbot is answering in the right way and building up that trust with the end user that they'll be more inclined to use it the next time. Whereas I think people will lose trust very easily if they're not getting accurate responses from the chatbot, so if they ask something one time and it doesn't know the answer, then they may be less inclined to use it the next time"*.

### 4.2.3 Confidentiality & Anonymity

Three participants noted that employees would be influenced to use a chatbot over a human where their HR concern was confidential or sensitive in nature. In contrast to this, four participants noted that employees would prefer to direct their query to a human where their query was confidential, sensitive, or where they were concerned about privacy. This is interesting as this theme can be seen to both positively and negatively influence employee adaptation to chatbots, perhaps depending on the participant or employee preference or opinion.

### 4.2.4 Prior experience with the chatbot in question or similar tools

Prior experience with the chatbot in question, or a similar tool, was another theme that was found to both positively and negatively influence employee adaptation to chatbots. This theme was mentioned by four participants from a positive perspective, where if an employee had a helpful, useful, and satisfying response or experience with a chatbot previously this would positively influence them to use the chatbot again. In contrast, this theme was mentioned by six participants from a negative perspective, where if an employee had an unhelpful or adverse

experience with a chatbot previously this would negatively influence them to utilise the chatbot again in the future.

### 4.2.5 Nature and complexity of the query

All participants agreed that the type of query an employee wishes to ask would influence whether they would prefer to direct the query to a chatbot or a human. This was further broken down into the complexity of the query, so whether the employee believed the chatbot had the capability/functionality to address a complex query, the sensitivity of a query which most mentioned as potentially regarding maternity leave, sick leave, or if an employee was thinking about leaving the firm, or just whether the query was transactional or conversational in nature. For example, if an employee wanted to view their annual leave balance it was appropriate to address this concern to the chatbot, but where an employee wanted to discuss their upcoming maternity leave options, or an employee relations concern this was found inappropriate – participant six noted "*If it's an easy query, like where can I check my annual leave? And it's just showing them a link where to go, but if they want to, I guess talk more in-depth on more kind of HR concerns or employee relation concerns*".

### 4.2.6 Data Security Concerns

Issues regarding where their query might be held, data security, and GDPR concerns were mentioned by two participants as reasons why an employee might prefer not to use a chatbot to address their HR concerns. This is potentially telling as to the employees understanding of the chatbot's set-up regarding data security. The chatbot in question at Company X does not have the capability to inform who asked the question, what area of the business the requestor is in, or what level they are, but it clearly is a potential negative influence for those who might have concerns surrounding their data security, when using technology as opposed to speaking to a human. In contrast to this, when probed re data security, most other participants assumed the chatbot would be set up to align with GDPR legislation and thus had no concerns in this regard.

### 4.2.7 Other Themes

Other themes which arose as influences to using chatbots were as follows:

- Knowledge of the Chatbot's existence: it was mentioned that there was potential that employees are unaware of the chatbot and perhaps advertising and education should be a priority for the business to let employees know about the chatbot, where it can be found, and what types of queries it can answer. This aligned with what was mentioned by participants five and seven, in that, it is important for HR to act as a positive reinforcer of the bot to ensure it is known and what it can do and to spread a consistent message to the business. Participant seven noted "*I think another big part of it is the whole HR team, like from, you know, your talent development straight through to your business partners. They all need to be completely on board or push the bot because otherwise when they send an email, they're undermining what the message is*". Similarly participant five noted that "*The way that we advertise it and promote it I think is really important… when I get a call and, you know, it's kind of working with staff, when they ask me a straightforward question, I could kind of pull up the bot in front of me and go, oh, let me just put your question into the bot and see what happens, you know, and then they kind of will learn and go, oh yeah, I could just ask the chatbot rather than annoying her with that question... that helps spread the word that this bot can answer the question a lot quicker. We're not going to do that with every person, but it would be beginning to change the behaviours and to help people self-serve, which is what we're trying to do is but I think we're, we're trying to do that, but we need to be kind of, I think we do need to be doing more in every way to educate the business about that and spend a lot of time in that because they really need it because they're so used to the other way, the hand-holding method.*"

- Comfort with technology and generational differences: this was mentioned by four participants whereby due to the range in age at Company X it was expected that there would be vastly varying levels of comfort with technology and noted generational differences. Company X is a training firm, and therefore welcomes hundreds of graduates each year who are growing up in a technological age and are expected to be comfortable with technology and self-service. Participant four for example noted that "*When you think about the generation that we're in now and further generations, when you look at their day to day lives, for example, like Alexa or Siri, you know, you ask them a question, they have their answer in 30 seconds.*

*They're going to want that in the work environment as well, where you can actually log on, ask your question, you have your answer within 30 seconds*". In contrast, there is a population of long-standing employees who may have been with the firm for 15-20+ years. They are used to the human in HR and having things actioned for them and as a result may not be as comfortable with technology, and potentially require change management to adapt to self-service options.

- Interactivity: this was discussed by participant 7 only but is note-worthy as it is noted in the literature review. She noted, "*Well the more interactive it is, so you feel like you're actually talking to somebody, it can sometimes be a lot easier*" i.e., where the chatbot is interactive, and mirrors speaking to a human, e.g., uses conversational tone and language, this would positively influence employees to utilise the tool.

## 4.3 Research objective 3 and 4: What are the benefits and risks associated with using chatbots, to the employee and to the business?

Several of the main influences for using chatbots were mirrored as also key benefits associated with using same. The below table summarises the main benefits mentioned by participants, to both the employee and the business.

Table 3: Research Objective 3 – Coding and themes relating to benefits of chatbots

| Codes | Themes | Impacts Employee? | Impacts Business? |
|---|---|---|---|
| Ease of access, fast response time, time management, speed, instant response, enhanced flexible working, quick, easy to use, timesaving, efficiency, immediate response frees up HR's time | Accessibility, timesaving, efficiency | ✓ | ✓ |
| Anonymity, privacy for confidential queries, confidential, comfort in asking silly questions without fear of judgement/embarrassment | Confidentiality & Anonymity | ✓ | |

| | | | ✓ |
|---|---|---|---|
| Reduces costs, cost saving, potential to reduce the number of HR staff needed, cost effective | Cost effectiveness | | ✓ |
| Less time spent on repetitive jobs, focus on more value-add roles, reduce volumes of queries to HR, decreased workload for HR on repetitive queries, more time to focus on projects/interesting work, reduction of repetitive work for HR, personal development, employee engagement, less attrition, more time to focus on strategic initiatives | Move from transactional to meaningful work for HR | | ✓ |
| Promotes culture of self service, increase in technology culture | Self-service | ✓ | ✓ |
| Other: preference for the written word rather than phone call/conversations – easier from a language barrier point of view; improved information access, shows employees that the business care for them | | ✓ | |
| Other: Consistent responses, improved data analysis for reporting/to identify trends | | | ✓ |

### 4.3.1 Accessibility, timesaving, efficiency

As mentioned in 4.2.1, the most mentioned influence on using chatbots is also a key benefit. To the employee, chatbots provide instant responses to an employee's query. They are helpful, efficient, and timesaving. Participant one also mentioned that accessing and using a chatbot can be done simultaneously while doing other work, as opposed to having to wait to speak to someone in HR – "*Another advantage is just time management that they can have a chat bot open while they're still doing other work rather than sitting on the phone waiting or kind of it's a bit more involved when you're on the phone or you're sending kind of batches of emails and stuff like that*". Participant two mentioned that as employees continue to work flexibly post-

Covid-19, the chatbot allows them to get answers to their queries 24/7, as opposed to having to wait for a member of the HR team to respond in business hours, which is a huge benefit to the employee. To the business, the same benefits were noted – mainly that when a chatbot is used it improves efficiency for the HR team, allowing them more time to focus on other work, and manage their time more effectively. This is discussed further in 4.3.4 below.

### 4.3.2. Confidentiality & Anonymity

As noted in 4.2.3, whereby three participants felt that employees would prefer to use a chatbot where their HR concern was confidential or sensitive in nature, this was also noted as a key benefit to the employee. Utilising chatbots allows the employee to feel comfortable asking as many different queries as they like without feeling as though they are burdening HR, or if they fear their question is trivial. The chatbot offers anonymity, privacy, and confidentiality to the employee, which they may not feel is offered when speaking to a human.

### 4.3.3. Cost Effectiveness

A key benefit of chatbots to the business, which was noted by five participants, was cost effectiveness. Where a chatbot can address HR queries, particularly at a much higher volume than a human can, this reduces the need for humans to answer these queries or work in these types of roles. In reducing the number of roles required for these queries, there is a potential for reduced costs for the business.

### 4.3.4 Move from transactional to meaningful work for HR

A key benefit noted by seven participants was that the less time spent on answering the repetitive queries that a chatbot can answer, or the less questions directed to HR due to them being managed by the chatbot, the more time available for HR professionals to focus on their own work and processes, additional projects, or different types of more meaningful work that offer increased value-add in their roles. It is important to remind the reader that these are responses coming from HR professionals within Company X, so it appears that a lot of their time is spent answering these repetitive, transactional queries which could be having an impact on job satisfaction. The addition of increased personal development, employee engagement, improved retention, and less attrition shows that this is something that is prominent for the

HR professionals in question, and perhaps should be an important consideration for the business. Participant five noted "*For your own kind of development as well as the business, because you will be happier if you're going to do more interesting work, you'll be adding more value, which is obviously more beneficial for the business*". The last benefit within this theme as mentioned by participant six, whereby they noted that implementation of a chatbot could allow HR more time to focus on strategic initiatives, is also of huge benefit to Company X and their future success.

## 4.3.5 Self-Service

A key goal of Company X, and other firms who are similarly trying to keep up with the ever-evolving fast paced technological advances of work today, is promoting a culture of self-service. This was mentioned as a key benefit to both the employee and the business. Where an employee can self-serve and attain the same information as they would have from a human in a fraction of the time, this is a huge plus from an efficiency and productivity perspective. Similarly, for the business, promoting a self-service culture and proceeding with continued technological developments is paving the way for continued future success.

## 4.3.6   Other themes

Other themes which arose as benefits to using chatbots were as follows:

- Participant one believes as Company X is a multicultural organisation, there might be a preference from employees for the written word and evidence of a response as opposed to a phone call or conversation. They noted this would be easier and more efficient where a language barrier or multi-cultural differences may be at play.

- Participants six and eight noted that the chatbot allows for improved information access. At company X there is a wealth of information available on the intranet, SharePoint, and policies, however a new hire to the firm may not be aware of these or know where they are each housed. The chatbot therefore acts as improved access to this information by directing the employee to the correct location for the information they need.

- Participant eight also noted that the implementation of a chatbot has the potential to show the employee how the business is investing in the technology to best serve

their employees, portraying how the organisation cares for its employees, and their exceptional experience at Company X.

The below table summarises the main risks of chatbots noted by participants, to both the employee and the business.

Table 4: Research Objective 4 – Coding and themes relating to risks of chatbots

| Codes | Theme | Impacts Employee? | Impacts Business? |
|---|---|:---:|:---:|
| Misinformation, inaccurate information, not fit for purpose, inaccurate responses, unreliable, accuracy, confusion on the employees' part | Misinformation | ✓ | ✓ |
| Frustration, loss of employee trust, reluctance to re-use, frustration of employees with HR, lack of trust/negative opinion of the chatbot, less likelihood of the employee using it again in the future, waste of resources | Frustration and distrust | ✓ | ✓ |
| Disconnect between employees & HR, less personal, lack of human connection, over-reliance on the chatbot rather than speaking to HR where necessary, disjointed employee/HR relationships, culture at risk, over-reliance on technology/automation | Over-reliance on AI leading to a disconnected workforce | ✓ | ✓ |
| Cannot deal with urgent concerns/won't be able to identify where a query requires escalation, missed escalations, potential for legal issues | Missed escalations and potential legal implications | ✓ | ✓ |
| Data security concerns, retention policy, risk management, GDPR concerns leading to potential legal implications | GDPR Concerns | | ✓ |

| Other: the chatbot requires constant updating, potential to reduce need for humans in HR | | ✓ |
|---|---|---|

## 4.3.7. Misinformation

The main risk, which was noted by all participants as both a risk to the employee and to the business, is misinformation. Misinformation was viewed in two ways, firstly whereby the chatbot was unable to respond to the query asked or secondly whereby the chatbot gave the incorrect response to the query asked. Misinformation in the form of being unable to respond to the query asked has the potential to then lead to the second most common risk, i.e., frustration and loss of trust in the chatbot's capabilities. However, a more worrying risk and concern on the part of the participants was if the chatbot gave the incorrect response to the employee but the employee believed it to be true. This has the potential to grow into a larger risk, leading to potentially missed escalations or legal implications for the company.

## 4.3.8 Frustration and Distrust

A follow on from 4.3.7 and another key risk noted by all participants was frustration on the employee's part where the chatbot is unable to fulfil its duties or provide the correct response. The main concern here is that if the chatbot is not fit for purpose, the employee will become frustrated and lose trust in its capabilities. This could then lead to a reluctance or hesitance to use the chatbot again in the future. Participant 5 noted that she used Company X's chatbot when it first launched in 2017, and despite major technological advances and improvements in the AI of the chatbot since then, she would still be reluctant to utilise it because of her previous experience. Further, she would be unwilling to recommend it to employees. This was also raised by participant 7, who noted "*Particularly like now in the organisation that we are in like it [the chatbot] has a name and even though there have been improvements made it's still the same name, so people are still thinking back to three years ago when they had that bad experience and they're like, oh no, I used that three years ago and it didn't work*". The frustration it seems is also not limited to the employee and the chatbot itself. Participant one believes employees could become frustrated with HR for pushing utilisation of the tool if it gives inaccurate responses. Participant ten also noted that HR are at risk of becoming

frustrated if the tool is not fit for purpose and a significant amount of time and resources has gone into building it.

### 4.3.9 Over-reliance on AI leading to a disconnected workforce

Another common risk mentioned by four of the participants was that the increase in automation and technology in HR has the potential to lead to a disjointed/disconnected workforce. The lack of personal connection, human touch, and push towards utilising self-service or automated alternatives to human service provision has the potential to take the 'human' out of human resources. Some employees may just prefer to speak to a human in HR rather than the chatbot. Participant two noted "*Removing some of the human element, perhaps it's creating a bit of a disconnect between employees as well. Often people prefer to have that kind of face-to-face time and might feel a little bit more of a disconnect when they're talking to a bot. And so just less of the, I suppose, the personal touch*". Participant five's role is to partner with the business and act as a trusted advisor, she noted that in some cases where the employee knows her and for example, is due to start a family and wants to discuss their maternity leave, the employee just wants to speak to an actual human being. A key concern of participant five, due to the increase in technology and automation, is the risk of losing the collegial, interpersonal culture that Company X has – "*The larger we get and the more we're using these automated approaches, it takes away from that kind of human touch and it does risk damaging our culture, our work environment, or what people like about working in our company*".

### 4.3.10 Missed escalations and potential legal implications

Six participants believe that there is a potential for missed escalations due to employees perhaps asking the wrong question or being unaware that the chatbot has given the wrong answer. Participant three worries that as the chatbot is unable to assess urgency and does not have the capability to escalate queries there is a huge risk for missed escalations. She urges the importance of educating the business, to let them know that if they are ever unsure if the chatbot's response is correct, to double check with HR. As the chatbot is owned and managed by HR, several of the participants noted the risk of potential legal implications, whereby the

employee could have grounds to say as this is the information that was provided by Company X's chatbot, which is managed by HR, and how were they to know it was incorrect.

### 4.3.11 GDPR Concerns

Four participants noted data security and GDPR as major risk of using chatbots. To the employee, if they ask the chatbot where they can update certain personal details or utilise the self-service options to update their address, PPS, or any other confidential information there is a worry as to where this information is held, how long it will be stored, and who has access to it. Interestingly, all other participants assumed that the chatbot was completely confidential and anonymous, and that as only HR has access to the information there was therefore no risk associated with data security/GDPR and chatbot adaptation. This is further discussed in 4.4.2 below.

### 4.3.12 Other Themes

Other themes which arose as risks to using chatbots were as follows:

- The chatbot requires constant updating: participant four noted that the content of the chatbot needs to be constantly monitored and updated to ensure it is accurate and not outdated. The risk here is that if HR's workload was to increase or there was a delay in updating the content of the chatbot that misinformation could occur.
- Participant nine was the only HR professional to express concern regarding the potential for chatbots to reduce the need for humans in HR – "*The more advanced technology goes, the less need for humans*".

### 4.4 Research objective 5: How can insights from chatbot data be used to influence the future of the organisation and/or the employee experience?

The data in response to this research question showed that most of the expected insights from the chatbot data are anticipated to positively influence the organisation and/or the employee experience. Even where the themes could be viewed from a negative perspective, there is a potential for these to be managed accordingly to mitigate the risk. The below table summarises the key insights from chatbot data and how these can be used to influence the future of the organisation and or the employee experience.

Table 5: Research Objective 5 – Coding and themes

| Code | Theme |
|---|---|
| Help to identify trends, analysis of repeated queries to improve service provision and the employee experience, analysis of themes leading to enhanced self-service culture, easier to track and report on huge amounts of data, potential to improve strategy, better reporting, potential to show the business what matters most to employees, better understanding of employees and their key concerns and frustrations, further enhance policy/procedures to reduce the volume of these queries moving forward, rich dataset to analyse/manipulate, supplement exit interview and other survey data, highlight key issues or things that are being done well | Increased data access leading to improved reporting and analysis of trends |
| Assumption that the tool would be GDPR safe as it is anonymous with ethical and risk management measures in place to avoid any negative insights being drawn, assumption that employees won't use the chatbot for confidential queries so no risk of negative insights being drawn, always a risk with technology for the data to be handled incorrectly but tool will be set up to be GDPR safe, requires data retention policies and ethical/risk management processes in place to ensure data is kept safe | Data Security & GDPR |
| Other: Potential for insights to be limited based off the population that use the chatbot, potential for business to act rashly where they see a spike in certain queries or trends. | |

### 4.4.1 Increased data access leading to improved reporting and analysis of trends

The most common theme and one that was mentioned by all participants was that the chatbot provides access to a wealth of rich, extensive data which could act to supplement other

employee data sources, like exit interviews or people pulse surveys. Utilising this data leads to improved reporting as the information is all in one place. Being able to view and track the queries that are being asked also allows for analysis of trends and themes, for example, queries that are asked frequently and come up time and time again. All participants believe analysis of these trends and themes have the potential to improve the employee experience and service provision, perhaps where something might seem particularly clear and available to HR but in fact is not to the employee. The consensus from this theme is that insights from chatbot data have the potential to only improve the experience of both employee and HR, by providing a better understanding of employees and their key concerns and frustrations, showing the business what is most important to their employees, and enhancing policies, procedures, and self-service mechanisms to better cater to those needs as a result.

### 4.4.2  Data Security & GDPR

There was agreement amongst six participants that the chatbot would be set up to align with GDPR regulation and have ethical/risk management policies and processes in place to mitigate any potential risks. Therefore, there is no potential for the chatbot data or insights drawn from same to negatively influence the future of the organisation and/or the employee experience. Further, participants three and nine believe that any employees who are worried about their data security or wish for their query to remain confidential would simply not direct their query to the chatbot to avoid this. Participant four noted that data retention policies and ethical/risk management processes must be in place to ensure employee data is kept safe. It appears therefore that so long as these measures are in place, the insights cannot be used to the business' advantage.

### 4.4.3  Other themes

Other themes which arose in response to this research question were as follows:

- Participant seven raised an interesting point; she noted that there was potential for any insights drawn to be limited based off the population that use the chatbot, and therefore not representative of the employee population. This is an important consideration for the business if they were to act on any of the insights drawn.

- Participant ten noted that there was potential for the business to act rashly where they see a spike in certain queries or trends. This risk of this occurring may be mitigated by the fact that only HR have access to the chatbot data, and thus insights shared would come through HR to the business however it is again an important consideration for the business.

## 4.5 Conclusion

This chapter provided a detailed summary of the key themes which arose in response to each research question within this study. While most of the data collected can be tied to previous literature, the similarities, and differences in opinions between the participants interviewed are thought-provoking and will yield an interesting discussion in the next chapter.

# Chapter 5: Discussion

## 5.1 Introduction

This Chapter will discuss the research findings with reference and comparison to previous literature. It will be structured by discussing each research question and hypotheses in response to the results found. The focus of this study was to contribute to the literature on chatbot usage in Ireland and to try and apply previous literature here. The research aimed to address the following research objectives:

1. To understand what, from HR professionals' perspectives, influences employee adaptation to chatbots.
2. To understand and explore the benefits and risks associated with using chatbots, to the business and the employee.
3. To understand and explore how insights drawn from chatbot intelligence can be used.

The next sections will discuss each of the above research objectives and the subsequent hypotheses in response to the research findings. It will also demonstrate ties to the literature and academic research in this area.

## 5.2 Discussion

### 5.2.1 Research Objective 1 and Hypotheses H01/HA1

The first research objective within this study was to understand what, from a HR professionals' perspective, influences employee adaptation to chatbots. The subsequent null and alternative hypotheses based off this research objective were as follows:

H01: Employees prefer the immediate response of a chatbot and are comfortable using chatbots so long as the performance is as expected, and the information given resolves their query.

HA1: Employees prefer directing HR queries to a human, as their expectation is to have this kind of information provided to them and resolved on their behalf as opposed to utilising self-service options.

Data analysis shows that there are several key influences on employee adaptation to chatbots, most of which align with the previous literature in the area. These included accessibility and efficiency, accuracy, confidentiality and anonymity, prior experience with the chatbot in question or similar tools, preference for human over artificial intelligent interaction, nature and complexity of the query, data security concerns, knowledge of the chatbot's existence and interactivity.

Several of the above were found to either positively or negatively influence employee adaptation to chatbots, depending on the participant in question and their opinion on or prior experience with the chatbot. For example, where the chatbot was found to be accessible, efficient, accurate in its responses, and data secure, this would positively influence an employee to use the chatbot. This is in line with Brandtzaeg and Følstad (2017) most common motivating factor for using chatbots as being productivity, where the chatbot can fulfil its role it is a preferable alternative to human service provision. It also aligns with Lei, Shen and Ye's (2021) factors affecting intention to use a chatbot. However, where the chatbot was inaccessible, inefficient, inaccurate in its responses, or there were potential concerns regarding data security, this would negatively influence an employee to use the chatbot. Prior experience with the chatbot in question or a similar tool ties into these key influences, as if the employee experience was previously positive or negative it seems to strongly impact future intention to use the chatbot. This echoes the caution mentioned by Gifford and Haughton (2019), Majumder and Mondal (2021) and Pereira et al., (2021) whereby if the chatbot was unable to fulfil its duty or the employee had a negative previous experience using the tool, this could create a hesitance or reluctance for repeated use on the user's part.

Depending on the employee, it seems that if there is an innate preference for human over AI interaction, this would negatively influence the employee to use the chatbot. Similarly, if the employee had any concerns regarding data security or GDPR, it was expected that they would not use the chatbot if this were the case. In contrast however, it was mentioned by several participants that it was assumed the chatbot would be set up to be data secure and aligned to GDPR legislation, so this was not a concern for these at all.

Confidentiality and anonymity were interesting themes that arose as participants had mixed opinions as to whether an employee would prefer to address a confidential concern to the chatbot, or to an employee. This ultimately came down to the employee in question, and their personal preference. This again aligns with both sides of the literature, i.e., Castelluccio (2019) in that some people will prefer to direct a confidential or sensitive query to a chatbot and Lei, Shen and Ye (2021) in that others prefer human service where the requestor requires empathy or a more personalised service.

Similarly, the nature and complexity of the query was found to strongly influence intention to use the chatbot. It was expected that where the query was complex, detailed, or conversational in nature it would be directed to a human in HR, whereas if it was a straightforward or transactional query the employee would be happy to address it to the chatbot.

Knowledge of the chatbot's existence raised the issue of education and internal advertising or marketing by HR. This would let employees know that the chatbot is there for questions, to educate them on how to ask the chatbot, and what types of queries the chatbot can answer. This is interesting as it was mentioned in the literature review by Taule, Følstad, and Fostervold (2022) who highlighted the importance of HR professionals in acting as internal marketers for the chatbot technology, with respect to system functionality, advocacy, and positive word of mouth, all of which were found to maintain enthusiasm for the technology and thus increase the chatbot's success. Participant five noted that in doing this the business can slowly encourage and implement self-service by showing employees how the chatbot works, educating them on the types of queries it can answer, and most importantly spreading the word as to how quickly they will receive their response. Participant seven noted however that the entire HR team needs to advocate the chatbot so that there is a consistent message being put out to employees and the team is not undermining one another. Education, marketing, and consistency from the HR team to employees across Company X will be vital to ensure the success of the chatbot.

Interactivity was the last-mentioned theme and is important to touch upon as it is mentioned in the literature. As noted in chapter four, where the chatbot is interactive, and mirrors speaking to a human, e.g., uses conversational tone and language, participant seven found this would positively influence employees to utilise the tool. This aligns with research by Epley,

Waytz, and Cacioppo (2007) who defined anthropomorphism as a tendency to infer human characteristics from a non-human object. It also echoes the work of Lee, Lee, and Sah (2020) who found that the more a user perceives a chatbot to have a mind, the stronger their intention to use. Lastly, it mirrors research conducted by Sugumar and Chandra (2021) which demonstrated that people were more inclined to use the chatbot if they liked the machine they were interacting with. It is clear therefore that these remain key design points that must be considered by an organisation when implementing a chatbot in the business.

It is clear from the above, that we can accept H01, i.e., that where the chatbot's performance is as expected and the information given resolves the employee's query, employees would prefer the immediate response of a chatbot, and are comfortable utilising same so long as this is the case. While there are caveats to this, as mentioned due to the confidentiality or complexity of the query, or due to a preference for human service over a chatbot, this is not predominantly the case. However, it is also important to note that as mentioned by participant five, a large volume of employees at Company X are very familiar with old ways of working, i.e., the 'hand-holding' method and having tasks actioned on their behalf, so it will take some time to manage the change to self-service and form new ways of working.

### 5.2.2   Research Objective 2 and Hypotheses H02/HA2 and H03/HA3

The second research objective was to understand and explore the benefits and risks associated with using chatbots, to the business and the employee. The subsequent null and alternative hypotheses based off this research objective were as follows:

H02: The benefits of using chatbots far outweigh any drawbacks or limitations, thus making chatbots an integral part of HR in the future.

HA2: The limitations of using chatbots outweigh the benefits, thus meaning there is little place for chatbots in HR in the future.

H03: Although risks associated with chatbots do exist, they are limited and can be managed effectively thus making chatbots a safe option to use.

HA3: The risks of using chatbots are difficult to manage making chatbots unsafe for many aspects of HR service provision.

Considering firstly the benefits of using chatbots, to the employee and the business. It was found that several key benefits mirrored positive influences to using the chatbot, i.e., accessibility, timesaving, efficiency, confidentiality, and anonymity. Accessibility, timesaving, and efficiency are all noted in the literature as benefits of chatbots (De Cicco, Silva, and Alparone, 2020; Johnston et al., 2021) so it is not surprising that these were mentioned here. While confidentiality and anonymity were mentioned as benefits it is now understood that this is dependent on the employee and query in question, as while it is a benefit to some, it has the adverse effect on others. There does not appear to be any rhyme or reason to the difference in opinion amongst the HR professionals interviewed, for example, age, level, or role, so further research would be required to understand why this is the case. A key benefit to the business was noted as cost effectiveness, echoing the work of Raj (2019), and Balakrishnan and Sankar (2018). Chatbots have the potential to reduce costs for the business in allowing the tool to answer those frequent and repetitive queries and reducing the need for humans to fulfil these roles. This in turn brings us to another key benefit, i.e., the move from transactional to meaningful work for HR and the increase in self-service. This was outlined in the literature by Toerien (2018) whereby chatbots were found to reduce the administrative burden for organisations and increase the amount of time available to spend on more complex, strategic, and value-add tasks. This thus allows employees to focus on more meaningful and rewarding work. This was of huge importance to the participants interviewed, as HR professionals it shows that a lot of their time is spent answering these repetitive and transactional queries which could be having an impact on job satisfaction. The increase in self-service because of chatbot implementation was a knock-on impact and as mentioned by Koebel et al. (2022) self-service through chatbots has been linked to higher rates of employee engagement and increased organisational reputation which also positively impacts the business. It is now understood that not only does this increase employee engagement, but it is expected to increase HR's engagement and improve retention too.

Moving on to the main risks of using chatbots, to the employee and the business. Those which echo the key risks as mentioned by Sugumar and Chandra (2021) and Summers (2018) i.e., where a chatbot fails to provide the correct response or does not perform as expected, this not only has the potential to provide misinformation but leads to frustration and loss of trust in the tool, and a hesitance or reluctance to utilise it again in the future (Gifford and Haughton,

2019; Majumder and Mondal, 2021; Pereira et al., 2021). Misinformation from the HR professionals' perspective in this study has the potential to also lead to missed escalations and potential legal implications. This is something that is not mentioned in the literature but perhaps shows the difference in chatbot usage within an organisation, that this is an inherent concern for businesses to be aware of. As mentioned by Hislop et al. (2017), a key limitation of chatbots is that they lack the judgement or social awareness that humans hold, and they remain unable to manage ethical decisions or social situations, therefore it is important for the employee to understand when a case requires urgency or escalation. Concerns surrounding GDPR and data security can be aligned to risks noted in the literature concerning privacy and transparency as noted by Tambe, Cappelli, and Yakubovich (2019) and Vrontis et al. (2021). While most participants assumed the tool would be set up to be data secure and align with GDPR legislation and thus pose no risk in this regard, this was still a potential risk as noted by two participants. As the chatbot could yield information that is personal and/or confidential, it is important that the tool is set up to protect this data and imperative the organisation has retention and risk management policies in place to do this. So long as the chatbot is set up in this way, this should mitigate this risk. Participant four was the only interviewee to note that the chatbot's continuous monitoring and updating is a potential risk, and as such, it is appropriate for organisations to adhere to Castellucio's (2019) guidelines for designing responsible and ethical chatbots. Interestingly, a common risk that is consistently noted in the literature, i.e., that of biased content within a chatbot, was not one that came to light in the interviews conducted. This is fascinating as it is a prominent feature in previous literature, perhaps it may be the case that the HR professionals in question do not recognise their own inherent biases, or perhaps the sample selected are naturally unbiased given their positions in the business. Future research would be required to understand why this is the case.

A common risk as noted by several participants in this study but one that is not mentioned in the literature is an over-reliance on AI leading to a disconnected workforce. This is perhaps telling as to the breadth of the literature surrounding chatbots within organisational settings. Also mentioned by Taule, Følstad, and Fostervold (2022) there is a severe lack of research on chatbot implementation from an organisational perspective and similarly Brachten, Kissmer, and Stieglitz, (2021) who noted that uptake of chatbot usage for internal business purposes is not prevalent in organisational settings. This is a novel finding, and one which was not expected

but is clearly prevalent within this sample. It is expected that future research is required on chatbots within a business setting to fully understand this risk, implications it may have on the business and steps required to mitigate same.

In review of the above, the researcher believes the research findings strengthened by the literature support the acceptance of H02 and H03, i.e., that the benefits of using chatbots far outweigh any drawbacks or limitations, thus making chatbots an integral part of HR in the future and although risks associated with chatbots do exist, they are limited and can be managed effectively thus making chatbots a safe option to use. A caveat within this research question is the limitation regarding research on chatbots in a business setting, as mentioned two key risks noted by participants in this study, i.e., missed escalations leading to potential legal implications and an over-reliance on AI leading to a disconnected workforce, are not mentioned in the literature and as such require further research to fully understand these risks.

### 5.2.3   Research Objective 3 and Hypotheses H04/HA4

The last research objective was to understand and explore how insights drawn from chatbot intelligence can be used. The subsequent null and alternative hypotheses based off this research objective were as follows:

> H04: Insights can be used to better both the future employee experience and business by analysing re-occurring requests and proactively addressing them.

> HA4: Insights can be used to infringe on employee privacy and mis-used by the business.

The most common theme that arose in response to this research question was a positive one, i.e., that a chatbot provides access to a wealth of rich, extensive data which has the potential to lead to improved reporting and analysis of key trends which are important to the employee. The consensus from this theme is that insights from chatbot data have the potential to only improve the experience of both employee and HR, by providing a better understanding of employees and their key concerns and frustrations, showing the business what is most important to their employees, and enhancing policies, procedures, and self-service mechanisms to better cater to those needs as a result. This echoes the literature as mentioned by Raj (2019) and Balakrishnan and Sankar (2018) in that the chatbot data can provide valuable

insights and intelligence analytics into the needs of the requestor, upon which the organisation can improve service provision, ensuring that information is clear and easily attainable to employees, and most importantly provide the best possible customer service to their employees (Sudhakar, 2022).

While data security and GDPR concerns were noted as a potential risk to two participants, most believed that the chatbot would be set up to align with GDPR regulation and have ethical/risk management policies and processes in place to mitigate any potential risks. Therefore, there is no potential for the chatbot data or insights drawn from same to infringe on employee privacy, be mis-used by the business, or to negatively influence the future of the organisation and/or the employee experience.

There were two other potentially worrying and note-worthy points raised regarding insights that could negatively influence the future of the organisation and/or the employee experience. These were mentioned firstly by participant seven, such that any insights drawn could be limited based off the population that use the chatbot, and therefore not representative of the employee population. Secondly, by participant ten who noted that there was potential for the business to act rashly where they see a spike in certain queries or trends. It is the researcher's belief that these insights are less likely to occur given that the business and key decision makers would not have instant access to the chatbot data as it is owned and managed by HR. Therefore, any data insights shared are likely to be collated and summarised by HR before being shared with key decision makers, and as such they can be analysed and shared with a word of caution ensuring the business fully understand the data, the population it came from, and whether it can be taken as representative of the employee population.

It is clear from the above that H04 can be accepted, insights from chatbot data can only be used to better both the future employee experience and business by analysing re-occurring requests and proactively addressing them to improve the business.

## 5.3 Conclusion

In conclusion, the null hypotheses formed in response to each of the five research questions outlined at the beginning of this study were retained. This is albeit with several caveats which

have been outlined above. As such, the alternative hypotheses for each research objective can be rejected.

Recommendations for future research have been provided so that the literature can be further developed to fully understand the impact of chatbot usage within an organisational setting. These recommendations are discussed further in Chapter 6.

# Chapter 6: Conclusion and Recommendations

## 6.1 Conclusion

The purpose of this study was to investigate employee adaptation to chatbots. It hoped to develop an understanding of the influences on employee adaptation, and why employees may or may not be inclined to use chatbots to address their HR concerns. It also aimed to explore the benefits and understand the risks associated with using chatbots, to both the employee and the organisation, within professional services firm, Company X, in Ireland. This research aimed to contribute to the chatbot literature from an Irish perspective and attempt to apply previous literature here.

Three research objectives were set, with null and alternative hypotheses derived in response to each. In light of the research findings, all null hypotheses were accepted. Employees are expected to prefer the immediacy of a chatbot and are comfortable utilising same so long as the chatbot's performance is as expected and the information given resolves the employee's query. While there are limitations or caveats to this as mentioned in 5.2.1, this is predominantly the case. The benefits of using chatbots were found to far outweigh any drawbacks or limitations, and although risks associated with chatbots do exist, they are limited and can be managed effectively thus making chatbots a safe option to use and an integral part of HR in the future. The main caveat within this research question was surrounding the lack of research on chatbots in an organisational setting. This is discussed further in 6.2. Lastly, insights from chatbot data are expected to be used to only better both the future employee experience and business by analysing re-occurring requests, addressing trends and themes, and proactively resolving them to improve service provision for employees.

## 6.2 Recommendations

In review of the findings from this study, the researcher proposes several recommendations.

From the outset, it was acknowledged that there were two key limitations to this study. Firstly, this research interviewed HR professionals' perspectives on employee adaptation to chatbots. Further research would be required to attain perspectives on adaptation to chatbots from employees directly. This would allow a more in-depth understanding on employee adaptation

to chatbots, the benefits and risks associated with using same from their point of view, and if they feel the business could potentially drive insights, positive or negative, from chatbot data. It would also be interesting to assess the similarities or differences in perspectives between HR professionals and employees. The second limitation, and one that is consistently tied to any qualitative research is that although the interviews conducted allowed the researcher to develop an understanding of the phenomenon being studied, analysis of results was undoubtedly impacted by the researcher's own agenda and opinion. As such, replication of this research in other similar organisations and by different researchers would be required to assess if results may be generalised to the population.

Further recommendations are unique to an organisational or business setting, as several findings came to the fore during analysis that were not present themes in the literature. As novel and unique findings, further research is important to formulate a holistic review of chatbot usage within a business setting. This would be imperative before organisations commit to implementing a chatbot for HR queries. The two key risks noted by participants in response to research question two which assessed risks associated with chatbots included:

- The potential for missed escalations to lead to legal implications for the organisation; to mitigate this risk, the researcher recommends that specifically two of Castelluccio's (2019) guidelines are followed to ensure that firstly, it is determined from the outset what the chatbot will be used for. It is expected that chatbots will only be used for transactional and straight forward service provision queries and as such, there should not be a risk for missed escalations with these queries. Secondly, employees need to be aware of the circumstances when it's inappropriate to use a chatbot. If the chatbot is marketed and advertised appropriately to the business and they are educated on what it should be used for, this should further mitigate this risk. Additional research is required to understand whether these guidelines would suffice in lessening the likelihood of these risks occurring, or if further steps would be required.
- The potential for an over-reliance on AI to lead to a disconnected workforce: as mentioned in 5.2.2, this was a novel finding, and one which was not expected but was clearly prevalent within this sample. It is evident that future research is required on chatbots within a business setting to fully understand this risk.

Organisations need to consider the implications this may have on their business, their people, and their culture. They need to decide either the steps required to mitigate this risk, or how they might best manage this within their company.

## 6.3 Implications of Findings

The implications of these findings will vary for different organisations. For Company X, where a HR chatbot is already in use, it is viewed as beneficial with manageable risks. Clear recommendations have been offered to understand how to further improve the chatbot and educate the business to maximise the potential of their experience. As a large firm employing over 3000 people, the costs of implementing this technology did not outweigh the anticipated benefits, and with further growth plans expected for the firm in the next five years, they need to focus on the most productive technologies to ensure the employee experience with HR is optimal. The chatbot however will need to be continuously maintained and updated, and this will require consistent attention from HR, however as mentioned above if this means the chatbot can remove the repetitive and transactional day to day queries that HR face and allow them time to focus on more rewarding work, this is a clear positive. Where an organisation is considering implementing a chatbot for HR queries, they must ensure to adhere to the key design guidelines and literature to guarantee it is effective from the outset. As trust is so easily lost where the chatbot is not performing as expected, this is not a risk an organisation should take if they wish for their return on investment down the line. Time, effort, and commitment is required to ensure the chatbot will perform as expected from the beginning, and this demand will not decrease with time as it is imperative the chatbot is monitored continuously. It is expected that in smaller organisations, perhaps employing less staff or with lesser budgets for advancing technologies, that these companies will not have the manpower to devote so much time and attention, or the budget, to adopt a chatbot in their organisation.

## 6.4 Personal Learning Statement

Taking on this dissertation during a global pandemic, while working remotely full-time was a huge undertaking. The time, effort, and commitment that was required all the while managing work, exercise, time with friends and family, and downtime was a balancing act that I did not expect to be as difficult as it was. The most important thing this dissertation has taught me is

flexibility and time management - it is amazing what and how much can be done when you put your mind to it.

Having completed my undergraduate degree six years ago, it took some time to get back into the swing of research, academic writing, and critical thinking. However, re-learning these skills has been most valuable and can certainly be applied to other areas of my life.

Choosing a topic that really interested me and that was applicable to my role at Company X, where I can bring back the findings, really helped the process. I have learned more about artificial intelligence than I have ever expected and the fact that I can bring this learning back to my role and apply it there, makes it even more rewarding. Further, the findings support and encourage the development of the chatbot at Company X and have provided much food for thought for improvements to the chatbot and optimising the employee experience moving forward. I can now make plans to implement the improvements to the chatbot in my role on the HR Services/People Operations team so that Company X can continue to provide the best possible service to its clients and a continued exceptional experience to its employees.

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# Appendices

<u>Interview questions</u>

1. What do you think influences employees to use chatbots to address their HR concerns?

2. Why do you think employees might prefer not to use chatbots to address their HR concerns?

3. What, in your opinion, are the benefits of chatbots, to the employee and to the business?

4. What, in your opinion, are the risks of chatbots, to the employee and to the business?

5. How can insights from chatbot data be used to influence the future of the organisation and/or the employee experience?