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Balancing the Future of HRM: Navigating the Intersection of AI, Strategic HRM, and Coaching Leadership

Scoping Literature Review

Metropolia University of Applied Sciences

Master's Degree

Degree Programme in Health Business Management

Master's Thesis

1 November 2023

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Title	Balancing the Future of HRM: Navigating the Intersection of AI, Strategic HRM, and Coaching Leadership
Number of Pages	54 pages + 2 appendices
Date	1 November 2023
Degree	Master of Health Care
Degree Programme	Health Business Management
Instructor	Senior Lecturer, Tricia Cleland Silva
<p>Artificial intelligence (AI) is defined as the concept of machines performing tasks that, if done by humans, would be considered intelligent. In its early stages, AI tried to replicate human thinking and reasoning, primarily to automate tasks previously carried out by humans. Now the emphasis lies in AI not just mimicking human cognitive abilities but rather exceeding them through the facilitation of independent learning, anticipation, and superior inference capabilities. This thesis is centered on the field of human resource management (HRM), with a particular emphasis on performance management and the integration of AI within HRM. In the realm of leadership, coaching leadership is highlighting the role of communication in fostering an empowering environment for individuals and teams to achieve higher performance, aiming to replace traditional control-based leadership practices.</p> <p>The purpose of this master's thesis is to use the scoping literature review to contribute to the understanding of AI in the context of HRM. This master's thesis aims to produce information that can be utilized by companies and organizations which are exploring the possibilities of integrating AI into human management practices. The research questions are: 1. "What is the relationship between artificial intelligence and managing people", 2. "Can coaching leadership support AI and human resource practices such as performance management", and 3. "How can organizations ensure responsible and ethical use of AI in Human Resource Management".</p> <p>This master's thesis was conducted as a scoping literature review. The information retrieval was systematically carried out in September 2023 on the search portals ProQuest, ScienceDirect, Taylor & Francis Online, and Wiley Online Library. The information retrieval yielded 23 search results. At the title level, 15 articles were selected, and their abstracts were read. The full text was read for 9 articles. Using inclusion and exclusion criteria, a total of eight articles were selected for the literature review. These articles were published between 2021 and 2023 in Switzerland, Finland, Australia, England, and through international collaboration. All the articles were in English. The content of the chosen articles was categorized into three main categories: "AI and digitalization in HRM, ethical considerations of AI in HRM, and employee's engagement and performance. Quality assessments were performed for all selected articles.</p> <p>In this thesis, it was observed that the adoption of AI in HRM goes beyond mere technological enhancements; it's about fostering a supportive environment, enabling personalized development, and reducing biases. These findings collectively support the idea that AI can significantly contribute to HR effectiveness and employee engagement while aligning with ethical and moral standards. The observations made in this literature review can be considered directional. They can also guide further research and educational efforts in the field. Overall, there is still a need for further research to gain a clearer understanding of the most suitable contexts and situations for the deployment of AI in HRM. This understanding is essential to ensure that AI contributes to creating positive and effective work environments, while upholding ethical standards.</p>	
Keywords	artificial intelligence, human resource management

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1 Introduction

The influence of technology on the global economy, businesses, and societies has grown exponentially, facilitating remarkable progress. Experts are now forecasting significant transformations in the nature of work in the next decade due to the rise of artificial intelligence (AI). (Jaiswal, Arun and Varma 2022.)

The growing adoption of artificial intelligence (AI) technologies, such as generative AI tools, within organizations is undeniable. As these systems become more ingrained in organizational procedures and processes, it becomes crucial to understand their influence on employees' experiences and job structures. Nevertheless, the ongoing discussion about AI utilization in the workplace presents a divided perspective. Advocates of the technology praise its potential for improving efficiency and productivity, while others express concerns regarding potential negative impacts on human workers. (Bankins, Ocampo, Marrone, Restubog and Woo 2023, 1.)

As advanced AI technologies continue to reduce the demand for human labor within multinational corporations, it becomes essential to establish a strong connection between these technologies and the specific requirements and outcomes of organizations. This requires a profound comprehension of the capabilities possessed by organizational members (Davenport and Kirby, 2016). Undoubtedly, the cultivation of competencies associated with AI and its various applications is of utmost significance in ensuring that employees remain employable in the future. (Jaiswal, Arun and Varma 2022).

The purpose of this master's thesis is to use the scoping literature review to contribute to the understanding of Artificial Intelligence (AI) in the context of human resource management. The aim of the master's thesis is to produce information that can be utilized by companies and organizations which are exploring the possibilities of integrating artificial intelligence into human management practices. The research questions of this master's thesis are:

1. What is the relationship between Artificial Intelligence and managing people?
2. Can coaching leadership support AI and human resource practices such as performance management?

3. How can organizations ensure responsible and ethical use of AI in Human Resource Management?

In order to find relevant material, this master's thesis was conducted as a scoping literature review. A systemized search was performed on September 2023 in databases ProQuest, ScienceDirect, Taylor & Francis Online and Wiley Library Online. The keywords which were used in search were "artificial intelligence", "human resource management", "coaching individual's performance", "ethical AI" and "AI applications in HRM".

This research has not had a commissioner, nor a financier, nor has it been conducted with any specific company in mind. The starting point of the research has been the researcher's personal interest in the topic. The researcher does not have prior experience in conducting a study of this scope. All information has been acquired for the purpose of this master's thesis.

2 Theoretical framework

This chapter presents the theoretical framework of this study. First, the main features of Artificial Intelligence (AI) are introduced, followed by a review of how AI is part of business. Second, this thesis presents human resource management focusing on performance management (HRM). In the following section the thesis writer will examine how coaching management is connected in the previous chapters. Finally, this master's thesis focuses on investigating the relationship between AI and HRM.

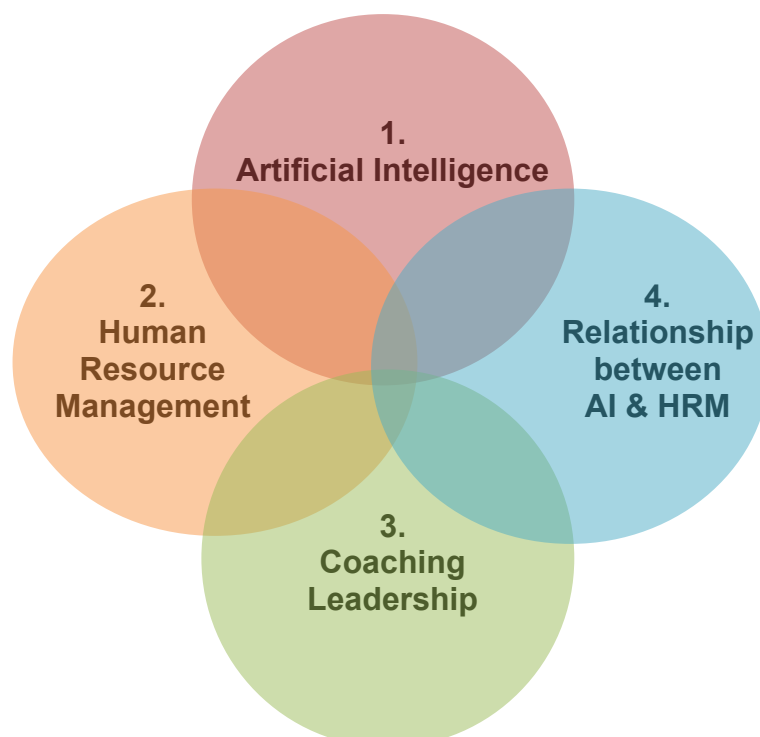


Figure 1. Theoretical framework of the study.

2.1 Artificial Intelligence

This chapter describes the history of artificial intelligence, defines artificial intelligence, and outlines the changes that artificial intelligence has brought to leadership.

2.1.1 Definition and history of artificial intelligence

The first computers entered the market in the 1980s. The memory capacity of computers has evolved from that point to this day by about 140,000 times, and their performance has increased by 700,000 times. The computational power of today's smartphones matches that of the best computers from the 1980s and 1990s. The development has occurred over the past thirty years and encompasses not only computational power but also the performance of memory and communication connections. (Rousku, Andersson, Stenfors, Lähteenmäki, Limnell, et al. 2019: 15–16.)

The history of computers can be seen as the earliest history of Artificial Intelligence (AI). The first surge in the development of AI occurred in the 1970s. The period known as the AI winter began in 1973 when investors widely withdrew funding from AI projects. A new enthusiasm for AI emerged in the early 1980s, but similarly to the excitement of the 1970s, it ended in disappointment. It wasn't until the early 2000s that problems in industry and educational institutions could be solved for the first-time using machine learning models. Rapid development has continued since then. (Tekoäly.info 2021.)

There is a lot of discussion about artificial intelligence, but its definition is not unambiguous. Often, when discussing AI, terms like machine intelligence, deep learning, and machine learning are also used. Fundamentally, the technology of artificial intelligence consists of mathematics, programming, and statistics. (Kananen and Puolitaival 2019: 27.) Artificial intelligence differs from traditional rule-based programming in that it is taught to learn from data based on provided responses. AI, therefore, compares the received data with the given responses. Traditional rule-based programming, on the other hand, aims to provide rules to the program that the machine follows without learning anything from the content. A rule-based program requires a vast number of coded rules to function correctly. AI, on the other hand, requires a large amount of data to

function reliably, but learns from the processed data. Based on the information it receives, artificial intelligence generates probabilities. (Kananen and Puolitaival 2019: 27-28.)

The picture below (figure 2) depicts the technology that has been used by humans during different decades. Additionally, it illustrates the spreading of technology's capacity from a narrow sector to a widespread digitization that encompasses everywhere. (Rousku et al. 2019: 15.)

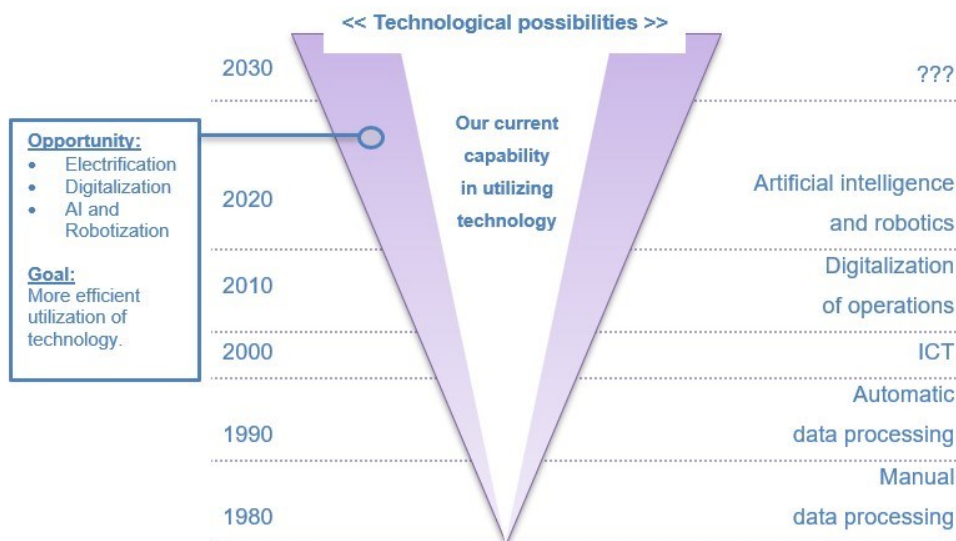


Figure 2. In the 2020s, we are increasingly using automation and self-service. We utilize artificial intelligence and robots not only in industry but also in our everyday lives (adapted from Rousku et al. 2019: 15).

According to Merilehto (2018: 18), the definition of artificial intelligence can be considered as the notion that a machine performs functions that, if done by humans, would be deemed intelligent. He emphasizes that artificial intelligence should be developed in a way that it doesn't merely match human cognitive capabilities but rather is capable of independent learning, anticipation, and inference superior to that of humans. (Merilehto 2018: 18.) Initially, artificial intelligence was developed and created to mimic human thinking and reasoning. The purpose of artificial intelligence is to enable machines to perform tasks that previously required human labor. Processes involving human knowledge can be automated and entrusted to artificial intelligence. Such tasks include memory, learning, reasoning, perception, attention, creativity, and problem-solving. Underlying artificial intelligence are various methods and techniques, from which the most suitable ones can be chosen for a given purpose. (Kananen and Puolitaival 2019: 17.)

Artificial intelligence is divided into narrow AI (also known as weak AI), strong AI, which is general AI, and superintelligence, also known as Super-AI (see figure 3). Currently, the focus has been primarily on weak AI, which excels at specific tasks it is programmed for, rather than the construction of strong or superintelligence. The possibilities of strong AI are constantly being developed, contingent on the AI's ability to learn autonomously, without guidance, and to generalize its learning. Neural networks already function and learn quite autonomously, and deep neural networks are partially capable of generalization. However, the development of strong AI is still decades away. (Merilehto 2018: 18, 23–25.) In visions that are more technology-oriented, the acceleration of artificial intelligence and technological development takes center stage, leading up to technological singularity. At that point, progress becomes so rapid and uncontrollable that humans can no longer keep up, and societies undergo radical transformations. Typically, the vision includes the idea of an all-powerful artificial intelligence surpassing human intelligence. (Dufva and Rekola 2023: 51; Järvinen 2023.)

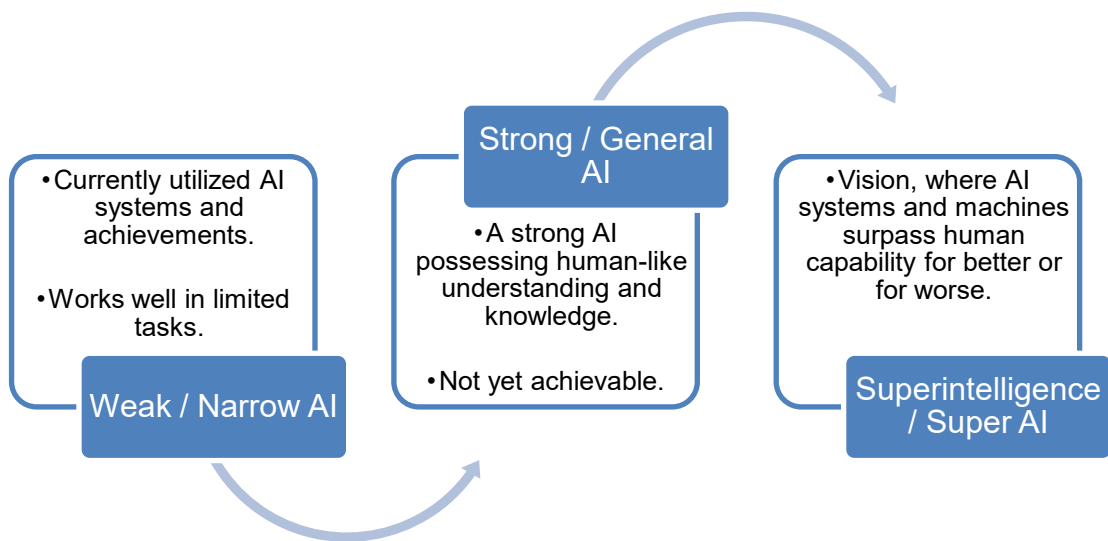


Figure 3. Stages of Artificial Intelligence Development (adapted from Ailisto et al. 2018).

2.1.2 Artificial intelligence as part of business

The Internet enabled the development of digital services in the 1990s. In the 2000s, the advancement of mobile technology heavily shaped the communication between customers and businesses. (Gerdt and Eskelinen 2018.) The era of artificial intelligence and data is set to transform society even more profoundly (Auvinen 2017; Gerdt and

Eskelinen 2018). Due to machine learning, the pace of change increases, and communication becomes more intuitive. From the customer's perspective, this means that we no longer want to stand in cashier queues; instead, purchasing and payment should happen quickly online, and the customer experience should be seamless. (Gerdt and Eskelinen 2018.) By harnessing artificial intelligence, an entirely new market area can be created, one that has no competition yet. This can also generate entirely new demand. AI-based business maximizes value creation at its best and minimizes costs. This situation is referred to as a blue ocean strategy. In this scenario, a company transcends competition, leaving behind a cutthroat competitive environment. A competitive market is referred to as a red ocean strategy. (Kananen and Puolitaival 2019: 16.)

Digitalization has been the most significant technological advancement in recent times, cutting across virtually all industries. Our ways of writing text, listening to music, watching movies, managing banking affairs, maintaining social relationships, and working have already changed. Digital services have also become more prevalent in areas such as healthcare, transportation, and education. The use of remote connections significantly increased during the COVID-19 pandemic. (Dufva and Rekola 2023: 48.) Digitalization is not a game in which one can participate or succeed easily. The question is no longer about a digital leapfrog competition, but about power and its determination. It's about how we want to live in the future (Lindgren, Mokka, Neuvonen, Toponen, Liukas and Hirvonen 2019). An increasing number of businesses are being built upon data, and existing business operations have been able to evolve through the utilization of data. In the future, data will rapidly reshape markets, causing many traditional businesses to disappear (Lindgren et al. 2019; Merilehto 2018). When companies realized the potential of harnessing data for business management, a significant transformation occurred. Data-driven business will surpass non-data-driven business in the future, as it doesn't require substantial capital investments. Data-driven business yields better returns on invested capital, as it can optimize sales or production costs relative to sales (Lindgren et al. 2019.) According to Dufva and Rekola (2023: 48) the digitalization of text, images, music, and videos has generated digitally formatted data that can be endlessly copied. This has given rise to the modern data economy. Data has emerged as one of the most crucial raw materials of our era. We are currently undergoing a historical technological and economic transformation, where digitalization and the data economy enable substantial growth in well-being and productivity.

Artificial intelligence is already capable of helping through applications in tasks such as data-driven prediction, clustering, classification, and anomaly detection. Such applications have been utilized in familiar products and services for humans, such as self-driving cars, language translation and speech recognition machines, robotics, weather forecasting, pricing, targeted marketing, disease diagnosis, credit decision-making, insurance risk assessment, and spam email identification. (Jääskeläinen 2019: 13.) With the help of artificial intelligence, computers can learn, recognize objects, make decisions, and assess situations. This also applies to demanding professions such as doctors and lawyers. (Manka and Manka 2023.)

In a survey conducted by Oxford and Yale Universities, it is predicted that the automation of all current jobs will occur within the next 120 years. One notable prediction from the study is that machines are projected to surpass humans in performing surgical procedures by the year 2053. The survey included 352 artificial intelligence researchers in the year 2015. (Merilehto 2018: 26). According to Merilehto, no professions that we currently consider beyond the reach of automation or artificial intelligence are truly impossible to be fully or partially carried out by machines. The profession of a barber, for instance, could be considered one that AI couldn't perform. In reality, programming a robot to cut people's hair would be more than feasible, if we desire it to happen. After all, cutting hair is less demanding compared to complex surgical operations. (Merilehto 2018.) Development of artificial intelligence is unpredictable because it is entirely commercial, and anyone can develop it, including states (China, the United States), or private individuals on their own computers. (Järvinen 2023; Merilehto 2018.) Technology has not altered the fundamental elements of customer experience, which still need to be considered as a whole. These elements encompass company cultures, internal capabilities, processes, branding, and measurement. With the rapid development of technology, the evolution of these elements has become technology assisted. (Gerdt and Eskelinen 2018.) In order for humans to be able to compete against artificial intelligence in the future as well, it's important that humans do not become stuck in their ways but instead learn and adopt new skills. (Järvinen 2023).

According to Dufva and Rekola (2023), the question of the direction of technological development is essentially a question of future power: who defines the visions of the future, whose interests do they represent, and who is included in them? The risk is that the visions of the future are shaped based on values and interests that we do not share or that may be in conflict with European values, for instance. On the other hand, there

is also a risk that we may not seize the opportunities presented by technological advancement. Technology brings solutions, such as those for well-being, resource monitoring, and sustainable production, as long as it is wielded correctly. (Dufva and Rekola 2023: 49.)

2.2 Human Resource Management

Human Resource Management (HRM) is a strategic, comprehensive, and consistent approach to the work, development, and well-being of individuals in an organization (Armstrong 2016: 53). In HRM, the focus is on how people work and how they are managed and developed within organizations (Armstrong 2016: 52). According to the definition by Boxall and Purcell (2003: 1), HRM encompasses all actions related to managing employment relationships within a company. In this context, human resource management refers to the organization's practices and principles, which include activities like recruitment, training and development, evaluation, and compensation, as well as providing a safe, ethical, and fair environment for the organization's workforce (Dessler 2011: 13).

According to Viitala (2021), human resource management is a central field of management in every company. Whether a company's workforce becomes a success factor for it or not depends on the success of human resource management. It can thus be rightfully said that it is a success factor for the company. Through HRM, the company ensures that it has the right number of employees, always targeted properly, who can perform their tasks in line with the company's objectives. (Viitala 2021.) Therefore, human resource management includes all groups of employees, including supervisors. This raises the question of how individuals in leadership positions are managed. (Boxall and Purcell 2003: 2.) In order to examine human resource management related to leadership roles sensibly, it is necessary to divide the whole into smaller, distinct areas that require different forms of leadership. These subareas are often referred to as human resource practices (figure 4). Good performance is based on competence, motivation, commitment, well-being at work, and good working conditions, which are promoted through various human resource practices. (Viitala 2021.)

HRM comprises four key areas of responsibility, which are typical for all forms of management: planning, involving the definition of human resource management goals and guidelines, the organization and resourcing of HRM, practical implementation of matters, and performance evaluation, which also includes the development and renewal of HRM. In human resource management, various practices of personnel management

can be employed to achieve desired objectives. Different methods can lead to the same goal, and the same method may function differently in various situations. (Viitala 2021.)

2.2.1 Strategic Human Resource Management

The roots of strategic human resource management (SHRM) can be traced back to the 1980s. Especially in the 1990s, the role of human resource management (HRM) evolved into a more strategic function, with the task of creating conditions for the implementation of the business strategy. Human resources (HR) were wanted to be examined in relation to the economic and social environment, and towards the end of the decade, special attention began to be paid to the link between strategic human resource management and the company's performance. Human resources and human resource management started to be seen as a strategic competitive advantage, and researchers wanted to examine the structures and practices of human resource management as well as the difference between knowledge and skills from the perspective of strategic human resource management. (Salaman, Storey and Billsberry 2005: 2; Viitala 2013: 33.)

In the very first definitions of strategic human resource management, personnel were seen as a company's strategic resource, enabling a competitive advantage to be gained. A crucial factor for the definition was also the connection between human resource management and the organization's strategy. Pioneers in the field of strategic human resource management research, such as Hendry and Pettigrew, held this view. In their literature review, they stated that strategic human resource management is a systematic activity in which human resource policy and strategy serve as the foundation for planning and management. These policies and strategies are derived from the company's overall strategy, and people are considered the company's strategic resource that generates a competitive advantage. (Hendry and Pettigrew 1986: 3-8.)

Even today, Forbes (2023) defines that the primary objective of strategic human resource management is to develop policies and initiatives that are closely aligned with the company's overall business strategy. The key distinction between traditional human resources and strategic human resources lies in their focus. Conventional human resources primarily deal with day-to-day employee management, while SHRM concentrates on how employees can contribute to the achievement of the company's broader

goals. To accomplish this, SHRM must first gain a deep understanding of the company's business objectives and subsequently design programs and policies that are in harmony with those objectives. (Forbes 2023.)

The connection between the organization's strategy and human resource management remains one of the cornerstones for researchers in the field. Strategic human resource management is seen as an approach that describes how the organization's goals are intended to be achieved through people, using human resource strategies, integrated practices, and methods (Armstrong 2008: 33). Strategic human resource management consciously aims to formulate and implement collectively agreed-upon human resource actions that support the organization's broader objectives and business strategy to enhance overall performance. Strategic human resource management aims to improve organizational outcomes through people while considering the needs and well-being of employees (Armstrong 2008: 79). Therefore, the purpose of strategic human resource management is to ensure the organization's strategic capability by ensuring that the organization has a sufficient number of skilled, committed, and motivated employees so that the organization can achieve its goals (Armstrong 2008: 33, 35, 79).

According to Forbes (2023), strategic human resource management often involves the implementation of programs and policies in areas such as performance management, training and development, compensation and benefits, and employee relations. Performance management programs help track and enhance employee performance, while training and development initiatives identify employees' development needs and provide them with the necessary training and resources for improvement. In terms of compensation and benefits, SHRM aims to create packages that not only attract but also retain employees. Additionally, managing employee relations is a key aspect of strategic resource management, as it contributes to creating a positive and productive work environment. (Forbes 2023.) Viitala (2013) agrees that efficient operation is a key factor for the success of an organization, and a crucial part of this operation is the ability of the people working in the company to perform effectively. Managing performance is, in essence, a core aspect of human resource management, as it involves the performance of individual tasks by the individuals in relation to the organization as a whole and its objectives. (Viitala 2013: 130). In figure 4 is illustrated the different human resource practices but this thesis focuses solely on performance management.



Figure 4. Human resource practices (adapted from Viitala 2021).

2.2.2 Performance

The goal of human resource management is to create a workforce within the company that meets the requirements of the business and delivers the desired level of work performance. It is not enough to have a sufficient quantity of personnel who are correctly allocated if there are many individuals who do not perform their tasks adequately. The crucial point is that every employee hired by the company is capable of fulfilling their tasks according to the set goals. Good performance is built upon strong expertise, motivation related to tasks and objectives, well-being at work, commitment, participation, and supportive mental and physical working conditions. (Viitala 2021.)

For decades, a primary focus of researchers in the field of human resource management has been to explore how the management of personnel can influence the success of a company. One theory, known as the AMO model, is a widely used and applied theory. According to this model, an individual's performance at work depends on their competence, motivation, and the opportunities the work environment provides. The name of the theory is derived from the words *ability* (A), *motivation* (M), and *opportunity* (O), represented in the formula $A \times M \times O = P$ (*performance*). This multiplication formula emphasizes that all these factors are essential for performance. (Kellner, Cafferkey and Townsend 2019; Viitala 2021.) According to the theory, people achieve

effective results when they possess the necessary knowledge and motivation for the task and have the opportunity to influence their work. Competence can be strengthened through good orientation and training, while motivation can be influenced through rewards and feedback. Enabling can be supported by offering opportunities for employees to have an impact on their work and workplace matters, as well as by shaping job tasks to include opportunities for planning, development, and decision-making. If all three of these factors are strong for an individual, they will strive for and exceed basic performance. (Viitala 2021.) According to Kellner et al. (2019) the AMO theory has found broad acceptance as a valuable tool for understanding the complex link between how people are managed and the resulting performance outcomes. This theory has been developed by researchers such as John Boxall and Peter Purcell (2003) as introduced in figure 5.

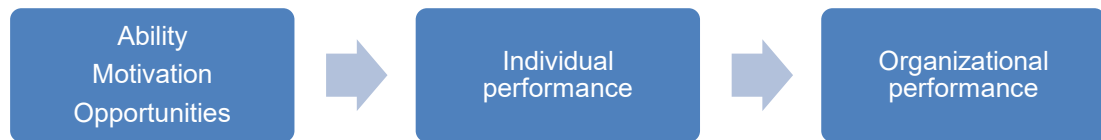


Figure 5. AMO model (adapted from Viitala 2021).

The AMO model has been accompanied by further developed versions that also consider human resource practices. One such version is the "People and Performance" theory by John Purcell, Nicholas Kinnie, Sue Hutchinson, Bruce Rayton, and Juani Swart (2003). They proposed that the success of team leaders in people management affects the formation of employee commitment and job satisfaction. For example, if the company defines employee participation in workplace matters as an important human resource practice, its realization largely depends on the willingness and ability of team leaders to implement it in practice (see Figure 6). Commitment and job satisfaction impact both individual and organizational performance. (Viitala 2021.)

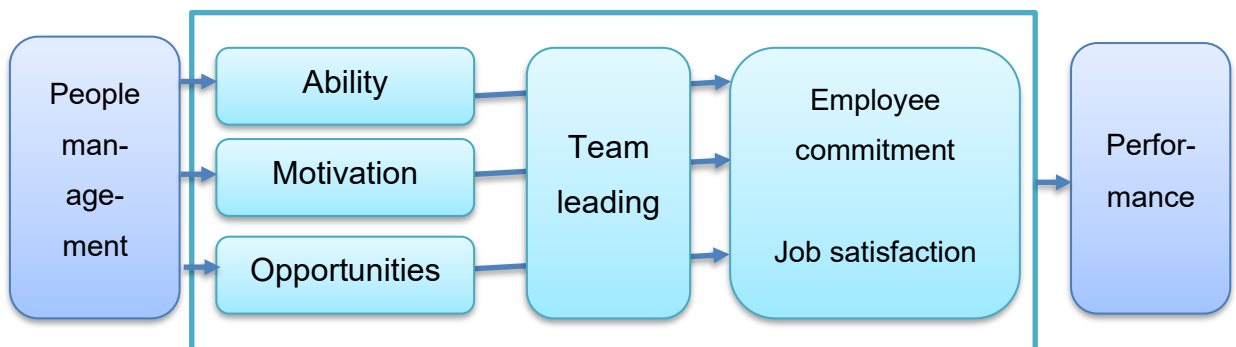


Figure 6. People and performance theory (adapted from Purcell et.al. 2003; Viitala 2021).

According to Viitala (2021) good performance occurs when an individual can carry out their tasks both in terms of timing and quality according to the set objectives. They can, at least generally, complete the work within the agreed-upon timeframes, and the results meet expectations. Naturally, this is contingent on the work being appropriately sized, and the objectives being set in a way that the employee can reasonably be expected to meet them. Within the toolkit of human management, performance management and leadership, in general, play a central role in supporting performance. In practice, this means coaching leadership, establishing clear objectives, ensuring good working conditions, evaluating work performance and results, utilizing feedback and reward practices, job design, and potentially task transfers, as well as providing opportunities for skills development. (Viitala 2021.)

2.2.3 Performance management

Conceptually, performance management involves a structured approach aimed at enhancing the overall effectiveness of an organization through the development of both individual and team performance (Armstrong 2017). A company that can operate more efficiently than its competitors gain a relative competitive advantage. The core aspect of efficiency and productivity within a company is the ability of its employees to work effectively. Therefore, performance management is needed, focusing on individual performance and performance capacity at the individual level. (Viitala 2021.)

Good performance is evident in achieving and surpassing goals and generally succeeding in one's work. Viitala writes (2021) that nowadays, most companies have defined individual-level objectives against which performance is monitored, either alongside or even in place of regular working hours. Performance tracking for groups and teams working towards the same goal is also carried out in a similar manner. However, managing performance falls short if it is solely based on monitoring and evaluation of achievements. By ensuring the prerequisites for performance, such as competence and well-being at work, are sufficient and providing favorable conditions, the attainment of objectives and the meaningfulness of work are enabled. This way, performance management can, at its best, also take on a proactive approach (Viitala 2021.) Figure 7 will represent targets of performance management.

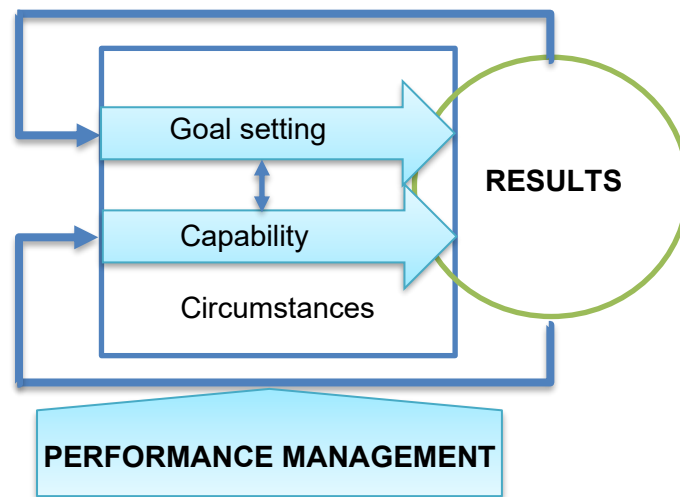


Figure 7. Targets of performance management (adapted from Viitala 2021.)

According to Viitala (2021) setting goals is the starting point of performance management. It is essential to establish clear and measurable objectives and evaluation criteria. The setting of company goals begins with strategy and top management. Each unit's supervisor ensures that its goals align with higher-level objectives, and the objectives of each individual employee support the achievement of common goals. Goals for work are typically defined through discussions between supervisors and employees. Even though goals may seem self-evident, there is often a need to clarify them from time to time, especially when circumstances change.

Reaching a goal requires a concrete and measurable plan of actions that can be tracked and evaluated. In the creation of individual and group-level action plans, the SMART model serves as a guideline. A goal is more likely to become a reality and be accomplished when the plan is SMART. (Ristikangas and Ristikangas 2013: 219.) The SMART model was originally introduced by Robert L. Heneman and Jon M. Wernes (2005). According to the model, the objectives are:

- **Specific:** Clear and understandable
- **Measurable:** Measurable and verifiable
- **Achievable:** Possible to achieve with available authority and resources
- **Realistic:** Realistic in the current situation of the company and its operating environment
- **Time-based:** Time-bound

Christina Black and Wendy Lawrence (2012) added two elements to the model and expanded it into the SMARTER model:

- **Evaluated:** Goal achievement is actively assessed
- **Reviewed:** Goals and conditions for achievement are modified based on evaluation.

The assessment of performance revolves around certain metrics and criteria, which can be quantitative or qualitative. Effective metrics are commonly accepted, understandable, and perceived as fair. Their selection requires careful consideration because people's attention and effort are focused on what is monitored, evaluated, and rewarded. The impacts of objectives should be examined comprehensively. For example, if objectives and their tracking in a sales organization were solely tied to market share and sales volumes, it could have detrimental consequences for the company's profitability if sales were increased, for instance, by offering discounts. On the other hand, if metrics only focus on factors like service speed or the quantity of served customers, it could lead to a decline in the quality of service. (Viitala 2021.)

Michael Armstrong (2022) has outlined a performance management process cycle as depicted in Figure 8, which illustrates a continuous process of improving performance. Initially, the context in which the task fits within the organization is clarified, goals are set using the SMART model, and the individual's development direction is agreed upon. Subsequently, achieved goals are reviewed, the direction of development is monitored, and if necessary, the supervisor can provide coaching to reshape the goals and offer feedback on progress. Achievements are also examined, and the attained development is identified.

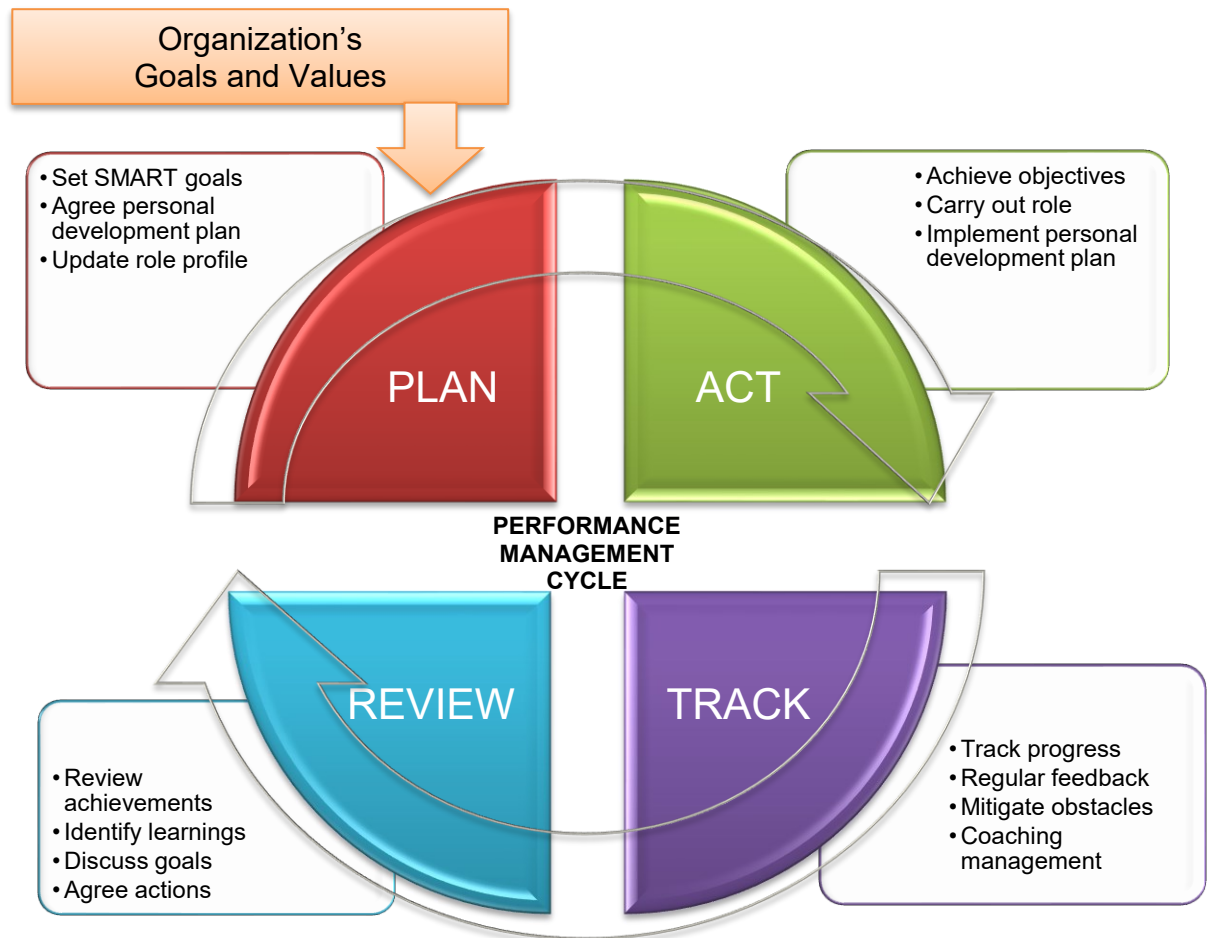


Figure 8. The stages of the performance management cycle (adapted from Armstrong 2022).

Performance should always be evaluated within its context, meaning in relation to the circumstances (Viitala 2021). Viitala describes that often, many factors can influence the progress and outcome of work, some of which are beyond one's control. For instance, a skilled salesperson may fall short of their sales targets because a manufacturing defect arises in the product, and this information spreads through the media, sparking widespread discussion. A crucial part of performance management is that both the supervisor and the employee ensure that there are adequate conditions for performance. The foundation of performance lies in strong competence, as well as physical and psychological well-being at work. Additionally, it is influenced by favorable working conditions and proper tools and equipment. (Viitala 2021.)

2.3 Coaching leadership

This chapter examines the history and definition of coaching leadership, its classification, and explores the significance of coaching leadership in business.

2.3.1 The background and classification of coaching leadership

Coaching became a part of leadership literature in the 1950s. Back then, coaching was a part of a supervisor's responsibility to teach and guide their subordinate in a "master-apprentice" relationship style. The supervisor's role was to enhance and develop their subordinate's work skills, and there existed a hierarchical relationship between them. Coaching was seen as equivalent to the development of job skills. In the 1970s, an attempt was made to introduce coaching like sports coaching into management development. In the literature of that time, coaching leadership appeared as a tool for management development. (Evered and Selman 2001: 20.)

Hamlin, Ellinger and Beattie (2008: 295) have categorized coaching into four distinct categories based on their literature review: coaching leadership, executive coaching, business coaching, and life coaching. In coaching leadership, the intention is to develop the skills or performance of the individual being coached. Executive coaching involves a coach and a top-level executive, aiming to assist the individual in achieving personal or work-related goals, which contribute to enhancing the organization's performance. Business coaching aims to help organizations, owners, and employees achieve their personal and business-related objectives, ensuring the organization's long-term success. Life coaching involves a coach aiding their "trainer" in improving their quality of life or fostering personal growth. (Hamlin et al. 2008: 295.)

2.3.2 Definition of coaching leadership

Yu (2007: 6) views coaching leadership as a means of developing both supervisors and their subordinates, emphasizing the provision of individualized and constructive feedback instead of giving orders to subordinates. Ristikangas and Ristikangas (2013) define coaching leadership as a holistic way of being, influencing others, and being influenced. It involves appreciative, participative, and goal-oriented collaboration, where individuals' potential is unleashed for the benefit of the group and the organization. The group's potential, in turn, supports the empowerment of individuals. Coaching leadership is based on trust and belongs to everyone. (Ristikangas and Ristikangas 2013:

12). Cox, Bachkirova and Clutterbuck (2014: 1) describe coaching leadership as a process related to personal development, aimed at achieving desired and sustainable changes that benefit both the individual being coached and potentially other stakeholders as well. Such a development process involves structured interaction and the selection of appropriate methods, strategies, and tools (Cox et al. 2014: 1). Anderson also describes in his research (2013: 262) the coaching process as a two-way endeavor, where the coach must motivate team members, enhance their learning skills, and provide opportunities for them to fully utilize their skills. It is crucial that there is mutual acceptance between the coach and the team. (Anderson 2013: 262.)

According to Cox et al. (2014), coaching is widely acknowledged for its effectiveness in boosting performance, delivering results, and optimizing individual effectiveness. Also Downey (2003: 21) writes that coaching leadership is a combination of improving the performance, learning, and development of the individual being coached. Performance improvement can be related to a specific task or, more broadly, to enhancing efficiency, for instance. Downey distinguishes between learning and development by emphasizing that learning is essential for an organization's future performance, while development refers to the individual's personal growth or achieving better self-awareness. Furthermore, coaching leadership strongly involves the coach's influence on the individual being coached. A coaching leader must be able to set aside their own biases and encourage their coachee to explore things from a new perspective, enabling a broader understanding. This also requires creativity. When executed effectively, coaching leadership does not rely solely on following techniques or control, as the coaching leader is deeply committed to the coachee, and their interaction operates in full harmony. The significance of creativity, imagination, and intuition comes into play as the coaching leader can adapt to the situation without depending solely on techniques. (Downey 2003: 21–22.)

Evered and Selman (2001: 16–18) define coaching leadership as a management practice in which communication is used to create an atmosphere and environment that empowers individuals and teams to achieve better performance. Coaching leadership represents a new type of leadership culture aimed at replacing the prevalent control-based leadership. (Evered and Selman 2001: 16–18.) The essence of coaching leadership is formed by the following ten elements:

1. Developing partnership
2. Commitment to achieving results and fulfilling the vision
3. Compassion and non-judgmental acceptance

4. Speaking and listening
5. Coachee's response to the coach's interpretation
6. Respecting the uniqueness of each coachee and situation
7. Practice and preparation
8. Willingness to coach and be coached
9. Respecting both the individual and the team
10. Willingness to achieve something that has not been achieved before
(Evered and Selman 2001: 23–24.)

Orth, Wilkinson and Benfari (1987: 74) also view coaching as a new style of leadership aimed at elevating the performance of those being coached to the highest possible level. They describe coaching leadership as a practical process in which employees are helped to identify their development opportunities concerning their job performance and personal abilities. However, to implement coaching leadership effectively, the right work environment and specific critical skills of a coaching leader are also required. (Orth et al. 1987: 66–67.) Orth and others (1987: 74) also assert that coaching leadership involves assisting individuals over the long term with the goal of improving an individual's performance to its highest potential, rather than being a one-time problem-solving approach.

Redshaw (2000: 106–107) describes coaching in his work 'Coaching for Managers – A Tutor/Facilitator's Workbook' as the systematic development of a person's abilities or job performance. This is achieved by providing them with tasks or experiences that facilitate learning. To facilitate learning, the individual being coached is guided and provided with feedback. (Redshaw 2000: 106–107.) Table 1 summarizes the definition of coaching leadership according to various researchers.

Table 1. Coaching Leadership as Defined by Various Researchers (adapted from Cox et al. 2014: 1; Downey 2003: 21–22; Evered and Selman 2001: 17–18; Orth et al. 1987: 66–74; Redshaw 2000: 106–107)

Researcher (Year)	Coaching Leadership
Cox, Bachkirova and Clutterbuck (2014)	A process related to personal development, where communication is purposeful, and suitable strategies and methods are employed to achieve the desired change for the benefit of

	the individual being coached and potential other stakeholders.
Downey (2003)	A combination of performance improvement, learning, and development that requires open-mindedness and creativity from the coaching leader.
Evered and Selman (2001)	A leadership action involving communication to create an atmosphere and environment that empowers individuals and teams to perform better.
Redshaw (2000)	The systematic development of skills or job performance by providing individuals with tasks or experiences that enable learning. To facilitate learning, individuals are guided and provided with feedback.
Orth, Wilkinson and Benfari (1987)	An everyday practical process where, by building the right work environment, employees are assisted in identifying opportunities to improve their performance and abilities.

According to the summary in Figure 9, Cox et al. (2014: 1), Downey (2003: 21–22), and Redshaw (2000: 106–107) all see coaching leadership as a learning process or strongly related to enabling learning and the development of the individual being coached. All researchers agree that coaching leadership is closely linked to performance improvement. They all also emphasized the importance of communication, interaction, and creating the right atmosphere. There were no significant differences in the definition of coaching leadership among the researchers.

Process related to learning and development	Performance enhancer	Communication, interaction, and atmosphere building
<ul style="list-style-type: none"> • Cox, Bachkirova and Clutterbuck • Downey • Redshaw 	<ul style="list-style-type: none"> • Cox, Bachkirova and Clutterbuck • Downey • Evered and Selman • Orth, Wilkinson and Benfari 	<ul style="list-style-type: none"> • Cox, Bachkirova and Clutterbuck • Downey • Evered and Selman • Orth, Wilkinson and Benfari

	• Redshaw	• Redshaw
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Figure 9. Coaching leadership in summary (adapted from Cox et al. 2014: 1; Downey 2003: 21–22; Evered and Selman 2001: 17–18; Orth et al. 1987: 66–74; Redshaw 2000: 106–107)

2.3.3 The impact of coaching leadership on performance and practical implementation

In the business world, it has been observed that both individuals and teams perform better, resulting in increased productivity and profitability when coaching leadership is employed within the organization. The quality of coaching has a significant impact on the outcomes (Evered and Selman 2001: 20). Yu (2007: 6) notes that coaching leadership not only enhances organizational performance and productivity but also improves employee job satisfaction. Kim, Egan, Kim and Kim (2013) also find in their research that employees who have been coached by their supervisors have a clearer understanding of their roles, are more satisfied with their work, and consequently, are more committed to their organization. They also perform better in their jobs compared to their colleagues who have not received coaching. Coaching leadership indirectly influences employee satisfaction, their level of commitment to both their work and the organization, and their job performance (Kim et al. 2013: 326).

Redshaw (2000: 106) believes that coaching leadership benefits both the organization and the employees themselves. In organizations where a strong coaching leadership culture prevails, there is noticeable improved learning capability throughout the organization, enabling more efficient adaptation to changes. Individuals not only learn new coached aspects but also become better over time at learning new things. Learning new skills is often motivating as well. Furthermore, the implementation of effective coaching leadership creates a continuum where individuals who have received good coaching become proficient coaches themselves. The more coaching leadership there is in an organization, the more it continues to grow in the future. (Redshaw 2000: 106.)

The practical implementation and success of coaching leadership are greatly influenced by the organization's atmosphere and culture (Redshaw 2000: 106; McCarthy and Milner 2013: 776). According to Ristikangas and Ristikangas (2013: 267), if a workplace aims to cultivate a coaching culture, special attention must be given to the organization's practices and values, competency development, and improving interpersonal relationships. Shortcomings in these areas make it more challenging to build a coaching leadership culture (Ristikangas and Ristikangas 2013: 267).

The organization's practices, values, and appreciation constitute the first of three prerequisites in the endeavor to foster a coaching leadership culture. The organization should have a shared direction and clear objectives that are systematically pursued. When introducing coaching leadership into an organization, the attitude of senior management, especially the CEO, plays a significant role. They serve as role models, and their commitment to a coaching culture is noticed at lower levels. The process of change requires time and systematic development, as shifts in thinking patterns and practices do not happen overnight. In addition to these factors, reward systems should support the recognition of groups and teams rather than individual performance (Ristikangas and Ristikangas 2013: 268–272).

Ristikangas and Ristikangas (2013: 273) highlight that the development of professionalism and competence is the second factor when striving for a coaching leadership culture. They state that according to Huffington (2006), it is only when coaching leadership is integrated into a company's strategy that it is taken seriously. Feedback should be seen as an opportunity, not a threat (Ristikangas and Ristikangas 2013: 273–274). To establish a coaching culture, it can be justified to use external coaches to gain an objective perspective. External coaching can be utilized at all levels of the organization. Coaching processes for senior management are crucial in changing the organizational culture, while supervisor coaching practices create the framework for coaching in everyday leadership (Ristikangas and Ristikangas 2013: 274–275).

The third and final prerequisite for transitioning towards a coaching leadership culture is deepening the quality of interpersonal relationships. A coaching culture emerges through groups when its members know each other better. In smaller groups, interaction is easier, and although occasional friction may inevitably arise among group members, these issues are addressed (Ristikangas and Ristikangas 2013: 275–276). In coaching leadership, coaching pairs or colleagues work together with the aim of improving interpersonal relationships. When forming pairs, it is advisable to select individuals whose perspectives differ from each other. This way, new and fresh perspectives on the matter may be discovered, while also enhancing trust among the members (Ristikangas and Ristikangas 2013: 276–277).

Organizations that encourage employees and focus on learning from mistakes rather than finding culprits benefit significantly more from coaching leadership (Redshaw 2000: 106). Coaching doesn't necessarily have to be premeditated or process-oriented all the time. Coaching leadership can be implemented by anyone, for example, in a casual coffee table conversation by asking the other person a useful and relevant

question related to something they have been contemplating. This may lead to new insights for the individual, helping them discover a solution to their problem on their own (Wilson 2011: 413.)

Seeman, Stofkova and Binasova (2020: 7) state that short “minute interviews” between a supervisor and a subordinate can be beneficial. During a hectic daily routine, the purpose of these brief moments is to solve an immediate problem or prepare the subordinate for a specific matter. Often, these quick interviews are informal situations in which the supervisor, nevertheless, utilizes various coaching-related tools or interview techniques (Seeman et al. 2020: 7).

3 Scoping literature review as a method

This master’s thesis was conducted as a scoping literature review. The purpose of a scoping review is to provide a comprehensive perspective on a chosen subject, presenting its current status and highlighting available research. This type of review serves to pinpoint essential attributes and elements associated with the concepts at hand. In contrast, a systematic literature review employs more structured and clearly defined approaches compared to a scoping review, resulting in greater accuracy. Although a scoping review encompasses a wider scope than a systematic review, it demands meticulous and transparent methodologies to ensure the credibility of its findings. (Grant and Booth 2009; Munn, Peters et al. 2018; Peters, Marnie et al. 2020).

A scoping review enables the expansion of inclusion criteria for materials beyond peer-reviewed scientific articles, into what is known as grey literature, including even blog texts, opinions, and audiovisual materials (Peters, Marnie et al. 2020). The limitation of a scoping review is its omission of a quality assessment process. This could introduce bias in the selection of information, potentially leading to a situation where the conclusions rely more on the presence of studies rather than their actual quality (Grant and Booth 2009).

A scoping review is advisable when the author's intention is to acknowledge and pinpoint key ideas within various studies, aiming to chart, document, and discuss upon these discoveries (Munn, Peters et al. 2018; Peters, Marnie et al. 2020). The scoping review was chosen as the research method due to the continuously evolving nature of the subject area, in order to create a comprehensive and up-to-date overview of the topic under investigation.

The guidelines provided by Joanna Briggs Institute (JBI) can assist in formulating research questions and keywords. The Participations, Concept, and Context (PCC) framework is particularly beneficial for scoping reviews and offers a structured approach. This acronym aids in outlining the Participations (or Population), Concept, and Context aspects, enabling authors to craft a well-defined and logical title and inclusion criteria. Implementing the PCC model aids in pinpointing the review's focus and contextual parameters. The coherence between the title, research questions, and inclusion criteria is crucial. Generally, a scoping review focuses on one main research question, possibly supplemented by sub-questions to clarify on the PCC elements (Peters, Marnie et al. 2020.)

Because a scoping review encompasses a wide range of materials, it's essential to establish clear inclusion criteria. The author has the opportunity to establish specific boundaries for certain types of materials, thereby acquiring the most useful and valuable information. The specification of the population/ participations (P) is crucial, entailing factors such as gender, age, and other relevant variables. The explication of the concepts (C) must be meticulous and transparent. The context (C) varies based on the research objectives and questions, encompassing aspects like geographical location, social dynamics, cultural influences, and gender-related factors. Defining the context assists in narrowing the scope to specific countries or fields of study, thereby enhancing the precision of the research focus. (Peters, Marnie et al. 2020.)



Figure 10. Scoping review framework originally proposed by Arksey and O'Malley (2005) but afterwards updated and enhanced (Peters, Godfrey et al. 2020).

In this literature review, the JBI protocol for Scoping Reviews was followed (Peters, Marnie et al. 2020). The research protocol is presented in figure 10. Adhering to the protocol enhances the transparency of the literature review (Peters, Godfrey et al. 2020).

PCC tool was used to identify the research questions and the key words as represented in the following table 2. The research questions are: What is the relationship between Artificial Intelligence (C) and managing people (P). The context is not mentioned in the

first research question. The other research question is: Can coaching leadership (P) support AI (C) and human resource practices (C) such as performance management. And the third research question is: How can organizations (P) ensure responsible and ethical use of AI (C) in Human Resource Management (C).

Table 2. PCC Model to select the search terms.

Population (P)	Concept (C)	Context (C)
Managers, leaders, coaches, organizations	Artificial Intelligence (AI)	Human Resource Management (HRM)

3.1 Data collection

The literature search for this scoping review was conducted systematically and in an organized manner (Lehtiö and Johansson 2016: 36-42; Peters, Marnie et al. 2020). The information retrieval was well-planned; pilot searches were conducted in the spring of 2023, the summer 2023, and also in August 2023, both by the thesis author and in collaboration with the information professionals at Metropolia University of Applied Sciences. Based on the pilot searches, search terms and phrases were refined, criteria for study inclusion and exclusion were established, and search portals to be used in the information retrieval process were determined. (Peters, Marnie et al. 2020).

The actual information retrieval was conducted on September 22nd, 2023. The literature search was carried out systematically from the multidisciplinary search portals ProQuest, ScienceDirect, Taylor & Francis Online, and Wiley Online Library. The search query was formulated using the keywords of the research questions. (Lehtiö and Johansson 2016: 36–42; Peters, Marnie et al. 2020.) The keywords used in data collection are described in table 3.

Table 3. Keywords used in data collection.

Keyword	Synonym
Artificial Intelligence	AI Machine learning Neural networks
Human resource management	HRM

Coaching individual's performance	Coaching leadership Management Leadership
Ethical AI	
AI applications in HRM	

In the formation of search queries (Figure 11), Metropolia University of Applied Sciences' information specialists were consulted for assistance. The search was narrowed down so that the keywords "artificial intelligence" and the limiting keywords in the context of human resource management - "human resource management," "HRM," and "coaching management" had to be found in the text. Based on trial searches, it was decided to use only the keyword "artificial intelligence," as it included subtopics like "machine learning" and "neural networks" used in the publications that utilized these keywords, without excluding essential search results. Based on trial searches, it was also decided to add specific keywords such as "coaching individual's performance," "ethical AI," and "AI applications in HRM" to target and narrow the search to the desired topic. Boolean operators AND and OR were used in the literature search to find different forms of the keyword when it was possible in the search portal (Lehtiö and Johansson 2016: 37–42).

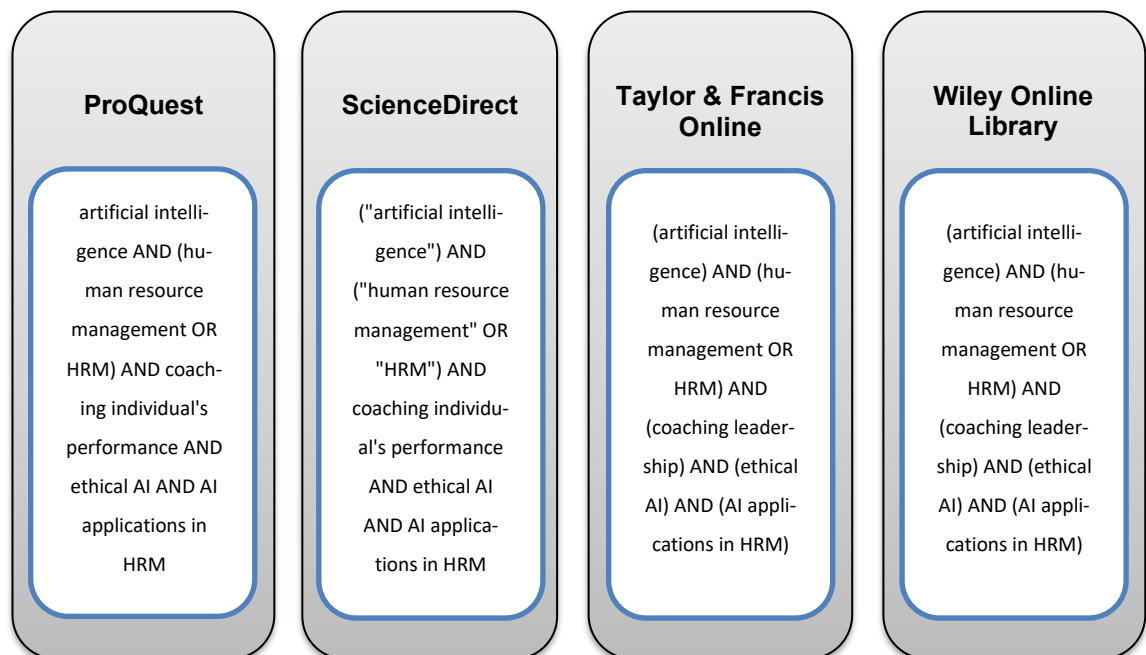


Figure 11. Search queries by database

The actual search protocol is presented in the PRISMA diagram in Figure 12. The figure illustrates the search portals used, the number of data sources by database, and overall, as well as the articles excluded from the literature review, as described earlier in this chapter.

3.2 Selection and processing of data

The exclusion and inclusion criteria for publications are presented in table 4. All Finnish or English language articles from the years 2018–2023 that matched the research questions were selected for the literature review. The limitation of the publication years is justified by the accelerated development of artificial intelligence in recent years, which was also evident in the number of articles found in the search (Peters. Marnie et al. 2020). The search was restricted based on the publication year, meaning that articles published before 2018 could not appear in the search results. No publications other than those in English were encountered in the search. Non-dissertation-level theses, videos, books, letters, and non-scientific articles were excluded from this scoping review. The goal was to find literature with scientific significance. The selected articles were required to address the research questions.

Table 4. Inclusion and exclusion criteria.

Inclusion criteria	Exclusion criteria
Scientific Article	Not Scientific article or publication
Editorial in a Scientific Publication	Bachelor's or Master's thesis
Blog Post	Video
Dissertation	Book
Opinion Piece in a Scientific Publication	Letter
Published 2018 – 2023	Publications before 2018
Peer reviewed	Not peer reviewed
Published in English or Finnish	Published in other languages than English or Finnish
Free access to full text	Access charged

Studies related to using artificial intelligence or AI	Studies related other than using artificial intelligence or AI
Studies related to human resource management	Studies not related to human resource management
Studies related to context of leadership	Studies not related to context of leadership
Answers to research question(s)	Not answering to research question(s)

In scoping reviews, not all publications undergo a quality assessment; instead, the decision on which publications to include is made by multiple individuals (Peters, Marnie et al. 2020). However, in this thesis, the selection of publications to be included was made solely by the thesis worker, and the weight of the review was increased by conducting a quality assessment on the chosen publications (Lemetti and Ylinen 2016: 74). The quality assessment used Joanna Briggs Institute's checklist for texts and opinions (McArthur, Klugarova, Yan and Florescu 2020) and the checklist for cross-sectional studies (Moola, Munn, Tufanaru, Aromataris, Sears, Sfetcu et al. 2020), depending on the publication type. Two mixed study-based publications were assessed using JBI's checklist for cross-sectional studies (Moola et al. 2020). Opinions, editorials, and narrative reviews were evaluated using JBI's checklist for narrative text and opinions (McArthur et al. 2020). The overall scoring of the quality assessment is presented on a per-article basis in Appendix 1. The actual quality assessment scoring and the checklist used are available in Appendix 2. Based on the quality assessment, no publications were excluded from this literature review.

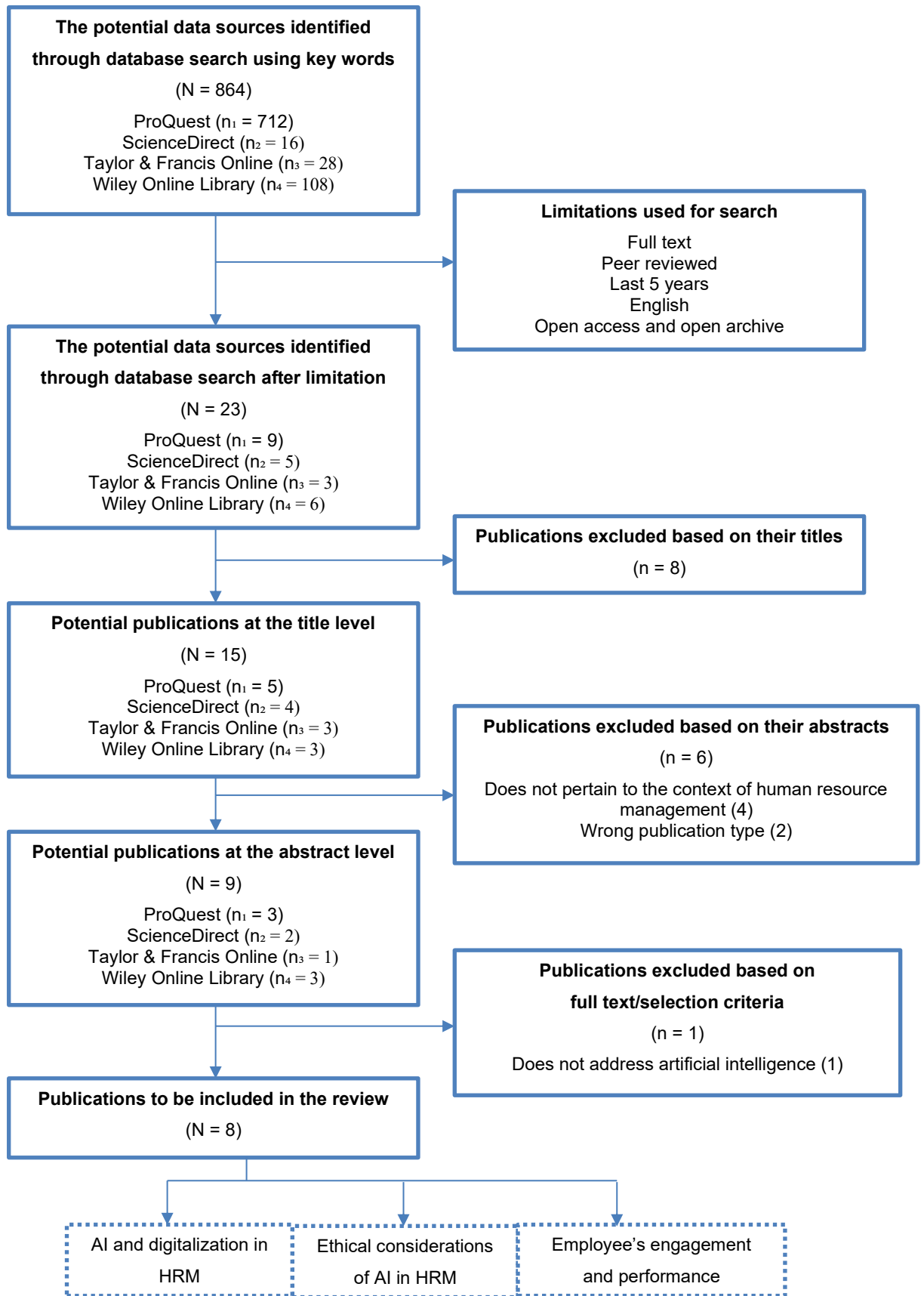


Figure 12. PRISMA diagram of publication selection

In this scoping review, the data were not analyzed by combining information into a synthesis but rather by describing the publications found in the literature search. The search protocol is described using the PRISMA diagram (Figure 12) and through narrative description. The selected publications for the literature review are tabulated (Appendix 1), and they are also listed in the Data Source - reference list on page 48. The table (appendix 1) includes the bibliographic references of the selected articles, publication country, publication year, article type, research method, key findings, and the score obtained in the quality assessment. The selected articles for the review were carefully read through several times. The material was color-coded to categorize it into themes for identifying key concepts and research findings (Peters, Marnie et al. 2020.)

3.3 Content analysis

Content analysis is a method that can be used to accurately describe the phenomenon under investigation. Through content analysis, a large amount of data and text are systematically transformed to produce a clear, systematic, and concise description of the material being studied. Qualitative content analysis aims to produce coherent and meaningful information to draw reliable and consistent conclusions about the phenomenon under study. (Erlingsson and Brysiewicz 2017: 94; Kyngäs et al. 2011: 139; Tuomi and Sarajärvi 2009: 95–117.) Content analysis enables the objective and systematic examination and analysis of material. It allows for the classification of data, the creation of concepts and concept maps to describe the phenomenon being studied. Approaches to content analysis include theory-driven, theory-based, and data-driven analysis. Data-driven content analysis requires the analyst to have good control over the data. (Kyngäs et al. 2011: 139; Kangasniemi et al. 2013.) In the analysis of the research data for this thesis, data-driven content analysis was used. The first step in the analysis was to create a tabular summary of the content of the selected studies, including the purpose of the study, its methods, and results. The summary of data sources is presented in Appendix 1.

The goal of data-driven content analysis is to create a theoretical framework from research material. The analysis is guided by the purpose of the study, the job description, and the research material. Prior theoretical knowledge on the subject should not influence the final outcome of the research. (Tuomi and Sarajärvi 2018: 108.) In this thesis, content analysis was conducted following the guidelines of Tuomi and Sarajärvi (2018: 122), and the analysis was divided into three distinct phases: data simplification, data categorization, and, finally, the creation of theoretical concepts. Figure 13 illustrates the process of data analysis.

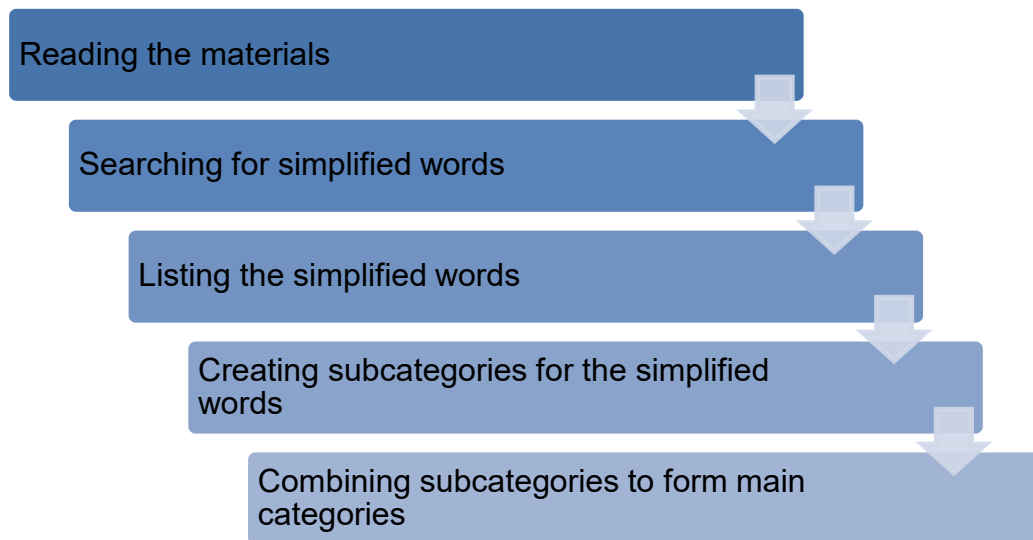


Figure 13. Content analysis and progression (adapted from Tuomi and Sarajärvi 2018: 123).

The simplification phase, which is the first step, involved narrowing down the material by excluding irrelevant information for the thesis and searching for expressions related to the defined research questions. During the categorization phase, the identified simplified expressions were carefully examined, and related and/or different concepts were sought among them. Groups were formed from corresponding concepts, and from these groups, further classifications were created through combination. Subcategories were classified first, and through this combination, main categories emerged. The purpose of forming these concepts is to conceptualize the original research material. (Tuomi and Sarajärvi 2018: 122–127). In this scoping literature review as well, the process continued by merging different categories until expressions were formed into theoretical concepts and conclusions.

The data analysis was conducted as data-driven, also known as inductive content analysis. The material was thoroughly reviewed to identify expressions and words related to the research questions. Initially, expressions and words were highlighted with different colors. The selected studies and publications were written in English, and the identified expressions were written on different colored post-it notes. Although the selected material for analysis included various types of original research and articles, the analysis was carried out in the same manner for all the material. Subsequently, a simplification process was performed, involving the condensation of expressions. This was carried out based on the identified expressions multiple times. The condensation of expressions was also done in conjunction with writing on the post-it notes. Notes were combined based on the identified expressions, creating a common expression or word.

Expressions were examined based on the research questions, which were:

1. What is the relationship between Artificial Intelligence and managing people?
2. Can coaching leadership support AI and human resource practices such as performance management?
3. How can organizations ensure responsible and ethical use of AI in Human Resource Management?

In all eight studies, the expression "artificial intelligence and/or digitalization" emerged, which were related to the first research question, and "performance and its management" were related to the second question. Furthermore, seven studies also addressed the ethical aspects of artificial intelligence, which were related to the third research question. The expressions written on post-it notes were easily transferable and combinable. At this stage, expressions that did not correspond to the research questions were still removed. After the categorization phase, the formation of main concepts began. At this stage, it was observed that three main concepts were forming for the research questions. Within these main categories, there was a need for further subcategorization, resulting in the creation of smaller groups within the main categories. These groups were formed by combining notes with similar expressions. Main category names were determined based on the research questions, and subcategories described the expressions. This approach aimed to identify commonalities, themes, and relationships between expressions in the material.

Based on the analysis, three main categories related to artificial intelligence and human resource management emerged from the material. The main categories are: "AI and Digitalization in HRM", "Ethical considerations of AI in HRM" and "Employee's Engagement and Performance". Subcategories have been categorized in a way that the author of this thesis found most suitable. In total, six subcategories were formed as illustrated in figure 14.

1. AI and digitalization in HRM	Enhancing efficiency
	Decision-making
2. Ethical considerations of AI in HRM	Ethical principles
	Ethical concerns
3. Employee's engagement and performance	The impact of coaching and supportive work environment
	AI-based HRM applications

Figure 14. Categories of content analysis.

The first main category was formed from materials indicating artificial intelligence and digitalization in human resource management. Under this main category, two subcategories were formed based on how artificial intelligence or digitalization impacted the activities of human resource management. The subcategories were: enhancing efficiency and decision-making. The second main category was created from considering an ethical perspective when using artificial intelligence in human resource management activities. Two subcategories were formed under the second main category: ethical principles and ethical concerns. The third main category was formed from the perspective of employee engagement and performance. Under this main category, two subcategories were also created, addressing the effects of a coaching and supportive work environment as well as AI-based HRM applications. The results of this scoping literature review are presented in more detail in Chapter 4.

4 Research findings

The search for information from search portals resulted in a total of 23 publications at the title level. Based on the titles, 11 abstracts were chosen for further reading, and out of these, 8 full texts were read.

All eight publications underwent a quality assessment. None of the articles were excluded from the review based on the quality assessment. The scores from the quality assessment and the checklist used are described in table of Appendix 1. The quality assessment for each article, including the questions from the JBI checklists used and the scoring, is available in Appendix 2. Of the selected articles, two were special issue

case studies, two were systematic literature reviews, one was narrative review, and the remaining three were qualitative studies. The quality assessment for mixed methodology studies used the JBI checklist for cross-sectional studies (Moola et al. 2020), while the other articles were assessed according to the JBI checklist for narrative text and opinions (McArthur et al. 2020). The articles were published in Switzerland (1), Finland (1), Australia (3), United Kingdom (1) and through international collaboration (2). The articles were published between 2021 and 2023. The search process is presented in the PRISMA diagram in figure 12. From the articles selected for this scoping review, three central themes were clearly identified, into which the findings from the articles were categorized. The categories revolved around AI and digitalization in HRM, ethical considerations of AI in HRM and employee's engagement and performance.

4.1 AI and digitalization in HRM

4.1.1 Enhancing efficiency

According to a study by Prikshat et al. in 2023, the utilization of advanced artificial intelligence (AI) tools and methods for both structured and unstructured data analysis has led to the rise of AI applications within human resource management (HRM), carrying substantial consequences for the HRM function. AI encompasses a broad range of technologies enabling computers to execute functions that would traditionally require human cognition and decision-making. (Prikshat, Islam, Patel, Malik, Budhwar and Gupta 2023:1.) Overall, digitalization, often described as the technological procedure of converting, generating, storing, or processing data, enhances work efficiency and makes work more interesting. It encourages interactions with colleagues and supervisors, contributing to enhanced job satisfaction through increased autonomy with job planning, decision-making and more adaptable work methods. Happy employees tend to be more productive, which underscores the idea that job satisfaction and happiness among employees lead to higher levels of engagement, productivity, and lower attrition rates. (Salvadorinho and Teixeira 2023: 6-9.) Malik, Budhwar, Mohan and Srikanth agreed in their article (2022: 108) that an AI-driven technology platform has the potential to enhance efficiency and facilitate decision-making for management.

4.1.2 Decision-making

Strong decision-making skills are essential for upskilling since the decision-making process continues to be primarily subjective and lacks the desired degree of data-driven

analysis. Employees utilizing AI on a daily basis to support in decision-making can elevate their skill sets by promoting high-performance work methodologies, including teamwork and job rotation. (Jaiswal, Arun and Varma 2022:1193; Bankins, Ocampo, Marrone, Restubog and Woo 2023: 11.) Artificial intelligence helps improve HR decision-making as well. (Prikshat et al. 2023:7). AI is progressively automating and supporting in a variety of HRM responsibilities, including scheduling work, screening job applicants' resumes, assessing video applications through verbal and body language analysis, and delivering personalized career guidance. This can create numerous advantages by strengthening decision-making based on evidence, enriching the diversity, depth, and quality of applicant pools, and intensifying the personalization of HRM services. (Bankins 2021: 841.) On the other hand, in the field of HR, where decisions have a direct impact on individuals and their work experiences, the use of AI and automated decision-making presents new challenges in the context of diversity and inclusion (D&I). If algorithm performance lacks a built-in focus on fairness and equity, it can lead to algorithmic biases that may place legally protected, vulnerable groups at a disadvantage. (Walkowiak 2023: 5.)

4.2 Ethical considerations of AI in HRM

4.2.1 Ethical principles

Bankins (2021: 842) introduced in her paper decision-making framework, which was created to support ethical deployment of AI for HRM. She defines that ethical AI commonly refers to the fair and equitable development, utilization, and management of artificial intelligence technologies. Bankins' article (2021) lays its foundation on five core ethical AI principles. These include *beneficence*, which advocates for AI to foster human well-being and environmental sustainability. *Non-maleficence* underscores the importance of avoiding harm and protecting privacy in AI development and use. The principle of *autonomy* calls for a balanced distribution of decision-making between humans and AI. *Justice* is paramount, requiring AI to eliminate bias and promote diversity for equitable outcomes. *Explicability* necessitates that AI systems be comprehensible and accountable for their operations. Also, Walkowiak (2023: 6) writes how ethical values like trustworthiness, transparency, responsibility, accountability, justice, and fairness are evolving into fundamental principles within digital work environments.

4.2.2 Ethical concerns

According to the study by Prikshat et al. (2023: 7), there are ethical considerations linked to the utilization of AI in HRM. In their article they described how the emerging AI-augmented HRM landscape introduces various challenges, including concerns related to data privacy, security, ethical and moral considerations in decision-making, alignment of objectives between AI and humans, and ethical questions about the agency and fairness of AI. The authors wrote that these highlighted risks and challenges underscore the importance of comprehensive ethical principles that address the unique challenges posed by various AI techniques within different HRM functions. These guidelines should also outline the clear responsibilities of stakeholders engaged in the use of these techniques to improve HRM decision-making. (Prikshat et al. 2023: 10-12.)

According to Prikshat and others (2023:12) enhancing the knowledge and awareness of managers about the full potential of AI in HRM, including the diverse HRM functions it can serve, the integration of these applications, and the ethical considerations associated with various AI techniques, can help them make the most of AI in HRM while avoiding any negative consequences. Also, according to Jaiswal, Arun and Varma (2022) it is crucial to take into consideration ethical and legal factors while making decisions in HR. While Koivunen, Ala-Luopa and others (2022) explored chatbots in the context of recruitment in their article, they also discussed that AI solutions have the potential to enhance HR efficiency and promote fairness. However, they also acknowledged specific challenges, such as limited data availability, accountability concerns, considerations related to fairness, potential negative employee responses, as well as ethical and legal constraints, that must be addressed when adopting AI in HRM.

4.3 Employee's engagement and performance

4.3.1 The impact of coaching and supportive work environment

Malik et al. (2022: 106) wrote in their article that the cohesion and engagement of the team were critical indicators of the team's success. Researchers found that continuous coaching and feedback discussions were highly appreciated by employees for their positive impact on individual performance. An individual's performance levels also impact on their capacity to collaborate effectively with AI systems (Bankins et al. 2023: 6). According to Salvadorinho and Teixeira's study (2023: 8-9) by fostering the right lead-

ership style and cultivating a positive organizational environment, employees experience fair and consistent treatment aligned with ethical and moral standards. This, on the other hand, enhanced innovative behavior in the workplace. Their study findings demonstrated the significant effectiveness of workplace coaching in increasing organizational outcomes. Authors emphasized that implementing technology, instead of solely concentrating on productivity enhancement, could also contribute to fostering happy and engaged employees. Bankins et al. came up with the same results in their article in 2023. They discussed that organizations can fully harness the potential of AI systems and reduce adverse outcomes by fostering supportive work environments and empowering their employees (2023: 19).

4.3.2 AI-based HRM applications

According to Bankins (2021: 850) performance management is a prevalent function within HRM, typically entailing the supervision of employee efforts through the evaluation of measured performance outcomes. A key aspect of this function includes gathering data on employee performance, engaging in performance-related conversations with employees, and offering feedback. Bankins writes that when it comes to data and AI considerations, the potential for bias is moderately probable, as various factors come into play. There is some indication that performance management based on metrics (which AI can support) has the potential to reduce biases arising from human errors (2021: 850.)

In their research in 2022, Malik and others indicated that the adoption of AI-based HRM applications has been associated with heightened levels of individualization in learning and development, employee coaching, performance management, administrative tasks, and various employee outcomes, ultimately enhancing HR effectiveness. (Malik et al. 2022: 100.) According to the study by Jaiswal, Arun and Varma (2022) AI finds significant applications in two key HR areas: the hiring process and performance management systems. In recruitment, AI-powered bots have accelerated applicant screening and selection. Performance management systems, on the other hand, assess and determine rewards for organizational members based on their competencies, behaviors, and task achievements. Here, AI-driven algorithms emerge as a promising HR intervention. (Jaiswal, Arun and Varma 2022: 1183.) In her article, Walkowiak emphasizes the importance of technology in recruitment. She writes that technologies have the potential to neutralize the subjectivity of the interview process by enhancing the objectivity of performance assessments. (Walkowiak 2023: 9). Koivunen, Ala-Luopa et al. also observed that recruitment generally adheres to a linear decision-making process

with multiple stages. In their article they suggested that the utilization of chatbots in recruitment is frequently justified by the potential for enhanced efficiency and performance, immediate and round-the-clock service, as well as simplifying end-users' lives by assisting with straightforward practical tasks. (2022: 490.)

5 Conclusion

Artificial intelligence (AI) is becoming increasingly integrated into different aspects of human resource management (HRM), including tasks like sourcing job candidates, staff selection, workload allocation, and providing personalized career coaching. Although utilizing AI in these areas can offer numerous advantages, there is evidence to suggest that if its implementation is not approached with care and intention, it also carries the potential for significant adverse consequences (Bankins 2021.)

The purpose of this master's thesis was to contribute to the understanding of artificial intelligence in the context of human resource management. The research questions "What is the relationship between artificial intelligence and managing people", "Can coaching leadership support AI and human resource practices such as performance management", and "How can organizations ensure responsible and ethical use of AI in Human Resource Management" were explored through a literature review conducted using the scoping method.

A total of 23 publications were identified through search portals, and after careful consideration, 8 full texts were included for analysis. The quality assessment of these publications revealed that all met the necessary criteria for inclusion in the review. The selected articles encompassed various study types and were published in different countries between 2021 and 2023. The scoping review identified three central themes within the selected articles: AI and digitalization in HRM, ethical considerations of AI in HRM, and employee's engagement and performance.

The studies collectively emphasize that the adoption of AI in HRM goes beyond mere technological enhancements; it's about fostering a supportive environment, enabling personalized development, and reducing biases. These findings collectively support the idea that AI can significantly contribute to HR effectiveness and employee engagement while aligning with ethical and moral standards.

The integration of AI and digitalization into the realm of HRM represents a significant shift in the way organizations manage their workforce. This transformation is marked by several key developments and considerations. Firstly, the adoption of AI and digitalization in HRM is shown to enhance efficiency and decision-making. AI tools have the capacity to perform tasks that traditionally required human intervention, leading to streamlined processes, improved job satisfaction, and increased productivity. This not only benefits employees but also empowers management to make data-driven decisions and enhance HR effectiveness. Additionally, AI plays a crucial role in upskilling employees by promoting high-performance work methodologies and providing support in decision-making. However, it is important to strike a balance between human judgment and AI-driven decision-making, as excessive reliance on AI can have ethical implications and challenges, particularly in ensuring fairness and equity in HR decisions.

The ethical considerations surrounding AI in HRM are paramount. Ethical principles, as outlined by researchers like Bankins, emphasize the importance of beneficence, non-maleficence, autonomy, justice, and explicability. These principles guide the responsible deployment of AI technologies and emphasize the need to address concerns related to data privacy, security, fairness, and alignment between AI and human objectives. (Bankins 2021.) Moreover, a supportive work environment, coaching, and continuous feedback are essential for enhancing employee engagement and performance. AI can play a supportive role in this context by offering performance metrics and reducing biases in performance management. (Malik et al. 2022.)

AI-based HRM applications, particularly in recruitment and performance management, offer significant advantages by accelerating processes, enhancing objectivity, and improving efficiency. They contribute to individualized learning and development, employee coaching, and performance management, ultimately leading to more effective HR practices. (Malik et al. 2022; Jaiswal, Arun and Varma 2022.)

In summary, the integration of AI and digitalization into HRM brings a wealth of benefits, from enhanced efficiency and decision-making to upskilling and improved employee engagement. (Jaiswal, Arun and Varma 2022; Bankins et al. 2023,) However, the ethical considerations and potential pitfalls must not be overlooked, and a balanced approach that combines human judgment with AI capabilities is essential for the future of HRM. Organizations should be aware of the ethical implications, foster supportive work environments, and utilize AI as a tool to complement, rather than replace, human skills in managing their workforce.

5.1 Assessment of research ethics and reliability

In the execution of this thesis, good scientific practice was followed, which is a prerequisite for the reliability of the thesis. The literature search for the scoping review was carefully planned, and the search protocol, as well as the quality assessment of selected studies, has been documented and reported. The analysis of the literature review has also been documented and reported. Throughout the planning, data recording, and reporting of this thesis, honesty, diligence, and precision have been adhered to (Tutkimuseettinen neuvottelukunta 2012: 6). The value of the scoping review conducted as this thesis has been enhanced by ensuring transparency in the search protocol, data selection, description, and reporting, along with careful justification of the choices made by the thesis worker (Peters, Marnie et al. 2020).

Arene (2020: 19) emphasizes in its guidelines that, according to the ethical recommendations for master's theses in universities of applied sciences, the author of a master's thesis should be proficient in good scientific practice, the subject matter, relevant legislation related to development projects, ethical considerations related to human subjects, and applicable ethical norms and practices within the professional field, as appropriate. (Arene 2020: 19.)

In an ethically well-executed thesis process, honesty, thoroughness, and accuracy are emphasized. Information gathering and evaluation methods must be ethically sound. When quoting text or ideas written by others, the source should always be cited, and the text should be adapted while preserving the underlying idea. (Ojasalo, Moilanen and Ritalahti 2014: 49.) Precision has been required regarding the citations in this thesis, as there are multiple authors for several sources. Carefulness has been crucial when placing the citations in the text at the right location and in the correct manner. The text should clearly distinguish between what is original and what is quoted or paraphrased. Throughout the thesis process, the researcher has improved their ability to paraphrase text more effectively.

The reliability of the research is examined throughout the work. The reliability of the literature review is heavily influenced by the original studies used. Evaluating the quality of these studies ensures that the scientific evidence is based on well-conducted research. Reliability can also be assessed based on how well the literature review has been able to address the research question posed. Providing a detailed and illustrative description of the data processing enhances the reliability of the literature review process. (Kangasniemi and Pölkki 2016: 91.) During the data selection phase of this thesis

literature review, careful reading of the material has been emphasized, both in terms of abstracts and the full texts, as they impact the quantity and quality of included studies.

As one measure of reliability, source criticism is considered crucial, and according to Vilkkä (2021), it is essential to pay attention to this because the quality of sources inevitably affects the quality and reliability of the thesis. In this thesis, the researcher has aimed to use source material extensively and diversely, favoring newer sources. An older publication year in the reference material does not necessarily imply that the information is outdated. Attention has been given to the author's expertise and position regarding the subject matter. The thesis includes appropriate and accurate references to the publications used, thus showing respect for the researchers who have previously investigated these matters.

When selecting the material for the literature review, the focus is on the content of the material and how well it addresses the research question. The content of the articles found is constantly compared to our own research questions. (Kangasniemi et al. 2013: 296). The sample sizes of the articles and the method of obtaining the samples are taken into account when evaluating the quality. Results obtained using small sample sizes may not necessarily be generalized to a larger population. (Kankkunen and Vehviläinen-Julkunen 2013: 93). In this thesis, unlike in the scoping review protocol, a quality assessment has been conducted for the selected studies, which enhances the reliability of the thesis (Lemetti and Ylinen 2016: 74). However, it would have been preferable if the decision regarding the selection of articles and the quality assessment had been made by two individuals. The selected articles for this thesis were of good quality according to the Joanna Briggs Institute's quality assessment criteria. The articles provided a comprehensive response to the research questions. In this thesis, only reliable peer-reviewed studies in the English language were used as sources. The reliability could have been increased by utilizing articles in languages such as Spanish, French, or German.

In the literature review selection process, the goal is to include all relevant and reliable studies on the subject. Attention should be paid to accuracy, objectivity, and minimizing errors in the decision-making and choices during the selection process. It is essential to document the selection process meticulously to enable replication if desired. (Valkeapää 2016: 61.) When conducting and later evaluating the article selection process, one should be critical and strive to approach matters objectively.

The conducted searches were saved in databases. It is important to dedicate sufficient time to this process and double-check that the searches were conducted correctly. When defining the purpose of the thesis and research questions, it is crucial to contemplate them together. Having clear research questions makes it easier to select articles that provide answers to them. (Levac, Colquhoun and O'Brien 2010: 5.) In the trial searches, there was a balance between setting too broad and too narrow keywords, but the final search query was justified. The topic of this literature review is constantly evolving: no generalizations can be made from the selected articles.

The description of conducting a literature review should be transparent and detailed. It is essential for a literature review to be replicable. Reliability can be compromised by the fact that original studies are more likely to publish research results supporting treatment efficacy rather than those that do not support it. Additionally, the way a researcher collects data, selects included sources, and presents findings from previous studies affects the reliability. The quality of original studies and the successful use of methods also influence the reliability of the future literature review (Malmivaara 2002: 877, 879). This thesis described the working process of the literature review in detail, step by step, and critically evaluated the success of the working process. When conducting a literature review alone, the researcher's own expertise becomes more visible to the evaluator. For more extensive reviews, collaboration between two researchers enhances reliability.

The reliability of content analysis can be assessed by examining how summarization and the formation of subcategories succeed in providing a detailed description of the chosen research topic. Subcategories must be connected to the research material and logically relate to the conceptual framework. Content analysis is, therefore, an ongoing dialogue with one's own research material. (Kyngäs and Vanhanen 1999: 10.) In this thesis, conducting content analysis was a process that initially required an understanding of the steps involved. The reliability could be compromised due to the thesis writer's lack of experience. The thesis writer is conducting scoping literature reviews for the first time, which may result in some deficiencies in mastering the methods. To enhance reliability, literature and thesis seminars have been utilized, along with the expertise of the library information specialist, to obtain a comprehensive understanding of the research methodology. The thesis has been completed in a self-directed manner. Meetings with the supervisor have taken place virtually through Zoom four times during the writing process. Better communication with the supervisor could have facilitated the progress of the thesis, especially during the gathering of the theoretical framework, as there is a wide range of source material available, varying in quality. The thesis writer does not

have any financial conflicts of interest related to the thesis. Instead, efforts have been made in advance to mitigate potential biases caused by time constraints and possible haste through careful planning and in-depth familiarity with the topic.

5.2 Future prospects

The limited number of data sources in the literature review, along with the observations based on these sources, indicate the need for further research. The observations made in this literature review can be considered directional. They can also guide further research and educational efforts in the field.

There are several potential paths for further research. It would be beneficial to establish standards for AI leadership in organizations. Prior to this, an examination is needed to determine what concepts, values, and criteria should be included in AI leadership standards. The increasing need for AI literacy among leaders emphasizes the necessity for constructing educational pathways. As a follow-up study, the experiences of employees regarding the changes in leadership brought about by the implementation of AI could be explored. Another path could be a study about productive collaboration between leaders and AI.

Overall, there is still a need for further research to gain a clearer understanding of the most suitable contexts and situations for the implementation of artificial intelligence in human resource management, taking into account ethical considerations as well as the continually evolving forms and applications of artificial intelligence. This understanding is essential to ensure that AI contributes to creating positive and effective work environments, while upholding ethical standards.

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Summary of Data Sources and JBI assessment scoring

No.	Source	Country of publication	Purpose of the study	Publication type	Method	Key findings	JBI assessment
1	Salvadorinho, J., Teixeira, L. 2023. Happy and Engaged Workforce in Industry 4.0: A New Concept of Digital Tool for HR Based on Theoretical and Practical Trends.	Switzerland	The purpose of study was to explore the state of the art concerning Workforce Engagement in a business context characterized by Industry 4.0 and, based on the results found, propose a concept of a technological tool to promote and monitor work engagement.	Scientific article	The methodology focused on a mixed approach—theoretical (systematic literature review (SLR)) and practical (comparative evaluation of engagement applications).	According to the findings from the systematic literature review, four major groups emerge as predictors of a happy and engaged employee: Employee Role, Employee Skills and Career Management, Supervision Support, and Social Relationships. As observed by the investigation, all these groups have a common core, which is Communication.	16/16
2	Bankins, S. 2021. The ethical use of artificial intelligence in human resource management	Australia	The purpose was to develop a decision-making framework to support the ethical use of AI for HRM and research how ethical implementation can be supported through considered combinations of human and machine involvement in tasks.	Narrative review	Research methods have not been described. However, the review has been conducted using source literature and referring to it.	In this paper, researcher developed a decision-making framework aimed at facilitating the ethical implementation of AI in HRM. This framework served as a guide for determining the most suitable combination of human and machine involvement for various HRM tasks.	12/12
3	Koivunen, S., Ala-Luopa, S., Olsson T. & Haapakorpi, A. 2022. The March of Chatbots into Recruitment: Recruiters' Experiences, Expectations, and Design Opportunities.	Finland	This research aimed to enhance the advancement of next-generation e-recruitment systems using chatbots by offering insights from a recruiter's perspective, focusing on user-centered and activity-centric comprehension of chatbots in the recruitment process.	Scientific article	Qualitative study with semi-structured interviews. Researchers conducted 13 expert interviews with people who were already using, developing, or planning to deploy recruitment bots in the near future.	The findings offered a qualitative description of interviewed experts' expectations and motivations, initial experiences, and perceived opportunities concerning the current and future utilization of chatbots in the recruitment domain.	12/12

No.	Source	Country of publication	Purpose of the study	Publication type	Method	Key findings	JB1 assessment
4	Prikshat, V., Islam M., Patel P., Malik, A., Budhwar, P. & Gupta, S. 2023. AI-Augmented HRM: Literature review and a proposed multilevel framework for future research.	United Arab Emirates (UAE), United Kindom, Australia	The purpose was to examine the context, including the timeline, geographical distribution, sector-specific distribution, utilized theories and methods, as well as the theoretical content, i.e., the primary themes, of AI-Augmented HRM research. Additionally, the goal was to identify any existing research gaps and propose a comprehensive multilevel framework for future studies.	Scientific article	Systematic literature review.	Drawing from the outcomes of this comprehensive Systematic Literature Review (SLR), this multilevel research framework serves as a foundation for in-depth exploration of multilevel empirical research themes in AI-Augmented HRM. The extensive SLR effectively illuminated and documented the advancements made in comprehending the impact, diverse themes, and voids within the existing literature on AI-Augmented HRM.	11/12
5	Jaiswal, A., Arun C.J., & Varma, A. 2022. Rebooting employees: upskilling for artificial intelligence in multinational corporations.	United Kindom	The purpose was to identify the essential skills necessary to enhance employees' abilities to maintain their jobs and succeed in the era of AI.	Scientific article	Qualitative study. Researchers interviewed 20 experienced professionals in multinational corporations (MNCs) in the information technology sector in India.	With using Gioia's methodology for qualitative analysis, the study revealed five critical skills for employee upskilling: data analysis, digital, complex cognitive, decision making and continuous learning skills.	12/12

No.	Source	Country of publication	Purpose of the study	Publication type	Method	Key findings	JBI assessment
6	Bankins, S., Ocampo, A.C., Marrone, M., Restubog, S.L.D., & Woo, S.E. 2023. A multilevel review of artificial intelligence in organizations: Implications for organizational behavior research and practice.	Australia	The aim was to produce valuable insights to enhance future theoretical and empirical research on the impact of AI in the workplace. Additionally, this involved exploring how organizational leaders can integrate AI systems to foster fairness, diversity, and sound decision-making.	Scientific article	A systematic review of empirical research	This thorough examination of empirical research on AI in the workplace has yielded valuable insights into key factors affecting the success of human-AI collaboration. It has shed light on perceptions of human and algorithmic capabilities, employee attitudes toward AI and algorithmic management, and the consequences of AI adoption on labor markets and skills. This research lays a vital foundation for scholars and leaders to effectively navigate the complex landscape of AI adoption, striving to strike a balance between productivity and the well-being of workers.	11/12
7	Walkowiak, E. 2023. Digitalization and inclusiveness of HRM practices: The example of neurodiversity initiatives.	Australia	The purpose was to investigate the connection between digital technologies and workplace diversity and inclusion (D&I) by examining how these technologies contribute to neurodiversity initiatives.	Special issue article	Qualitative study with phenomenological approach. The phenomenological approach generally relies on a sample of 5–30 participants. Here sixteen participants were interviewed.	Researchers discovered creative approaches to effectively shape an inclusive organizational structure focused on neurodiversity through the use of technology. They identified several technology features that promote diversity and inclusion in neurodiversity initiatives, including the mitigation of biases during interviews, the creation of digital tools to support physical and mental well-being, and the facilitation of various cognitive modes.	12/12

No.	Source	Country of publication	Purpose of the study	Publication type	Method	Key findings	JBI assessment
8	Malik, A., Budwas, P., Mohan, H. & Srikanth, N.R. 2022. Employee experience –the missing link for engaging employees: Insights from an MNE's AI-based HR ecosystem.	Australia, United Kindom, India	The aim was to to determine how AI-assisted HRM integrates within an organization's ecosystem, and second, to assess its influence on employee experience (EX) and employee engagement (EE).	Special issue article	A literature review combined with a single, in-depth case study.	The key findings indicated that AI-powered HRM applications have a positive impact on employee experience (EX), subsequently boosting employee engagement (EE). Additionally, researchers observed improvements in employee productivity and the effectiveness of HR functions.	15/16

Quality Assessment of Data Sources

No.	Source	1	2	3	4	5	6	7	8	Total
1	Salvadorinho, J., Teixeira, L. 2023. Happy and Engaged Workforce in Industry 4.0: A New Concept of Digital Tool for HR Based on Theoretical and Practical Trends.	2	2	2	2	2	2	2	2	16/16
2	Bankins, S. 2021. The ethical use of artificial intelligence in human resource management	2	2	2	2	2	2			12/12
3	Koivunen, S., Ala-Luopa, S., Olsson T. & Haapakorpi, A. 2022. The March of Chatbots into Recruitment: Recruiters' Experiences, Expectations, and Design Opportunities.	2	2	2	2	2	2			12/12
4	Prikshat, V., et al. 2023. AI-Augmented HRM: Literature review and a proposed multilevel framework for future research.	2	2	2	2	2	1			11/12
5	Jaiswal, A., Arun C.J., & Varma, A. 2022. Rebooting employees: upskilling for artificial intelligence in multinational corporations.	2	2	2	2	2	2			12/12
6	Bankins, S., et.al. 2023. A multilevel review of artificial intelligence in organizations: Implications for organizational behavior research and practice.	2	2	2	2	2	1			11/12
7	Walkowiak, E. 2023. Digitalization and inclusiveness of HRM practices: The example of neurodiversity initiatives.	2	2	2	2	2	2			12/12
8	Malik, A., Budwas, P., Mohan, H. & Srikanth, N.R. 2022. Employee experience –the missing link for engaging employees: Insights from an MNE's AI-based HR ecosystem.	2	2	2	2	2	1	2	2	15/16

Used Joanna Briggs Institute (JBI) checklists and quality assessment scoring.

McArthur et al. 2020. JBI Checklist for text and opinion

Moola et al. 2020. JBI Critical Appraisal Checklist for Analytical Cross Sectional Studies

1. Is the source of opinion clearly identified?		1. Were the criteria for inclusion in the sample clearly defined?	
2. Does the source of opinion have standing in the field of expertise?		2. Were the study subjects and the setting described in detail?	
3. Are the interests of the relevant population the central focus on the opinion?		3. Was the exposure measured in a valid and reliable way?	
4. Is the stated position the result of an analytical process, and is there logic in the opinion expressed?		4. Were objective, standard criteria used for measurement of the condition?	
5. Is there reference to the extant literature?		5. Were confounding factors identified?	
6. Is any incongruence with the literature/sources logically defended?		6. Were strategies to deal with confounding factors stated?	
		7. Were the outcomes measured in a valid and reliable way?	
		8. Was appropriate statistical analysis used?	
Score			
Yes	2	Selected	8
Unclear	1	Excluded	0
No	0	Seek further info	0
Not applicable	-		