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The Integration of AI-driven HR Chatbots for Enhanced the Employee Onboarding Processes

Chatbots as a complimentary tool

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ABSTRACT

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Companies are increasingly relying on new technologies to streamline their daily operations and adapt the volatile, uncertain, complex, and ambiguous environments of businesses. The emergence of Artificial Intelligence (AI) and machine learning has further revolutionized operational functions, with HR chatbots emerging as impactful tools in streamlining onboarding processes. By providing personalized and accessible support, chatbots facilitate quick access to information, enhancing decision-making for employees. This is particularly crucial in addressing the challenges associated with traditional onboarding practices, such as time-consuming paperwork and manual follow-up procedures.

Onboarding is the employee's first touch with the company after the initial recruitment process and it can have a long-lasting impact on the employee engagement, retention, and overall organizational performance. Relying only on traditional HR practices can lead to challenges, since it can lead to insufficient access to resources and training as well as delays in communication between the organization and the newly hired employees. As a result, new employees may struggle to access the necessary information and resources to effectively navigate their roles and responsibilities within the company.

The research topic for the thesis is to gain a deeper understanding can HR Chatbots serve as a complementarity tool alongside humans to onboard new employees more efficiently and proficiently. Can the Chatbot understand user queries, extract relevant and valid information, and generate context aware responses to the user (employee). Not as to automate all the processes, rather play a role of an intellectual assistant that can complement the boarding of a new employee. And more importantly, are the employees ready to accept the assistance, and do they view it as something that could enhance their onboarding experience or not?

Keywords HR Chatbots, streamline, AI, complementarity tool, new employees

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1 INTRODUCTION

In today's dynamic business environment, firms are increasingly embracing new technology advancements to optimize their operations. Employees are moving across companies and talent management has become increasingly vital for companies. Moreover, onboarding is known to be costly for the company, which is why companies do not wish the employee to leave the company swiftly after initial investment (Davila & Pina-Ramirez, 2018)

Artificial Intelligence (AI) and machine learning have emerged as transformative technologies for various operational functions. HR Chatbots have particularly stood out as an impactful tool in streamlining HR onboarding processes. The onboarding of new employees plays a critical role in shaping organizational performance, including employee engagement, retention as well as facilitating cultural integration. These days, the way how companies introduce new employees to their roles has changed from how it used to be done. Instead of a one-time event known as "employee orientation," or "employee orientation day" it is now called "Employee onboarding."

This shift recognizes onboarding as a continuous process that extends throughout an employee's time in the company. When done well, this process can benefit the company by helping employees integrate smoothly into their roles, which is vital in the grand scheme, (Zaguri, 2016, 3). Bauer and Erdogan (2011, 51), defines onboarding as organizational socialization that facilitates the transition of new hires from external to internal members of an organization. Onboarding encompasses the steps taken to equip new employees with the necessary knowledge, abilities, and conduct to thrive within their new workplace.

Traditional onboarding practices, such as paper-based forms, in-person training, and manual follow-up procedures, can be time-consuming, repetitive, and prone to errors in the long-run. As a result, new employees may struggle to access vital information and resources needed to navigate their roles effectively. These challenges may arise; hence they can involve inefficiencies and lack of personalization. HR chatbots could serve as a solution to address these challenges by providing personalized, interactive, and accessible support throughout the onboarding journey and beyond. Chatbots can promptly address inquiries in real-time, facilitating prompt decision-making for employees" (Joshi, Deepika,

2018, p. 165). When HR managers have a small number of new hires, they can usually manage the process smoothly. However, it becomes difficult when there is a large influx of employees. In these situations, chatbots step in to assist with the onboarding process by interacting with employees, whose workload can become more manageable (Westberg, 2019). By accelerating the training period and adding cognitive solutions in the employee journey - it may foster employee engagement in the long run, which ultimately benefit not only the company, but also the HR professionals, as they do not have to search for new candidates for the job.

The traditional onboarding processes in organizations face challenges related to communication gaps between the organization and newly hired employees, leading to difficulties in accessing necessary information and resources. In response to these challenges, there is a growing need for innovative solutions to streamline the onboarding experience and enhance employee engagement, retention, and overall organizational performance. This study aims to address this problem by investigating the role of HR chatbots, leveraging advancements in artificial intelligence and cognitive science, in improving the efficiency and effectiveness of onboarding processes.

This thesis focuses on examining the potential synergy between HR chatbots and conventional onboarding methods. Will it be accepted by the employees; moreover, will they even be comfortable interacting with an HR Chatbot? It aims to investigate how the integration of artificial intelligence and cognitive science can streamline and improve the efficiency and successfulness of onboarding processes for newly hired employees. By researching a number of real-life examples of firms utilizing Chatbots in their operations and interviewing professionals and conducting surveys for employees, the study aims to further gain a deeper knowledge whether these solutions could be beneficial for the company as well as the employees in the long run. Furthermore, whatever employees would find these HR Chatbots beneficial enough and be comfortable using them.

The theoretical framework of this thesis comes from concepts of various domains, but is mostly focusing on human resource management, Artificial Intelligence (AI) and onboarding theories. The integration of these theoretical perspectives provides a comprehensive understanding on the significance of onboarding, and role of HR Chatbots in the onboarding processes as well as how they could add value to the processes. By synthesizing these

theoretical perspectives, the research aims to contribute to the advancement of knowledge in both HRM and AI domains, with practical implications for organizational onboarding practices.

2. LITETATURE REVIW

2.1 Onboarding processes

Employee onboarding process refers to the systematic approach taken by a given organization to integrate new employees into the company culture, familiarize them with their roles and responsibilities, and provide them with the necessary tools and resources to succeed in their job position. "Organizational socialization, or onboarding, is a process through which new employees move from being organizational outsiders to becoming organizational insiders. Onboarding refers to the process that helps new employees learn the knowledge, skills, and behaviours they need to succeed in their new organizations." (Bauer and Erdogan, 2011, 51).

Research highlights the vital role of effective organizational socialization in transforming new recruits into engaged members of the workforce. This process is shaped by various factors, with new employees actively engaging in information-seeking and feedback-seeking behaviours to facilitate social adaptation. Additionally, organizations play a crucial role by implementing orientation programs and facilitating mentorship relationships between newcomers and experienced employees. These mentors provide invaluable support by assisting new hires in navigating the organizational environment, offering guidance, and addressing any concerns they may encounter (Bauer & Erdogan, 2011).

Onboarding primarily focuses on a series of brief activities aimed at providing new employees with job-specific skills and knowledge during the initial weeks of their tenure suggesting its high importance. Moreover, the concept of onboarding is closely associated with goal-oriented strategies and is commonly discussed within the framework of organizational socialization (Bauer & Erdogan, 2011).

Furthermore, Onboarding is the process of familiarizing oneself with the established norms and procedures within an organization, with the aim of becoming an effective contributor within the system (Brenner 2014). This phase of integration, as articulated by the author, is marked by unfamiliar circumstances and the endeavour to fulfil the company's expectations of its new members.

As onboarding processes represent a series of activities and key tasks, unfortunately new employees are often left with the impression that all the attention and interest towards them disappear as soon as they start working (Znidarsic, A, 2018). This perception carries significant repercussions for both the employer and the employee: Since ineffective integration efforts have shown to trigger a cycle of setbacks (Gruman & Saks, 2011, 419-427).

Research indicates that the initial months are pivotal for long-term development, with employee adaptation primarily occurring within the first four weeks (Cooper-Thomas & Anderson, 2005, 116-128). Hence, onboarding requires the intention from all the frontline managers to integrate the employee effectively into the organization.

It is describing that organizational practice; onboarding transcends the sole responsibility of the HR department; active involvement from front-line managers is essential from the outset. Viewing onboarding as an integrated process rather than a discrete task is crucial for facilitating the seamless assimilation of new employees into the organizational framework. Research suggests that inadequately onboarded employees often require extensive guidance and training, resulting in heightened resource expenditure (Kumar, 2017). Furthermore, according to (Kumar, 2017) that the entire onboarding process can be divided into the following phases:

Phase I: Pre-joining Communication and Preparation

- In this phase, the employee communicates with the recruitment team, receives the offer letter, and gathers necessary information about the organization.
- Documentation submission is completed before the first day at work, psychologically preparing the new hire for the new environment.

Phase II: First Day and Induction/Orientation (inducting someone to a posed)

- The first day at work includes completing any remaining documentation from Phase I.

- The induction process spans from one day to a week, providing comprehensive information about the organization's mission, vision, policies, and employee benefits.
- The aim is to welcome the new employee and foster a sense of belonging.

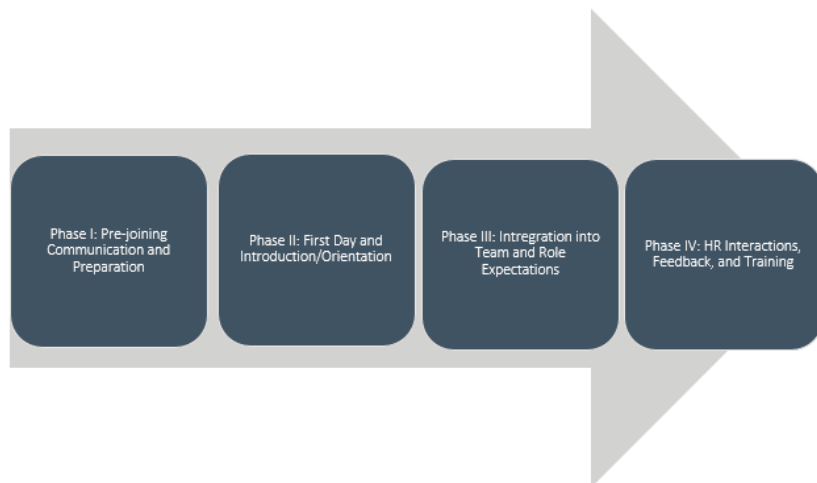
Phase III: Integration into Team and Role Expectations

- The employee becomes an integral part of a team under a supervisor's guidance.
- Expectations aligned with the job description are communicated by the supervisor.
- Integration with the team and consistent feedback are emphasized.

Phase IV: HR Interactions, Feedback, and Training

- This phase involves ongoing interactions with HR, receiving feedback, and engaging in training and development opportunities.
- It clarifies the distinction between onboarding and induction, highlighting that onboarding is a more extensive process spanning 30-60-90 days, encompassing various stages from selection to alignment with organizational goals.

Figure 2. Onboarding divided into phases.



(own illustration based on Kumar, 2018).

2.2 Benefits of onboarding and the challenges related

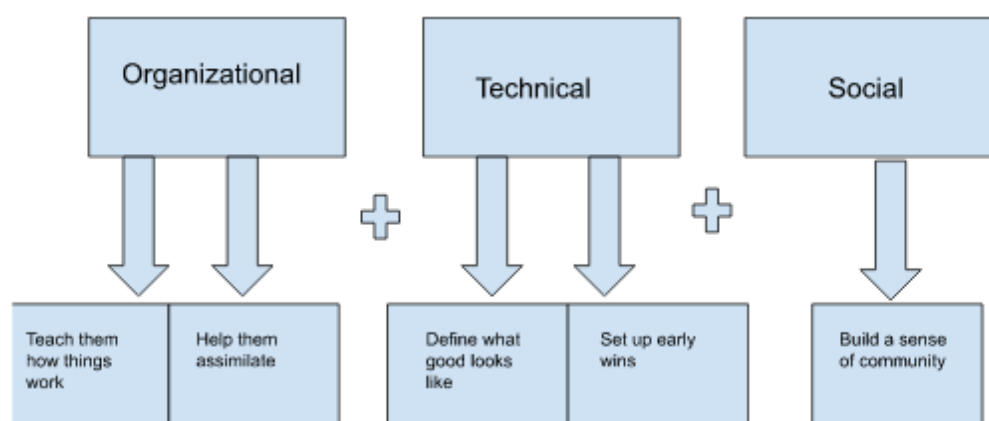
Employee onboarding serves is a critical process for organizations, facilitating the integration of new employees into their respective roles (Pedchenko, 2009). It not only affects integration, but it effects how the new employees are satisfied with their jobs, their organizational commitment and whether they stayed in the company.

Due to fierce competition, competition attaining real talents is high, which has led organizations to reevaluate their approaches to talent retention and acknowledgment of skilled individuals. Especially startups, facing limited resources, implementing effective onboarding policies becomes vital issue for optimizing efficiency. Such policies not only elevate morale within the organization but also contribute to retaining the most talented and committed employees and preventing them from being stolen away by rival companies (Hausknecht, 2009). A well-executed onboarding program has significance in contemporary business environments as it fosters a sense of belongingness among new hires, facilitating their integration into the team (McNeill, 2012).

Research conducted by Carucci (2018), argues that employees (69%) are significantly more willing to stay with a company if they undergo a well-structured and efficient onboarding process. The study emphasized the importance of prioritizing onboarding throughout the entirety of the first year, recognizing it as the most critical phase for new hires for retaining them within the company. Insufficient time to properly onboard new

employees, can result in talent loss and higher turnover-rate, which in the end becomes more costly for the company. The research suggested concentrating on three primary dimensions: the organizational, the technical and the social (Carucci, 2018).

Figure 2: The most effective organization onboarding processes; three key dimensions



(Own illustration based on Carucci (2018), Harvard Business Review).

To enhance overall organizational performance and operational efficiency, it is essential to cultivate a workforce that is not only committed to the company's mission but also sufficiently motivated to strive towards its goal (Reichheld, 2001). Christiansen (2010) emphasizes how in recent years numerous Fortune 500 corporations and small-to-medium-sized companies have reevaluated traditional orientation protocols, transitioning towards the adaptation of "onboarding" methodologies. This strategy aims at increasing employee productivity and engagement levels, mitigating the turnover rates and boosting the company's reputation among rival companies (Christiansen, 2010)

Suggested by Zaguri (2016), the research has shown that implementing successful onboarding practices significantly influences different aspects of employee behaviour, including retention, job performance, and job satisfaction. These practices also have the potential to improve employee relations and increase overall productivity within an organization. Moreover, the statistical analyses reveal notable trends, with approximately 54% of companies reporting enhanced productivity among new hires and around 50%

noting heightened retention rates attributed to the implementation of standardized onboarding procedures (Zaguri, 2016).

Furthermore, empirical evidence suggests that effective onboarding processes during the initial year of employment are linked to increased engagement levels, a significant 25% rise in retention rates, alongside improvements in performance and heightened productivity levels amongst employees. Also highlighting the aim for companies: to improve retention rates and speed up new employees reaching full productivity, (Zaguri, 2016, p. 4) Similarly, Aigner & Bauer (2008), stresses the significance of introducing newcomers to the company culture and equipping them with the necessary tools, resources, and information to feel at ease in their new work setting (Aigner & Bauer, 2008).

“It’s the key to setting employees up for long-term success, and a formative part of the employee experience that needs to be rediscovered through the lens of information discoverability and accessibility” (Forbes, 2023). According to survey research conducted by Forbes in a collaboration with Gallup (2023), highlighted that onboarding should not be seen as just a formality anymore and indicated that improved knowledge sharing and accessibility during the onboarding process led to better outcomes of onboarding. The study found out that a hefty 81% of employees felt overwhelmed during the onboarding process. This is not surprising in today’s modern working environment, where employees are typically using multiple platforms and apps in their day-to-day operations. Sorting through the vast amount of information generated and stored across various applications consumes a significant amount of time, with the average employee spending an entire workday per week on search task (Forbes, 2023).

According to the same study, a staggering 85% of employees currently lack engagement at work, which is a concerning reality. Additionally, the findings indicate that 63% of workers would contemplate leaving their positions within two years if they do not experience professional growth. Moreover, 72% of the respondents, expressed hesitation about asking too many questions from senior colleagues, when starting at the job

Contemporary onboarding demands a solution that would simplify these processes from start to finish. Making information easily accessible through effective search functionality and discovery features. This is where HR Chatbots could be a great assistant for new hires,

to acquire the needed information without the shame of asking senior colleagues. Chatbots can enhance accessibility and ensure that important queries are addressed promptly. Furthermore, the research found that (75%) of the employees were found to be happier at work being able to find the information needed, without having to ask others, (Forbes, 2023).

Since onboarding is costly, companies do not to lose the employee after initial investment in onboarding costs. Davila & Pina-Ramirez (2018) highlighted in their book the costs of onboarding processes in the US, varying from \$4,000 for a frontline employee to over \$50,000 for an executive recruitment. Furthermore, "Costs on onboarding can include various processes such as identifying and defining job needs, revising job descriptions, creating, and posting job announcements, selecting candidates through resume screening and interviews, negotiating contracts, conducting background checks, and completing paperwork related to salary and benefits" (Davila, N., & Pina-Ramirez, W,2018).

Employee retention serves as a financially prudent strategy as it mitigates the expenses linked to recruiting and training new personnel (Sinha, 2012). This aspect poses a significant challenge for corporate executives, mainly attributable to the scarcity of proficient professionals, which has resulted in a surge of lucrative career prospects for highly qualified individuals (Goos, 2018). The demand for skilled labour has surged to unprecedented levels. Employee turnover, denoting the proportion of replaced employees to the average workforce within a defined timeframe, further compounds these challenges (Shuck, 2014). "The effort that a business makes towards maintaining an environment and procedure that supports the current staff while encouraging them to remain as the employees of the company" described by (Aguenza, 2018). This also can be defined as the ability to keep the employees in the organization longer than rivalry (Lee, 2018). As mentioned, employee retention is about the conscious effort to keep new hires from leaving the company and thriving within it.

Employee retention is considered a financially efficient strategy since it helps decrease expenses related to recruiting and training new staff members (Sinha, 2012). Goos (2018) highlights the unprecedented surge in demand for skilled labour. This is further highlighted as the need for companies to keep their workers thriving and satisfied within the

company. Companies can tackle this problem by training new hires properly with the assistance of new modern onboarding techniques to streamline the processes and ultimately make employees happy to stay in the company and be more productive. It is vital for empowering employees to fully utilize the organizational resources, thereby laying the groundwork for enduring success and fostering both employee satisfaction and contentment (Goos, 2018).

2.3 HR Chatbots in onboarding and complementarity

Chatbots are computer programs powered by artificial intelligence designed to engage in conversations. While they serve multiple functions across sales, marketing, and customer service domains, this thesis focuses specifically on how chatbots are reshaping the practices of HR professionals.

As mentioned, a chatbot is a computer program that engages in natural language conversations, either through spoken or written communication. It interprets the user's intentions and responds based on predefined rules and data gathered from the organization. Chatbots are software tools utilized by businesses to automate interactions with individuals, providing answers to their inquiries according to predetermined rules and algorithms. They employ Artificial Intelligence (AI) and Natural Language Processing (NLP) to simulate human-like conversations, facilitating the extraction and dissemination of relevant information. Artificial Intelligence Markup Language serves as the foundation of chatbot functionality. Unlike phone calls, emails, or web forms, chatbots offer instantaneous responses, making them highly efficient for addressing user queries. Many e-commerce enterprises are exploring chatbot implementation to enhance customer experiences and improve customer service (R.Mohan, 2019).

Artificial Intelligence (AI) is a field within computer science focused on enabling digital computers or computer-controlled robots to perform tasks typically associated with human intelligence, such as problem-solving and decision-making (Copeland, 2018). The personality of a chatbot can be influenced by the type of Artificial Neural Networks employed. Neural Networks are sophisticated deep learning models designed to analyze sequences of data. They consist of processing units organized into three interconnected layers: input, hidden, and output layers (R.Mohan, 2019, 492).

Moreover, the Chatbot technology falls under the umbrella of Weak AI as described by (Deryugina, 2010). Research by Hill et al. (2015) reveals that people tend to engage in lengthier interactions with chatbots, albeit with shorter messages, compared to conversations with other humans. While chatbots do not possess genuine cognitive abilities, they simulate intelligence by mimicking human conversational patterns, (Hill, 2015). However, human-chatbot communication often lacks the linguistic richness present in human-human conversations and may involve more frequent use of profanity. Chatbot technology has been applied across various domains, including information retrieval, question answering, decision support, shopping assistance, museum guidance, language tutoring, and education (Shawar & Atwell, 2007).

In recent years, the integration of artificial intelligence (AI) has significantly reshaped various aspects of HR practices. This transformation encompasses critical areas such as recruitment, employee engagement, and training. HR departments strive to optimize recruitment processes, foster employee engagement, minimize bias, and enhance overall productivity. Chatbots play a pivotal role in supporting recruiters by promptly addressing basic candidate queries regarding application status, company culture, policies, and job specifics (R.Mohan, 2019, 494). This not only saves considerable time but also enhances the overall candidate experience. After being hired following an interview, employees are typically required to undergo orientation provided by the company. While HR professionals can manage this process smoothly when dealing with a small number of new hires, it becomes challenging to handle a large influx of employees. In such cases, chatbots facilitate the onboarding process by engaging with employees, making it more manageable, (Westberg, 2019).

Consequently, HR chatbots are revolutionizing the traditional role of HR within organizations by tackling key personnel challenges with innovative solutions, thereby improving efficiency and streamlining manual processes. Deepika describes Chatbots as following: "Chatbot resolves queries in real time, leading to quick decision making for the employees" (Deepika, 2018, 165). Moreover, they enable HR departments to be more responsive, paving the way for organizational enhancements in the HR domain (R.Mohan, 2019, 495). Among these chatbots, ChatGPT emerges as a robust conversational AI tool, offering organizations compelling opportunities for HR innovation and transformation (Glorin, 2023).

HR chatbots have the ability to consolidate data from diverse sources and access information across multiple systems, facilitating seamless engagement with the workforce. Both new and established employees can inquire about various topics, such as leave policies, company regulations, benefits, and rewards, through the chatbot interface. Artificial intelligence (AI) plays a crucial role in several HR functions, including talent acquisition, performance management, attrition forecasting, detection of unethical behaviour, and employee training and development. Chatbots analyze candidate queries to identify underlying patterns and generate appropriate responses, (R.Mohan, 2019),

Given that much of the onboarding process involves repetitive tasks such as form filling, ID card issuance, and benefit enrolment, HR chatbots efficiently handle routine inquiries and provide thorough responses. They simplify employee learning by breaking down instructional videos and tutorials into manageable segments, followed by interactive quizzes to assess comprehension. In today's recruitment landscape, chatbots perform various functions like parsing resumes and asking pertinent questions to streamline candidate screening, making them effective tools for initial candidate evaluation. Moreover, chatbots can engage with multiple candidates simultaneously and operate round-the-clock, significantly reducing processing times.

When it comes to Artificial Intelligence systems, they are as good as the data placed into them. The more accurate the data is, the better the output, (Van Hammen, 2023). However, algorithmic bias can manifest in certain cases due to historical data containing implicit biases related to race, gender, or ideology. Chatbot designers must exercise caution when selecting input data and preparing underlying algorithms to mitigate this risk (R.Mohan, 2019, 494).

More and more, human cognitive abilities are emerging with artificial intelligence to boost productivity and adaptability in various environments. Cognitive assistant can be considered a subset of HR chatbots. HR chatbots encompass a broader category of automated tools used in HR functions, cognitive assistants represent a specific type of HR chatbot that employs advanced AI capabilities (Van Hemmen, 2023). A report by IBM explores practical ways in which this interaction (Chatbot) could be applied to enhance processes such as selection, onboarding, and training (IBM (2017)). In this report, they used an example employee called "Joe" and illustrated their onboarding journey in the company and

it could be enhancing with the use of CHIP, the cognitive assistant. Furthermore, In 2016, IBM introduced CHIP, a cognitive assistant aimed at assisting in various scenarios, including onboarding new hires, and supporting acquired and outsourced employees.

CHIP acts as a comprehensive knowledge hub for HR programs and policies, offering employees a centralized resource. Additionally, CHIP can send targeted notifications for tasks like completing new-hire checklists or enrolling in benefits. By providing accurate responses to common queries, CHIP enhanced the employee experience, boosting productivity, and reducing HR service costs. Despite participating in an onboarding program, it was reported that employee still struggled to find information and support in the systems (IBM, 2017).

The report explained, how the example employee Joe seek help from a nearby coworker, he discovers she works in a different department and cannot assist him. Meanwhile, Joe's manager is occupied with a presentation, and the employee service desk is unresponsive. Feeling lost and frustrated, Joe wonders what if he had access to tailored new hire information on his mobile device? What if a chatbot could quickly address his queries? Imagine if Joe received personalized training suggestions and was automatically connected with three colleagues on his first day. In a cognitive organization, Joe's initial experience would be markedly improved, fostering a sense of connection and confidence in his ability to succeed, Van Hemmen (2023).

Cognitive systems possess the ability to comprehend and process unstructured information much like humans do. They can interpret language patterns and sensory inputs, such as text, images, and auditory signals. For instance, a cognitive system can swiftly analyze extensive recordings from HR service centres to identify key words and patterns based on their frequency, tone, and sentiment.

Furthermore, cognitive systems have the capacity to reason by understanding underlying concepts, forming hypotheses, and inferring and extracting ideas. They can synthesize information rapidly to generate relevant and meaningful responses. For instance, in the context of hiring, a cognitive system could examine various data sources, including a candidate's professional background and past performance, to determine their suitability for a particular role within the organization. Moreover, cognitive systems can learn and improve over time, incorporating every data point, interaction, and outcome to enhance

their knowledge base continually. This ongoing learning process is particularly crucial in the dynamic HR landscape, where policies and regulations frequently change. Rather than relying on static rules, cognitive systems can read, tag, and organize (Van Hemmen, 2023).

In today's digital era, organizations face various opportunities, challenges, and trends that affect their HR functions. The demand for new skill sets necessitates flexible recruiting practices capable of sourcing candidates from diverse talent pools (IBM, 2017). As mentioned before there are several ways AI can be utilized in HR practices and in different forms. Bayesian modelling framework explores the idea of HR chatbots and onboarding processes serves as a valuable tool for understanding how hybrid systems of human and machine classifiers perform (M.S. and P.S, 2022).

This framework allows for a systematic examination of the factors influencing their performance, while also considering how human and algorithmic confidence levels are expressed and interact with each other. According to According to Steyvers, Tejada, & Kerrigan (2022), Bayesian modelling provides insights into the strengths and limitations of both human judgment and algorithmic predictions, aiding HR managers in optimizing onboarding procedures. To understand the unique ways in which human and algorithmic confidence levels manifest, HR managers can tailor onboarding procedures to meet the specific needs of new hires while maximizing efficiency and accuracy (Steyvers, M., Tejada, H., & Kerrigan, G. 2022).

2.4 Problems related to the study of the research topic

When examining the literature related to this study we found some problems related to the research topic.

Previous research has focused broadly more on AI's impact on HRM, but not extensive research done about onboarding, and specifically what are the profound impacts of AI-

based HR solutions. Some studies related to the topic, concentrated on industries, company sizes, or geographic locations, potentially neglecting the diversity of organizational contexts and their implications for AI implementation in HRM.

Additionally, theoretical Gaps in Empirical Evidence - While theoretical frameworks may exist to explain the impact of AI on HRM, empirical evidence supporting these theories may be limited or inconclusive, leaving theoretical gaps in understanding AI's practical implications, how well does the staff and HR manager adapt to the changes. In my own study conducted for this thesis, the survey and interview question might have been way too broad, causing misunderstanding and therefore leading to validity issues for the study. Furthermore, previous studies have not addressed the ethical and legal considerations associated with AI implementation in HRM, such as data privacy, algorithmic bias, and employee rights, which are critical for ensuring responsible AI adoption. These are relevant issues related to the integration of AI, not only in HR or business.

By addressing these shortcomings of the previous studies and advancing our understanding of AI's role in HRM, the research aims to provide useful insights for practitioners, policymakers, and scholars to navigate the complexities of AI adoption in HRM effectively.

2.5 Significance of the study

The study focuses on a relevant topic of the evolving Human Resource Management and the integration of artificial intelligence HR solutions such as HR Chatbots - to streamline the onboarding processes.

I believe the topic is relevant and that in the future HR practices in business will change and integrate the current human- machine complementarity. According to a recent study, a significant percent of the respondents answered better with the combination of machine and human (complementarity) (Steyvers, M., Tejada, H., & Kerrigan, G. 2022).

The practice of HR or HR managers will not disappear, but moreover the integration of AI solutions will change the way HR is conducted in the future. More and more of HR managers' day to day tasks will be automated by a machine for example recruiting, assisting

employees of payment, holidays etc. Talent recruitment and retention will be significant in the future. These changes are already happening, companies are integrating them into their operations. However, for most companies to adopt HR Chatbots will take time and the field will change along the way.

“The last decade has seen a growth in AI-based applications proliferating the HRM function, triggering an exciting new stream of research on topics such as the social presence of AI and robotics, effects of AI adoption on individual and business level outcomes, and evaluating AI-enabled HRM practices” (Budhwara et al, 2022).

It seems that according to numerous studies, AI- base applications and solutions will increase in the upcoming years. Since they will affect different parts of the organization, it will come down to the adaptation not only of technological but human integration in order to get the most optimization and cost-efficiency of the usage of AI-driven solutions.

3. RESEARCH DESIGN

The primary purpose of this study is to explore and understand the perceptions, experiences, and challenges associated with employee onboarding, with specific focus on the role of HR facilitating as a complementarity tool in these processes. Authors in the field of employee onboarding and the integration of HR chatbots within organizations, have provided valuable insights into the theoretical and practical applications of onboarding processes and HR chatbots. Various research tools have been utilized to collect pertinent data, including platforms such as Google Scholar, ResearchGate, and other sources.

3.1 Research Questions

1. What are the perceptions of employees regarding the effectiveness of traditional onboarding processes?
2. How do employees perceive the integration of HR chatbots into the onboarding process?
3. What are the experiences of HR professionals in implementing HR chatbots for onboarding purposes?
4. What are the challenges and opportunities associated with the use of HR chatbots in employee onboarding?

Understanding employee perceptions is crucial for assessing the current effectiveness of traditional onboarding processes. By exploring employee perceptions, the aim was to identify strengths and weaknesses in existing practices from the perspective of those directly involved. Furthermore, with the increasing usage of AI and automation in HR practices, understanding how employees perceive the integration of HR chatbots provides insights into the acceptance and usability of new technology. Also, one question addresses the potential impact of technology on the onboarding experience and employee satisfaction. This question delves into the experiences of HR professionals who are responsible for implementing HR chatbots. By exploring their experiences, challenges, and successes, you gain valuable insights into the practical implications of integrating chatbots into onboarding processes from a management perspective. This question aim was to identify both the challenges and opportunities associated with implementing HR chatbots in employee onboarding. By understanding more both aspects, this could provide a

balanced view of the potential benefits and limitations of this technology, helping to inform decision-making and strategy development. Moreover, these research questions address various stakeholders' perspectives, including employees and HR professionals, while also considering both current practices and emerging technologies. They aim to provide a holistic understanding of the onboarding process and the potential role of HR chatbots within it.

Sampling: The study will utilize purposive sampling to select participants who have experience with employee onboarding, including HR professionals/ consultants and boarded employees. A diverse sample will be sought to capture a range of perspectives and experiences of HR Chatbots to further understand whatever the employees would perceive it to be complimentary or if HR consultants will experience it as a helpful tool.

Data Collection: Data will be collected through semi-structured interviews and employee questionnaire survey. A semi-structured interview is a type of qualitative research method where the interviewer has a set of predetermined questions or topics to undergo but allows for flexibility and adaptability in the conversation. Unlike structured interviews, which follow a rigid question format, and unstructured interviews, which have no predetermined questions, semi-structured interviews strike a balance between the two. They are particularly useful when studying complex or multifaceted phenomena where a rigid interview format may not adequately capture the depth and complexity of the subject matter. Semi-structured interviews will allow for in-depth exploration of participants' experiences, perceptions, and challenges related to the research topic. Focus group discussions will provide an opportunity for participants to share and discuss their views in a group setting, allowing for the exploration of shared experiences and differing perspectives (Adeoye-Olatunde & Olenik, 2021).

Employee questionnaire survey will provide an opportunity for participants to express their satisfaction with the current onboarding, to gain deeper knowledge of the perceptions regarding the implementation of HR Chatbots in onboarding processes. Additionally, to understand whatever they see the use of HR chatbots as a complementary tool alongside traditional HR method or not. The questionnaire will have 23 questions, which include items assessing satisfaction levels, perceived effectiveness, and areas for improvement regarding the integration of HR chatbots in the onboarding experience.

Data Analysis: Thematic analysis will be employed to analyze the qualitative data gathered from interviews and focus group discussions, including insights from HR or chatbot consultants and employee questionnaires. This approach involves identifying patterns, themes, and categories within the data to uncover underlying meanings and insights related to employee onboarding and the role of HR chatbots. Furthermore, the data collection and analysis methods will be discussed in more-depth in the next part.

3.2 Qualitative research method

Qualitative research can be described as “[...] an approach for exploring and understanding the meaning individuals or groups ascribe to a social or human problem.” Qualitative research is a methodological approach that aims to explore and understand complex phenomena through the collection and analysis of non-numerical data. In the context of studying HR chatbots as a complementary tool for HR managers and their perceived usefulness by employees, qualitative research offers a rich and nuanced understanding of individuals' experiences, perceptions, and attitudes (Creswell, 2013, 32).

Data Collection:

1. **Semi-Structured Interviews:** Semi-structured interviews will be conducted with HR managers and AI- consultants. These interviews will allow for in-depth exploration of their experiences, challenges, and perceptions regarding the use of HR chatbots as a complementary tool in the onboarding process. The interviews are held in April of 2024, exclusively online. The interviews will cover topics such as:
 - Experience with HR chatbots
 - Perceived benefits and limitations
 - Integration with existing HR processes
 - Employee feedback and reactions
 - Suggestions for improvement
2. **Employee Questionnaire:** The questionnaire administered to employees will gather quantitative data on their perceptions of HR chatbots. It will include Likert scale questions to measure attitudes and open-ended questions to capture

qualitative insights as already mentioned, for data employees' perception questionnaire survey, was built in an online tool called "Google Forms" and the link to the survey was distributed through various channels such as university faculty email list, Instagram community and LinkedIn. The questionnaire will cover areas such as:

- Employee satisfaction of onboarding processes
- Relevance of information provided
- Impact on onboarding experience
- Preference for chatbots
- Perceived challenges/benefits
- Willingness to use

Data Analysis: The data collected from interviews and questionnaires will be analyzed using a simplified thematic analysis approach. Thematic analysis involves organizing the data into themes or patterns to identify key insights. The process will include the following steps:

1. **Data Organization:** Transcripts from interviews and responses from questionnaires will be organized systematically to highlight important points related to the research objectives.
2. **Theme Identification:** Common topics or patterns in the data will be identified to create initial themes. These themes will capture significant findings relevant to the research questions.
3. **Theme Development:** Themes will be further refined and categorized based on their relevance and significance to the research objectives. This step aims to extract meaningful insights from the data.
4. **Interpretation:** The identified themes will be interpreted to understand their implications and connections to the research objectives. This will involve analyzing the data in-depth to uncover underlying meanings and insights.

By using this simplified thematic analysis approach, the data collected will be systematically analyzed to gain valuable insights into the research topic.

3.3 Research questions with HR managers

The interviews were conducted exclusively through video meetings in Zoom and Google Meetings. First interviews with AI-solutions professional, was conducted in April 2024. The other interview was also in April 2024, with a previous HR manager and current regional director. Moreover, transcripts of the interviews were done with recording devices, and they were analyzed using thematic analytics and so forth grouped into most common topics and then written down as summaries. The two interviews were held after conducting the literature review of the research topic, giving a good foundation of understanding the research area and its benefits and challenges. The research questions aim to understand wherever the HR Chatbots could be perceived as beneficial tools and could it have a long-lasting effect on the employee job satisfaction. These interviews gave me a better understanding of the AI side on the HR Chatbots as well as the HR managers perspective on the matter.

These interview questions aim to gather insights into the onboarding processes, what are their expectations regarding the potential improvements with HR chatbots - assisting new employees in their onboarding journey. As well as their perception of HR chatbots as complementary tools in the onboarding process. The aim is to gather more insight into perceived concerns and benefits of the implementation of AI-driven HR Chatbots into the early stages of employee onboarding. It is most common for managers to onboard the employee, but the job satisfaction and job retention have a direct impact on the HR manager's job, as if employees have not been given proper onboarding - they might leave the company sooner than later. Which then has a negative impact on the whole company's results in various aspects. Moreover, the interview and the survey aim to find out can the Chatbots be of assistance and optimize the employee journey in the company (from the perspective of the company and employees). Furthermore, the interview is held as a semi-conducted interview, consisting of structured discussion while also providing flexibility for the interviewee to elaborate on their responses and share additional insights into the research topic.

4.RESULTS FROM SURVEY

27 individuals (employees) took part as survey respondents for the Employee Perception Survey. The survey was conducted by using Google Forms and distributed via LinkedIn, official university email channel and personal social media channels. The survey centred on the onboarding experience and perceptions of HR Chatbots. The following presents the findings of the research conducted.

4.1 Exploring Employee Perspectives and Practices in Onboarding: Familiarity, Satisfaction, Effectiveness, Training, Accessibility, and Expectations

The survey question 1 and 2 examined the familiarity on the topic and the respondents current onboarding processes as well as satisfaction with it.

The survey revealed a high level of familiarity with onboarding processes among respondents, with 92.6% indicating familiarity. However, satisfaction levels varied, with 55.5% expressing satisfaction, 37% remaining neutral, and 7.4% somewhat dissatisfied. While the majority expressed satisfaction, there are opportunities for enhancement and refinement.

Figure 3: Familiarity with onboarding processes

1. Are you familiar with onboarding processes
27 vastausta

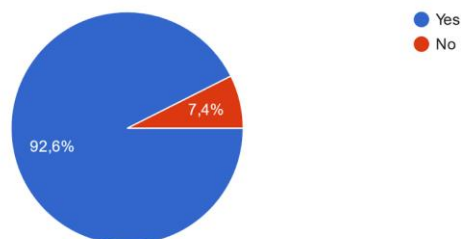
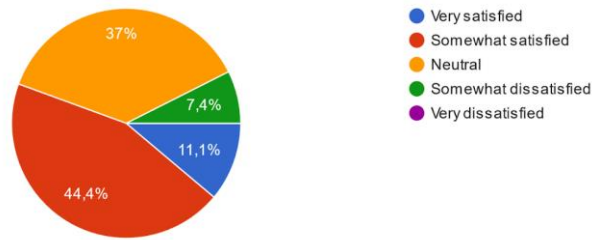


Figure 4: Satisfaction with current onboarding processes

2.How satisfied are you with the current onboarding process in your organization?
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Survey question 3 highlighted the perceived effectiveness of the current organization and how that was seen to assist in integration of the employee into the new company culture and question 4 the clarity of information provided during the onboarding processes.

Perceived effectiveness varied, with 66.6% finding the process either highly or moderately effective. Regarding clarity, 62.9% perceived information as either very clear or clear. Notably, 18.5% expressed a neutral stance, indicating room for improvement in communication during onboarding.

Figure 5: Rating the effectiveness of the onboarding

3. If you are satisfied, please rate the effectiveness of the onboarding processes in assisting you to integrate to your new role and the company culture:
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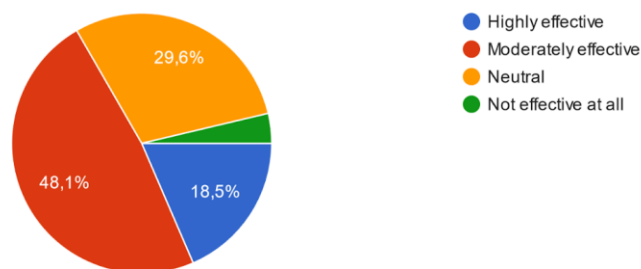
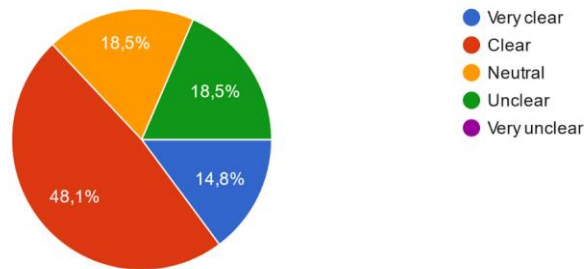


Figure 6: Rating the clarity of information provided

4. How would you rate the clarity of information provided to you during the onboarding process?
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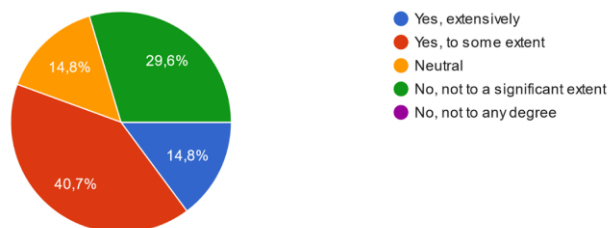


Next question 5, examined whatever the employees felt as they had been provided enough sufficient training and resources to perform their job effectively during onboarding.

A significant portion (40.7%) reported receiving sufficient training to some extent, while 29.6% felt they did not receive sufficient training. This suggests a need for improvement in providing adequate training and resources during onboarding.

Figure 7: Sufficient training and resources

5. Were you provided with sufficient training and resources to perform your job effectively during the onboarding process?
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Question number 6 and 7, explored more about the employee’s perception regarding how they would rate the accessibility of HR representatives or relevant personnel for assistance during the onboarding process and wherever they were given the opportunity to ask questions and seek clarification during the onboarding process.

The findings of the survey indicated that most respondents (55.5%) found HR support to be accessible during onboarding, yet 25.9% perceived it as somewhat or very inaccessible.

However, 96.3% felt they had the opportunity to ask questions and seek clarification, indicating a positive aspect of the onboarding process.

Figure 8: Rating the accessibility of HR representatives

6. How would you rate the accessibility of HR representatives or relevant personnel for assistance during the onboarding process?

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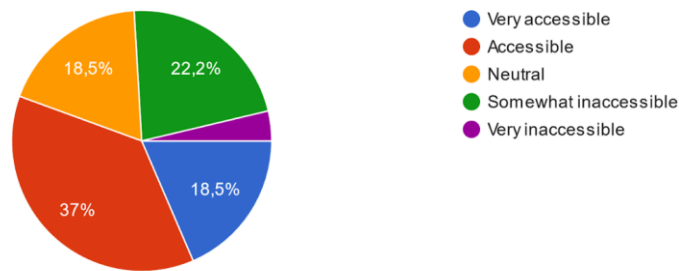
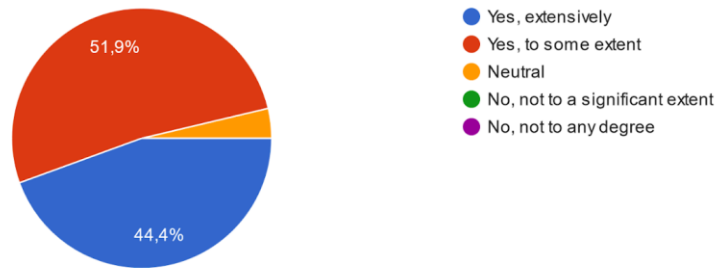


Figure 9: Opportunity to ask questions/clarification

7. Were you given the opportunity to ask questions and seek clarification during the onboarding process?

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Survey question 8, assessed whether the onboarding process adequately addressed the respondent expectation and needs as a new employee.

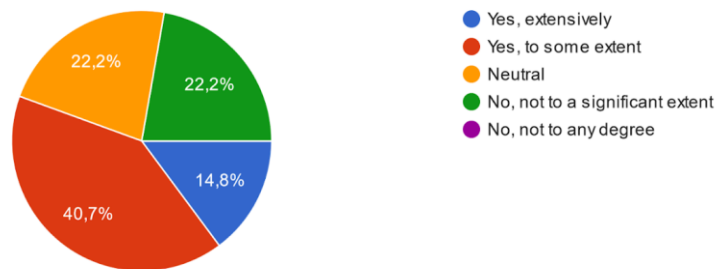
The responses of this survey question particularly indicated some mixed perception among employees regarding whether the onboarding process adequately addressed their expectations and needs at the time. While 55.5% indicated that the onboarding process met their expectations and needs to some degree, 44.4% expressed a neutral stance or felt it did not adequately address their expectations and needs. This suggests a need for

aligning onboarding processes with employee expectations to enhance satisfaction and retention.

Figure 10: Expectations and needs

8. Did the onboarding process adequately address your expectations and needs as a new employee?

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4.2 Employee Perspectives on Onboarding and HR Chatbots: Retention, Satisfaction, Importance, Familiarity, Benefits, and Acceptance

Furthermore, survey questions 9 and 10, explored whether the respondent thought an effective onboarding process is a matter that contributes to employee retention and job satisfaction and how important they think it is for organizations to invest in comprehensive onboarding programs for new employees.

The majority of respondents (92.6%) strongly believe that effective onboarding processes contribute to employee retention and job satisfaction. Additionally, 88.9% expressed openness to using AI-driven HR Chatbots as part of the onboarding process, indicating a positive perception of their potential impact on retention and satisfaction.

Figure 11: Contribution of effective onboarding

9. Do you believe that effective onboarding processes contribute to employee retention and job satisfaction?

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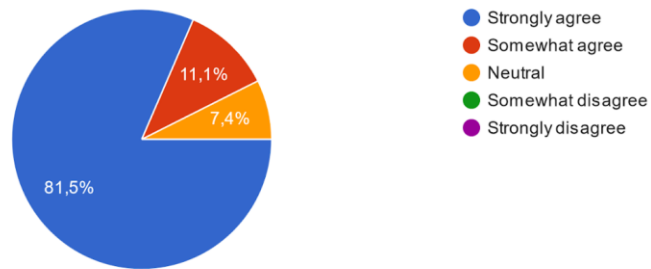
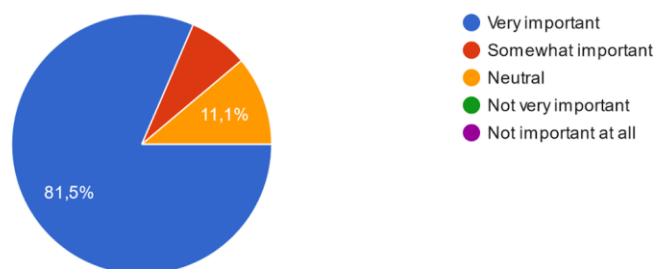


Figure 12: The importance of onboarding

10. How important do you think it is for organizations to invest in comprehensive onboarding programs for new employees?

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Question 11 and 12 investigated the familiarity and interactions the respondents may have of HR Chatbots. The survey results indicated an awareness of HR Chatbots shows a varied level of familiarity with the concept.

While a significant portion of respondents (33.3%) showed familiarity with HR chatbots, only 11.1% reported interacting with them during onboarding or daily work activities. This suggests a gap between awareness and actual utilization of HR chatbots within the organization.

Figure 13: Familiarity with HR Chatbots

11. How familiar are you with the concept of HR chatbots?

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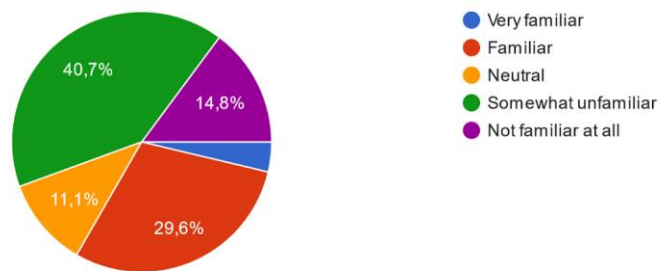
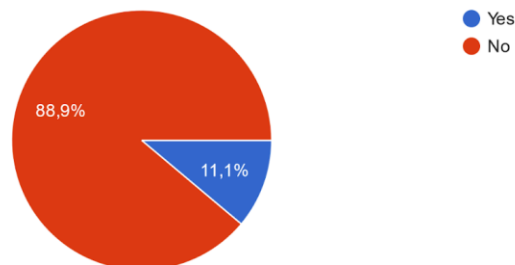


Figure 14: Interactions with HR Chatbots

12. Have you ever interacted with HR Chatbots during your onboarding process or in your daily work activities?

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Survey questions 13 and 14 inquire to interpret the respondents' underlying beliefs regarding the perceived benefits, complementarity and comfortability in using these Chatbots.

A majority (77.8%) viewed AI-driven HR Chatbots as complementary to traditional HR practices, indicating a positive perception of their potential benefits. However, 22.2% expressed discomfort with interacting with AI-driven HR Chatbots during the onboarding process, suggesting a need for further education or clarification about their use.

Figure 15: Perception of complementarity of Chatbots

13. Do you think AI-driven HR Chatbots could complement traditional HR practices in the onboarding process?

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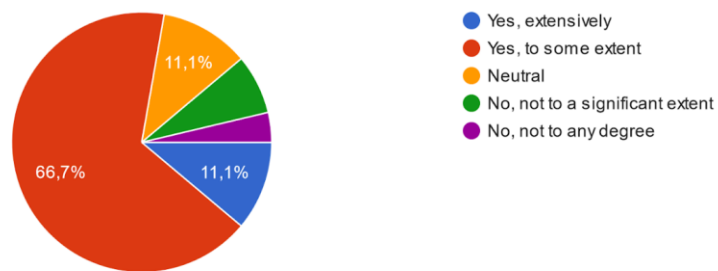
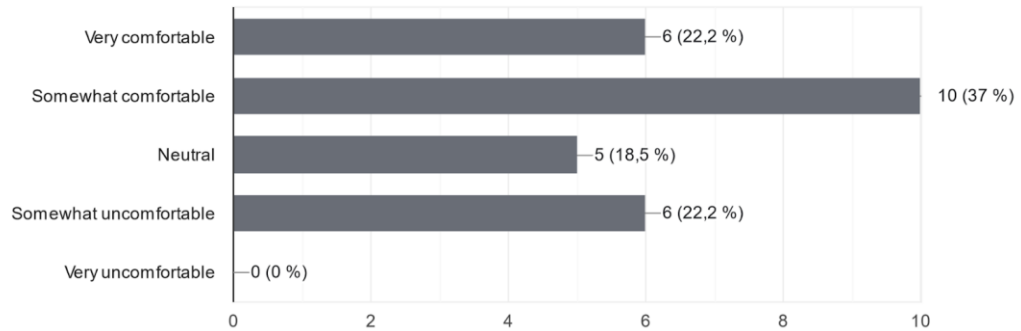


Figure 16: Comfortability level interacting with Chabot

14. How comfortable would you be interacting with AI-driven HR Chatbots during the onboarding process?

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To understand better the respondent’s perception and openness to use in their work, was further studied in survey questions 15 and 16.

Most respondents (81.5%) believed that AI-driven HR Chatbots could improve the efficiency of the onboarding process, reflecting optimism about their potential to streamline HR processes. Moreover, 88.9% expressed openness to using AI-driven HR Chatbots if given the opportunity, indicating a high level of acceptance and willingness to engage with this technology.

Figure 17: Perception on improvements

15. Do you believe AI-driven HR Chatbots could improve the efficiency of the onboarding process?

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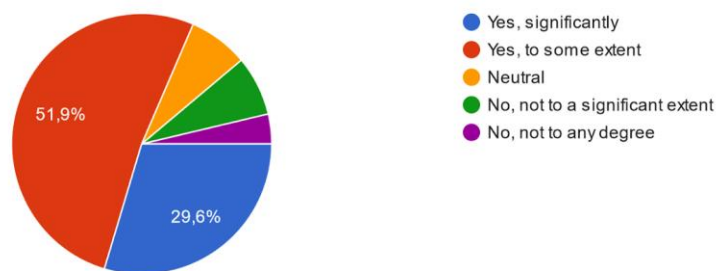
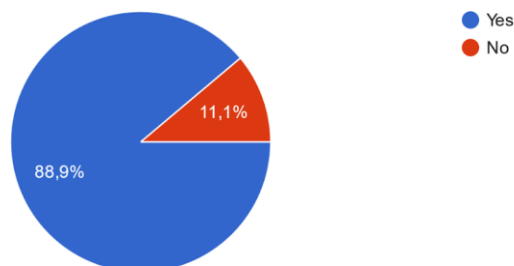


Figure 18: Openness to use Chatbots during onboarding

16. Would you be open to using AI-driven HR Chatbots as part of the onboarding process if given the opportunity?

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4.3 Perceptions and Potentials of HR Chatbots in Onboarding: Benefits, Concerns, Challenges, and Beliefs

Survey question 17 was a multiple choice (1 or more options) of the respondents perceived benefits of integrating HR Chatbots:

Improved Accessibility of Knowledge: 70.4% of respondents identified improved accessibility of knowledge as a potential benefit, indicating recognition of the value of having information and resources readily available through chatbots.

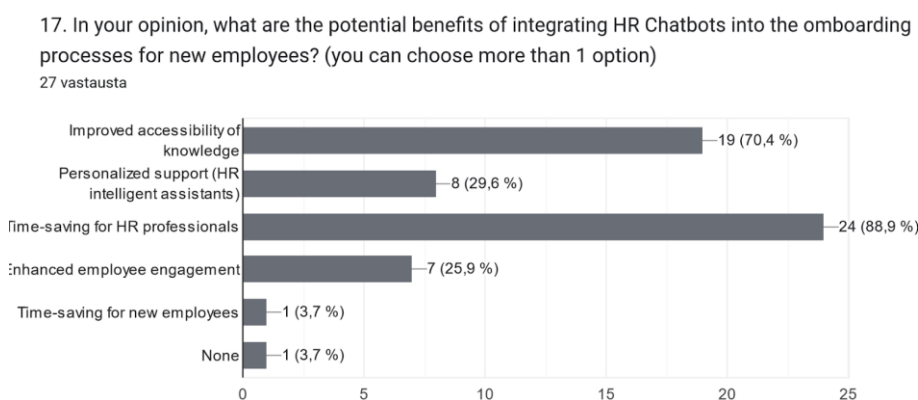
Timesaving for HR Professionals: A significant majority (88.9%) believed that integrating HR Chatbots could save time for HR professionals, demonstrating acknowledgment of the potential for automation to streamline administrative tasks.

Personalized Support: While a smaller percentage (29.6%) identified personalized support through an HR intelligent assistant as a potential benefit, it still represents a notable portion who see value in tailored assistance for new employees.

Enhance Employee Engagement: A slight minority of respondents (25.9%) believed that integrating HR Chatbots into the onboarding process could enhance employee engagement. Although relatively low, this percentage indicates recognition of the potential for chatbots to facilitate communication and interaction during onboarding.

Timesaving for New Employees: Only one respondent (3.7%) identified saving time for new employees as a potential benefit. This suggests a potential lack of awareness among respondents regarding the benefits that chatbots could offer to new employees in terms of efficiency and support during onboarding. **None:** Similarly, only one respondent (3.7%) believes that there are no potential benefits to integrating HR Chatbots into the onboarding process. This could indicate a lack of awareness or general scepticisms about the value that chatbots can bring to the onboarding experience.

Figure 19: Perceptions of the potential benefits



Question 18 gave the participants an opportunity to voice their optional opinion of perceived benefits of HR Chatbots:

Quick Answers and Timesaving: Respondents emphasized the potential for HR Chatbots to provide quick answers to common questions, resulting in time savings for both employees and HR professionals.

Accessibility and Efficiency: Recognition of HR Chatbots' potential to improve efficiency and accessibility by providing immediate responses to inquiries, thereby streamlining the onboarding process.

Reducing Fear of Asking Questions: Some respondents mentioned that HR Chatbots could alleviate the fear of asking "stupid" questions by providing a non-judgmental and quick response mechanism, fostering a supportive environment during onboarding.

Data Management: One respondent noted the potential for HR Chatbots to assist in keeping data up to date, suggesting benefits in terms of data management and accuracy, contributing to overall organizational efficiency.

Individualized Needs: While many respondents recognized the benefits of efficiency and accessibility, one respondent expressed concern about HR Chatbots' ability to address the individualized needs of every employee, highlighting the importance of personalized support alongside automation.

Variability in Question Complexity: Another respondent expressed a belief that HR Chatbots may struggle to effectively address the varied and complex questions in the onboarding process, suggesting limitations in their capability to handle diverse inquiries.

The optional responses highlighted the potential for HR Chatbots to improve efficiency and accessibility in the onboarding process. Furthermore, respondents acknowledged the importance of addressing individualized needs alongside automation, suggesting a need for a balanced approach that combines efficiency with personalized support.

Table 1: 18. Give a short answer of what could be the potential benefits of integrating HR Chatbots into the onboarding processes for new employees? (Optional)

A 1	"Quick answers to common question, time saving, avoiding the fear of asking stupid questions".
A 2	"Efficiency and accessibility"
A 3	"HR Chatbots would be useful as you could ask simple or "stupid" questions and get a quick reply. Can ask questions that you wouldn't necessarily email someone to ask"
A 4	"HR Chatbots could keep the data up to date"
A5	It could save a lot of time and answer most of the general questions applicants might have. However, I think eventually every individual's needs should be met personally as well"
A 6	"None, since the questions are very complicated and varying"

Survey question *19, examined more about the perceptions about the potential concerns the respondents have regarding the topic. They could choose one or multiple options. The results suggested the respondents identified several potential benefits of integrating HR chatbots as represented by the following numbers.

Potential benefits raised by respondents:

Fear of Lack of Human Contact: The most common concern among respondents (59.3%) is the fear of a lack of human contact during the onboarding process. This suggests that employees value interpersonal interactions and may feel uncomfortable with the impersonal nature of interactions with chatbots.

Privacy Concerns (Data Security): 40.7% of respondents expressed concerns about privacy, particularly regarding data security. This indicates a perceived risk associated with the use of chatbots in handling sensitive employee information, highlighting the importance of maintaining data confidentiality and security protocols.

Technical Issues: Nearly half of the respondents (48.1%) expressed concerns about technical issues with chatbots. This apprehension indicates worries about the reliability and functionality of chatbots, including potential glitches or malfunctions that could disrupt the onboarding process, underscoring the importance of robust technical support and troubleshooting mechanisms.

Competence in Special Areas: A small percentage of respondents (3.7%) expressed concerns about the competence of chatbots in addressing specialized areas or topics. This indicates a worry that chatbots may not be adequately equipped to handle complex or specialized inquiries, emphasizing the importance of ensuring chatbots are well-trained and knowledgeable in various domains.

Less Specific Information Being Provided: Similarly, 3.7% of respondents expressed concerns about chatbots providing less specific information compared to human interactions. This suggests a concern about the depth and accuracy of information provided by chatbots, highlighting the importance of ensuring chatbots can offer detailed and contextually relevant responses.

New Employee's Lack of Integration to the Team, Fear of Asking from Manager/Team

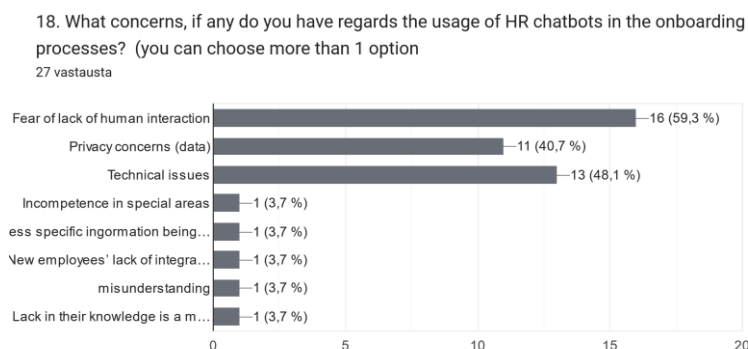
Members: Another 3.7% of respondents expressed concerns about the potential impact of chatbots on new employees' integration into the team and their ability to seek guidance from human colleagues. This indicates a concern that reliance on chatbots may hinder opportunities for new employees to interact with colleagues and seek support from human supervisors, underscoring the importance of balancing automation with human interaction.

Misunderstanding: One respondent (3.7%) expressed concerns about potential misunderstandings that could arise from interactions with chatbots. This suggests apprehension about the clarity and effectiveness of communication facilitated by chatbots, highlighting the importance of ensuring chatbots can understand and respond accurately to employee inquiries.

Lack of Knowledge: Another 3.7% of respondents identified a lack of knowledge as a major issue with chatbots. This suggests a concern that chatbots may not possess sufficient knowledge to adequately address employee inquiries or provide accurate information, emphasizing the importance of continuously updating and refining chatbot capabilities.

The results from this survey question, highlighted the concerns raised by respondents which signified the importance of addressing issues related to human interaction, privacy, technical reliability, competence, information specificity, integration, communication, potential misunderstandings, and knowledge gaps to ensure the effective implementation and acceptance of HR chatbots in the onboarding process.

Figure 20: Concerns regarding the use



Survey question *20 gave the respondent an option to write a short answer regarding the potential concerns and these are the answer that was received;

Concerns Raised by Respondents:

1. Preference for Human Interaction: Several respondents expressed a strong preference for human interaction and learning from the experience of colleagues during the onboarding process. They perceive human representatives as providing a level of personal connection and expertise that chatbots cannot replicate.

2. Relevance and Specificity of Information: Respondents raised concerns about the relevance and specificity of information provided by chatbots compared to human representatives. They worry that chatbots may not be able to offer tailored and contextually relevant information, potentially leading to misunderstandings or incomplete guidance.

3. Lack of Human Interaction and Sensitivity: Some respondents expressed concerns about the lack of human interaction and sensitivity provided by chatbots. They feel that chatbots may fail to meet the emotional and social needs of new employees, as they lack the empathy and understanding that humans can provide.

4. Personal Connections: Respondents emphasized the importance of personal connections in the onboarding process. They expressed concerns about chatbots' ability to establish meaningful connections with new employees, highlighting the value of interpersonal relationships in fostering a supportive and inclusive work environment.

5. Reliability and Supervision: Concerns were raised about the reliability of chatbots and whether there would be human supervision or support available if the chatbot failed to provide adequate assistance. Respondents worry about potential technical issues and the lack of human oversight in ensuring the accuracy and effectiveness of chatbot interactions.

6. Social Needs and Integration: Several respondents highlighted the importance of social interaction and integration into the team during the onboarding process. They expressed doubts about chatbots' ability to fulfil these social needs and support new employees in building relationships with colleagues, underscoring the value of human interaction in fostering a sense of belonging and camaraderie.

7. Sector-specific Limitations: One respondent expressed scepticism about the potential benefits of chatbots in their specific sector. They suggested that chatbots may not be suitable or effective in all industries or contexts, highlighting the need to consider sector-specific factors when implementing chatbot solutions.

The concerns raised by respondents underscore the importance of human interaction, personal connections, reliability, and sector-specific considerations in the design and implementation of chatbot solutions for the onboarding process. Addressing these concerns will be crucial in ensuring the successful integration of chatbots while maintaining employee satisfaction and engagement during the onboarding experience.

Table 2: Give a short answer to your concerns regarding the usage of HR chatbots in the onboarding process? (Optional)

A1	"I'd still prefer using human interaction and learning from the experience of another colleague"
A2	"Since chatbots rely on what they have previously been taught, I would feel that chatbots could not provide as relevant and specific information as when interacting with a human rep. "
A3	"HR Chatbots lack the human interaction and sensitivity that is required "

A4	“Lack of personal connections”
A5	“What if it does not work, will there be a human to” supervise” it?”
A6	“Though I think it would be beneficial, it is crucial to not replace human interaction with chatbots. New employees need feel that they are also socially part of the team, can ask questions from the people too and feel comfortable to interact with their manager and other team members. Chatbots do not fulfil the social needs and support new employees have when starting a new job.”
A7	“I don’t think that chatbots could actually provide any benefits at all in my sector “

Survey question *21 seeks to understand has the respondent faced challenges accessing necessary information or resources during their onboarding processes and question *22 aim to understand would the respondents be comfortable with the HR Chatbots to assist them onboard alongside. A significant majority of respondents (55.6%) reported facing challenges during the onboarding process in accessing necessary information or resources. This suggests potential areas for improvement in the onboarding process to enhance accessibility and clarity of resources. While the majority of respondents reported facing challenges, a notable minority (44.4%) did not experience difficulties in accessing necessary information or resources during the onboarding process.

A great portion of respondents expressed comfort with the idea of HR Chatbots assisting in their onboarding processes alongside traditional HR. Specifically, 48.1% of respondents reported feeling very comfortable, while 44.4% stated that they were somewhat comfortable with the idea.

Figure 21: Challenges during the onboarding regarding information or resources

20. Have you ever faced challenges during the onboarding process in accessing necessary information or resources?

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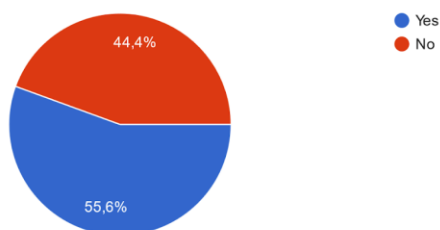
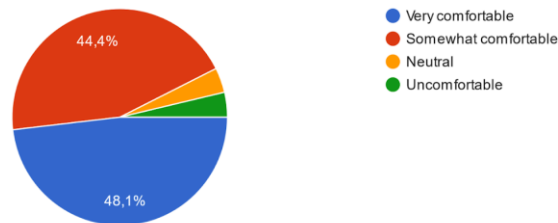


Figure 22: Comfortability level allowing a Chatbot to assist in onboarding

21. Would you be comfortable allowing a HR Chatbot to assist you in your onboarding processes such as training alongside traditional HR?

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Last question *23 seeks to gain a deeper knowledge of the underlying beliefs and perceptions of the respondents. Do the respondents perceived HR Chatbot to be beneficial at addressing or resolving challenges potentially faced during the onboarding process.

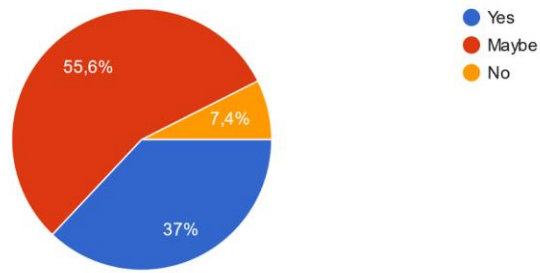
When asked whether HR chatbots could have helped address the challenges faced during the onboarding process, responses were mixed. While 37% of respondents believed that HR chatbots could have been beneficial, 55.6% were uncertain or had doubts about their effectiveness. Only 7.4% of respondents expressed disbelief in the potential of HR chatbots to address their challenges.

Despite the uncertainty, a notable portion of respondents expressed belief in the potential for HR chatbots to address challenges encountered during onboarding. This suggests recognition of the utility of chatbot technology in addressing specific issues, albeit with some scepticisms or uncertainty among others.

Figure 23: Beliefs regarding the helpfulness to addressing challenges regarding onboarding

22. If yes, do you believe HR chatbots could have helped address these challenges?

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5.RESULTS FROM INTERVIEWS

5.1 Interview structure

Two interviews were conducted for the research of this study. The first interview was held with a professional that specializes in AI-solutions and the other interview was with a current regional director, who previously worked as Human Resource professional. These interviews were held in the month of April 2024 via online meetings and each session lasted approximately 30-45 minutes. We made slight modifications to the interview question because the repetitive nature of the first questions, nevertheless the research questions and the structure of the meetings remained somewhat similar in both interviews. However, just to be noted that it might have implications regarding the validity of the research as the interview questions were slightly different. The second set of research questions can be found in the Appendix- section.

The research questions were the following:

Table 3: Interview questions

RQ1	Can you describe the steps involved in the onboarding process you underwent for your current role?
RQ2	How satisfied were you with the onboarding process in your organization? What were the key factors that influenced your rating?
RQ3	How does your organization's onboarding process contribute to employee retention and long-term commitment?
RQ4	What specific aspects of the onboarding process do you believe could benefit from improvements?
RQ5	Can you cite examples of HR practices within the onboarding process that you consider to be either particularly effective or ineffective?
RQ6	What advantages do you see in using HR chatbots as part of the onboarding process? Are there any specific tasks you think they could handle well?

RQ7	What potential challenges or drawbacks do you foresee in implementing HR chatbots in the onboarding process?
RQ8	Based on your experience, what lessons or insights can you share about interacting with AI-driven chatbots in HR-related tasks?
RQ9	Do you think chatbots could effectively complement human resources in assisting employees and managers during the onboarding process? Why or why not?
RQ10	In your opinion, how do you expect human resource management practices, especially regarding onboarding, to change in the next five years?

The interviews provided new perspectives and insights to the research topic. Since the interviews came from different specialty backgrounds, their answers differed from each other, yet providing a more comprehensive and a wider perspective to the subject. To interpret the interview results, we will use thematic analysis to underline the most common themes coming up during the interviews.

5.2 Interview results

1st interview

Varied Experiences of Onboarding: The interviewee provided insights into the nuanced experiences and perceptions of onboarding processes, highlighting both the benefits and challenges associated with integrating technology, such as chatbots, into HR practices. He described his experiences ranging from extensive onboarding periods to minimal guidance upon starting. The interviewee highlighted the variability in onboarding experiences based on the size and nature of the company. Small companies may lack comprehensive onboarding processes due to limited resources, while larger companies may invest significantly in onboarding, providing a structured and lengthy orientation period.

Importance of Investment in Onboarding: There was a clear appreciation for companies that invested time, money, and energy in onboarding employees. Moreover, he emphasized the importance of companies investing in their employees through effective onboarding. He noted that companies willing to invest time, money, and energy in

onboarding demonstrates a commitment to their employees' success, ultimately leading to greater productivity and effectiveness.

Impact on Employee Retention: The interviewee provided contrasting examples where thorough onboarding contributed to employee retention, while inadequate onboarding could result in early departures. He stressed the importance of aligning the onboarding process with the company's recruitment standards to enhance retention rates and secure talent.

Integration of Technology in Onboarding: The interviewee discussed the potential benefits of integrating HR chatbots into onboarding processes. He highlighted how chatbots could streamline information dissemination, reduce overwhelm for new employees, and save time for managers. He suggested that Chatbots could possibly streamline information delivery, making it less overwhelming for new employees. However, raising valid concerns about the quality and reliability of Chatbots, emphasizing the importance of ensuring accurate information (reliability and validity) and avoiding spreading misinformation that may confuse the employees.

Concerns and Limitations of HR Chatbots: Despite acknowledging the benefits, the interviewee expressed concerns about the quality and reliability of HR chatbots. Acknowledging the risks of over-reliance on Chatbots to deliver the correct information always, highlighting the risk of misinformation and emphasizing the need for human oversight on the operations. Moreover, concerns regarding Chatbots providing incorrect information or "hallucinations" if not properly designed and maintained.

Evolving HR Practices and Emerging Trends in Chatbot Usage: There was recognition of the evolving nature of HR practices, driven by advancements in automation and AI. While acknowledging the efficiency gains, the interviewee emphasized the importance of maintaining human interaction, particularly in HR roles that involve candidate engagement. The interviewee noted the increasing popularity of chatbots in customer service roles, citing examples from various industries and regions. He also highlighted how AI-driven chatbots are replacing traditional call centre functions, indicating a broader trend toward automation in customer interactions. The interviewee's insights offered valuable considerations for companies looking to enhance their onboarding processes

and leverage technology to improve efficiency while maintaining a human touch in employee interactions. Moreover, providing a different perspective for the possible complementarity of the AI-driven HR Chatbots and what are the possible implications of integrating it into a company's onboarding processes.

Furthermore, the interviewee expressed the importance of a well-executed onboarding process, the potential benefits of integrating HR chatbots, and the necessity of maintaining human connections in HR practices. He emphasized the variability in onboarding experiences and expressed concerns about the quality and over-reliance on AI-driven chatbots. The interview concludes with a discussion on the evolving landscape of HR practices, particularly with the integration of automation and AI-driven tools. Furthermore, he predicts a shift towards automation in certain HR tasks, such as candidate evaluation and initial interviews. Also highlighting the importance of maintaining human interaction in the hiring process to avoid creating a cold company image.

2nd interview

Evolution of Onboarding Processes: The interviewee, described a transition in onboarding processes over time, from a more ad-hoc approach to structured digital methods. Moreover, he mentioned the introduction of online courses, besides in-person orientation sessions, and the incorporation of online (introductory) onboarding games. These changes reflect an effort to enhance the onboarding experience and improve employee integration into the company culture.

Importance of Managerial Engagement: The interviewee emphasized the crucial role of managers in the onboarding process. He highlighted the significance of regular, meaningful conversations between managers and new employees during the onboarding process, both in person and digitally. These interactions facilitate understanding, feedback, and support, contributing to a positive onboarding experience. Furthermore, he emphasized the importance of conveying company culture, values, and career growth prospects during the onboarding process to engage employees.

Contribution to Employee Retention: Underscoring the link between effective onboarding processes and employee retention. He discussed how onboarding sessions incorporate company values, career opportunities, and support structures, fostering long-term

commitment among employees in the company. Clear communication of company goals and values is identified as a key factor in retaining talent as the clear communication and support mechanisms in facilitating employees could assist employees to understand company policies and procedures, thereby enhancing their commitment to the organization.

Challenges and Areas for Improvement: Despite advancements in onboarding methods, the interviewee identified areas for improvement. He suggested the need for streamlining updating systems to deliver relevant (relevant and up to date) information effectively. This also raised the question of who in the company would be responsible for validating and updating this significantly important information. Additionally, he highlighted the risk of information overload being too much for employees and the importance of providing ongoing support and building a system that could assist to remind new employees of all the new information. Furthermore, the interviewee suggested integrating interactive elements, such as online games, with opportunities for real-time interaction and clarification, to enhance learning retention and engagement.

Potential and risks of HR Chatbots: While the interviewee acknowledged the potential benefits of HR chatbots, such as facilitating quick access to information (for instance, searching legislations swiftly), providing new perspectives and providing assistance. However, validating information consistently, ensuring up-to-date content, and maintaining a balance between human interaction and automation are key considerations in integrating HR chatbots into the onboarding process. Furthermore, he emphasizes the importance of validation (reliability) and accuracy in the information provided by HR chatbots, highlighting potential challenges and risks associated with sourcing and verifying information from external sources to mitigate false information.

Future Trends in Onboarding: For future trends regarding onboarding, the interviewee anticipates a shift towards more immersive and interactive onboarding experiences, incorporating elements such as gamification, 3D simulations, and AI-driven interactions. This reflects a broader trend towards leveraging technology to enhance learning retention, engagement, and knowledge transfer in onboarding processes.

The interview highlights the evolving nature of onboarding practices, the importance of managerial involvement, and the potential of HR chatbots to enhance the onboarding experience. However, it also underscores the need for careful consideration of challenges and the importance of maintaining a balance between technological innovation and human interaction. The interviewee's insights provided valuable perspectives on the evolution, challenges, and future trends in onboarding practices as well as possible integration of the HR Chatbots.

6. CONCLUSIONS

The evolution of onboarding processes in today's dynamic business environment reflects a shift towards embracing new technological advancements to optimize operations and enhance employee integration. With the increasing mobility of employees across companies, talent management has become increasingly vital. Traditional onboarding methods are being replaced by more structured digital approaches, such as online courses and interactive onboarding games, aimed at improving the onboarding experience and fostering cultural integration.

The thesis has illustrated the realm of onboarding processes, recognizing its significant role in shaping organizational performance and employee integration. The traditional methods of onboarding, although crucial, can encounter challenges such as communication gaps and resource accessibility issues. As organizations strive to optimize their operations and enhance talent management strategies, the integration of HR chatbots could emerge as a promising solution.

The findings of this study shed light on the nuanced perceptions of employees regarding onboarding processes and the potential role of HR chatbots in addressing existing challenges. While there is a notable level of familiarity with onboarding procedures among respondents, satisfaction levels vary, indicating room for improvement. However, most respondents recognize the importance of effective onboarding in fostering employee retention and job satisfaction, underscoring the strategic significance of investing in comprehensive onboarding programs.

Despite the recognition of the benefits of onboarding, concerns regarding the integration of HR chatbots alongside traditional HR practices persist. While many view chatbots as complementary tools, some express discomfort and skepticism, highlighting the need for clear communication and guidance from organizations to address these concerns to successfully implement any of the HR Chatbots. Misconceptions of the level of automation can influence the perceptions of the employees, however, to be noted the Chatbots would not perform the entirety of the onboarding.

Moreover, challenges in accessing resources during the onboarding process suggest areas for improvement in organizational communication and resource allocation. On of the task

the Chatbot could assist is finding the needed information and coming through large data faster and efficiently. However, a valid concern regarding AI is the fact that the information might not be valid and dependable. Concerns about the reliability of chatbots and potential misinformation highlight the importance of human oversight in the onboarding process. If companies choose to implement the Chatbots, it is vital that the information it finds is valid and up to date.

The study also explored employees' attitudes toward the potential role of HR chatbots in addressing onboarding challenges. While some express belief in their efficacy, others remain uncertain or skeptical, emphasizing the importance of organizations providing clear communication and guidance regarding their intended role and capabilities.

Interview insights underscore the importance of managerial engagement, clear communication of company values, and ongoing support in facilitating a positive onboarding experience. Moreover, they emphasize the variability in onboarding experiences and the need for companies to invest in effective onboarding to enhance employee retention and organizational performance.

Looking ahead, the future of onboarding processes is expected to embrace more immersive and interactive experiences, leveraging technologies such as gamification and AI-driven interactions. While automation will play a significant role in certain HR tasks, maintaining human interaction remains essential to avoid creating a detached company image.

In conclusion, this thesis aimed to explore the role of HR chatbots as complementary tools in enhancing the efficiency and effectiveness of onboarding processes. By investigating their potential benefits, challenges, and acceptance among employees and professionals, this study seeks to provide valuable insights into the integration of AI-driven technologies in HR practices, contributing to the enhancement of organizational performance and employee satisfaction.

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8.APPENDICES

APPENDIX 1: 2nd. Interview questions.

RQ1	Could you share your experience with the onboarding process in your current role?
RQ2	Are you satisfied with the onboarding process in your organization?
RQ3	How have you seen a well-executed onboarding process impact employee retention and job satisfaction?
RQ4	Can you provide examples of traditional HR practices, specifically onboarding processes, that you find effective or ineffective?
RQ5	How do you perceive the integration of HR chatbots into the onboarding process?
RQ6	What do you think are the benefits of implementing HR chatbots in onboarding processes?
RQ7	What are your concerns regarding the implementation of HR chatbots in onboarding processes?
RQ8	Can you share any insights or lessons learned from your experiences with AI-driven chatbots?
RQ9	What are your concerns regarding this topic?
RQ10	Do you believe that chatbots can serve as a complementary tool for HR managers/employees?
RQ11	How do you anticipate HRM practices will evolve in the coming years?
RQ12	Could you provide insights into any emerging patterns or trends you've observed concerning AI-driven chatbots?