The Utilisation of Artificial Intelligence in International Recruitment Companies Operating in Finland

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Abstract

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This Bachelor's thesis studies the role of artificial intelligence (AI) in international recruitment companies operating in Finland. The objective of this thesis was to investigate how artificial intelligence is currently used in Finland in international recruitment companies studied, compare the results with other countries and, lastly, give recommendations on how the utilisation of artificial intelligence in recruitment could be improved in Finland.

This thesis includes a theory part and an empirical part. The theoretical framework of this thesis discusses the concepts of recruitment and artificial intelligence. Data for the theoretical framework was collected from relevant online sources and litterature. The empirical part focuses on the utilisation of artificial intelligence in international recruiment companies operating in Finland.

The research was conducted using the qualitative method. Semi-structured thematic interviews were held with four recruiters representing four different international recruitment companies. The interviews were conducted in order to understand the recruitment process of recruitment companies in Finland and internationally and to gain views and opinions on the utilisation of artificial intelligence in the recruitment process.

Observations were made based on the interviews. The results indicated that recruitment companies in Finland utilise artificial intelligence the most when distributing job advertise-ments and sourcing candidates. Additionally, there are no remarkable differences between recruitment companies in Finland and in other countries. According to the results, artificial intelligence is experienced as a possibility when utilised in certain phases of the recruit-ment process rather than in all of them, as the theory suggests. However, there is suspi-cion regarding the ability of AI to act humanely in a people-based business field. Despite the suspicion, the results show that artificial intelligence in recruitment is a current topic in the recruitment business. To conclude, the utilisation of artificial intelligence by interna-tional recruitment companies in Finland is most likely to rise.

Keywords
Artificial intelligence, recruitment, recruitment process, recruitment company, qualitative re-search, thematic analysis

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1 Introduction

This is a bachelor's thesis for the International Business Degree Program, under the Human Resource Management Specialisation, at the Haaga-Helia University of Applied Sciences. This chapter provides background information regarding the thesis topic, explains the research question, demarcation, internationality, along with the benefits and risks analysis of the thesis. The key concepts of the thesis are also outlined with the possible risks I may face whilst completing the thesis.

1.1 Background

The first forms of artificial intelligence were developed in the 1930's (Verlinden 2019). However, the definition of artificial intelligence was introduced by computer scientist John McCarthy roughly twenty years later. Since then, the artificial intelligence has been changing industries by helping and substituting the equipment and human labor to complete tasks. (Yello 2020.)

The recruitment industry is an excellent example of an industry that benefits from artificial intelligence. For example, artificial intelligence helps recruiters in candidate sourcing, candidate matching and even facial expression analysis. Recent studies show that in fact artificial intelligence is becoming the must-have tool of every recruiter. It is believed by seventy-five percent of the recruiters that artificial intelligence is going to have a greater impact on the recruiting industry. (Verlinden 2019; Verlinden 2018.)

According to Frey and Osborne (2013), thirty-five percent of jobs would be automated by the year 2030. The revolution of artificial intelligence and automation in the recruitment field has surfaced questions about the future of the recruitment industry. According to Digital Gurus (s.a.), since candidates cannot be hired solely on data, there is still purpose for the human recruiters to evaluate the candidate's cultural and organisational fit.

HR and recruiting have interested me ever since I started studying International Business at Haaga-Helia University of Applied Sciences. As a current HR employee, I find this thesis is rather intriguing and advantageous to anyone looking to establish a career within the industry.

1.2   Research Question

This aim of this thesis is to research and analyse the utilization of artificial intelligence in the recruitment processes in international recruitment companies operating in Finland. Since the topic of this thesis is currently a trend in the field of recruiting, the outcomes of the thesis will be highly beneficial to the companies involved and all the recruitment companies operating in Finland.

The research question (RQ) can be worded as: How are international recruitment companies operating in Finland using artificial intelligence (AI) in their recruitment processes and how could it be improved?

The research question (RQ) is divided into three investigative questions (IQs):

IQ 1. How is artificial intelligence currently used in the recruitment processes of international recruitment companies in Finland?

IQ 2. How is artificial intelligence currently used in the recruitment processes of international recruitment companies outside Finland?

IQ 3. How are international recruitment companies planning to use artificial intelligence in the recruitment processes in the future in Finland?

The theoretical framework, research methods and results chapters for each investigative question are presented in Table 1 below.

Table 1. Overlay matrix

Investigative question	Theoretical Framework	Research Methods	Results (chapter)
IQ 1. How is artificial intelligence currently used in the recruitment processes of international recruitment companies in Finland?	Recruiting processes Artificial intelligence in recruiting	Desktop Research, qualitative interview with anonymous recruiters in the recruitment companies	5.1 6.1
IQ 2. How is artificial intelligence currently used in the recruitment processes of international recruitment companies outside Finland?	Recruiting processes Artificial intelligence in recruiting	Desktop Research, qualitative interview with anonymous recruiters in the recruitment companies	5.2 6.1

IQ 3. How are international recruitment companies planning to use artificial intelligence in the recruitment processes in the future in Finland?	Recruiting processes Artificial intelligence in recruiting	Desktop Research, qualitative interview with anonymous recruiters in the recruitment companies	5.3 6.1

1.3 Demarcation

This thesis focuses on the recruitment processes in which artificial intelligence is being used as a tool. The concentration of this thesis is only on the recruitment part of the employment process, meaning that for example, employee introduction and training are excluded.

The expected result of this thesis is to have a concrete comprehension about the usage of AI in international recruitment companies in Finland and other countries they currently operate in, and how it could be developed further.

1.4 International Aspect

All companies interviewed operate in different countries outside of Finland, which brought the international aspect to this thesis. The aim is to understand how AI is being used in the recruitment processes in Finnish recruitment companies compared to the situation with the case companies' operations in other countries. This will conclude how the utilisation of AI in the recruitment process could be improved.

1.5 Benefits

Identifying how the AI is used in the recruitment processes and the means to improve its usage provide many benefits. Recruitment companies can have a better understanding on how AI is being used in the recruitment processes abroad and how it could be improved in order to reach better results in the recruitment processes in Finland. Successful recruitment processes include, for example, positive applicant experience and finding right fit for a position.

Students that are interested in AI and Human Resource Management will benefit from this thesis. They will gain more knowledge about the topic in general while deepening their understanding on how it is being used in the field and what is the future of it.

1.6   Key Concepts

Algorithm in artificial intelligence refers to a set of instructions or a formula designed to transform data input to processed data output. These kind of data outputs include Google search engine result, mathematical solution and text suggestions. (Wei, 2020; Dictionary 2020.)

Artificial intelligence (AI) refers to the capacity of a computer or any kind of machine to think, behave, learn and solve problems like humans. The ideal ability of AI is its power to make rational decisions and perform the best specific actions in order to achieve a certain goal. (Investopedia s.a.)

Artificial intelligence in recruitment helps make the recruitment process faster with the automation of tasks that tend to be a lot of work or performed repeatedly. AI can even teach itself to pre-screen applicants and rank applications. However, AI can be used in every step of the recruitment process, from sourcing to acceptance. (Eclipse Software 2017.)

Candidate screening refers to the process of going through the job applications. Several steps, such as skimming through the resumes and cover letters in order to find the best candidate whilst keeping mind the qualifications and previous experience required for the position, as well as appropriate skill set and a fit between the candidate and the organisation. (Ghosh 2019.)

Employer brand refers to the reputation of a company as an employer in the job market. Every company has an employer brand and the biggest factors that influence it are the experiences of current and previous employees. (Catalyst 2019.)

Machine learning is a field of artificial intelligence referring to the ability of a computer program to learn, identify, adapt to new data and build predictions without human help (Frankenfield 2020).

Recruiter is a person whose job is to fill vacant positions in the organisations. The job of a recruiter includes pre-screening applications, interviewing candidates and negotiating salaries. Recruiters may work for an organisation or for a staffing agency. Their pay can be based on a commission or a base salary. (Energy Resourcing s.a.)

1.7   Risks and Risk Analysis

One of the biggest risks the research may face is the quality and the amount of data. The topic is new, meaning that there may not be many books and research papers available regarding this topic. Thus, I need to rely on online sources mostly. I have to be careful with the quality and trustfulness of the sources. I will be using only high-quality sources to make sure the data is up to date and trustworthy.

Another risk I have identified is the participants and the interviews. There is always a possibility that one participant cancels. The risks are being taken into account, and I have other connections I can use if an interviewee happened to cancel. I will keep the interviewees updated about the thesis process and communicate schedule changes on time.

2 Recruitment

Chapter 2 provides the theory of recruitment. The definition, purpose, importance and history of recruitment are presented first. Then, the recruitment process and recruitment methods are discussed.

2.1.1 Defining Recruitment

Recruitment can be defined as selecting the right applicant for the right position. Recruitment includes the activities of attracting, selecting and appointing talent which meet the organisation's strategic goals and objectives. (Tutorials Point 2020a.)

The term recruitment is often used as a synonym for words staffing, hiring, and talent acquisition. Staffing usually refers to a hiring with a short-term focus in order to fill in a specific requirement, whereas hiring means filling an open position from an existing pool of candidates reflecting short to medium term goals. Talent acquisition is longer, more strategic and proactive process of finding the best talent in order to fill the roles that are required to meet the organisation's present and future goals. (Ghosh 2020.)

2.1.2 The Purpose and Importance of Recruitment

According to Das (2018), the purpose and importance of recruitment is to determine and analyse current and future needs with the help of personnel planning and job analysis activities. The purpose of recruitment is to increase the organisation's talent pool at low cost and evaluate and increase the personal and organisational effectiveness in the short run and in the long run. Successful recruitment will also help organisations to analyse their recruitment techniques and reduce the short-term employments. It also helps organisations to meet their social and legal obligations. (Tutorials Point 2020a).

Recruitment is viewed as one of the core functions of human resource management and as one of the most important activities performed by the organisation's HR team. Employees tend to become quickly either assets or liabilities to the company and this makes the recruitment as a process very critical. Today, the importance of recruiting the best people is very crucial since the global competition is harder than ever. (Mondy & Martocchio 2016, 131.) Organisations aim to grow steady which can only be achieved with the best combination of people and talent, that being one of the reasons why recruitment is crucial to every organisation. (Reddy 2019.)

2.2   The History of Recruitment

This subchapter presents the development of recruitment. It discusses what recruitment was in the Roman Empire and after World War 2. Additionally, it goes over what happened to the recruitment field when internet rose - explaining the reader current recruiting practices and what the future holds. A timeline figure of the history of recruitment is presented below (Figure 1) and discussed in more detail in this chapter.

| 318 BC-1453 CE: The Roman Empire, the first forms of recruitment | 1945: After WW2 | 1990s-2004: The rise of the internet | 2004-2011: The rise of social networks | 2011 to current: Digitalisation |

Figure 1. A timeline of the history of recruitment

The first known cases of recruitment processes come from the Romans. Julius Caesar, the dictator of the Roman Empire, needed more people for the Roman army due to the large number of casualties on the battlefield. (Big Ideas s.a.) Caesar had two selection criteria in order to be considered for his army. The two perquisites were being a citizen of Rome and being physically fit. (Evolve s.a.) Caesar signed a decree offering a bonus of 3000 sestertii to any soldier who was able to bring another soldier to the army. Roman Senate laws made recruiting a difficult task to do - not all applicants could join any position in the army. There were five classes in the Roman society, and the class that the candidate was in defined for example the equipment they were allowed to have. (Singh, 2008.) Later, the class structure was removed as the Roman army started to support the Equal Employment opportunity (Big Ideas s.a.).

The concept of employee recruitment as we know it today is in fact a product of the second World War. The recruitment agencies got created as there was a need to fill in the open vacancies when the men joined the army. Post War, the recruiters continued to find work, now for the soldiers that were returning home. After the War, during the following decades, there was a new practise that made recruiting easier, the creation of resumes. This creation made it easier for the staffing companies to match the open positions with

the applicants. However, the staffing companies had to work with the help of paper ads while the applicants had to write their resumes and applications by hand and deliver them by hand or via mail. (Perelson s.a.)

Internet changed the whole recruitment industry as the accessibility to information changed and online job boards were created in 1999 (Prospect Personnel s.a.). The first versions of applicant tracking systems (ATS) were created. The 1990s until the early 2000s were lucrative years for agency recruiters; the industry was booming adding wealth to the owners of the companies. (Overell 2017.)

Next significant actions in the recruitment industry happened between 2004 and 2011. Due to the rise of social networks, the candidates were now seen as active and passive candidates. More sophisticated versions of applicant tracking systems were created, highly limited job boards were active for candidates and "pay-per-click" job advertising was introduced. The most significant company of this period was LinkedIn. LinkedIn provided new tool for passive sourcing by bringing free candidate data online for everyone to use it. Recruiters were now able to search for potential talent regardless the candidate had applied the job or not. In the late 2000s, two conflicting trends occurred in the recruitment industry: some companies decided to manage the recruitment process internally, as the rise of LinkedIn and other technologies made it easier, whereas some companies wanted to outsource their recruitment processes in order to manage costs. (Overell 2017.)

Currently, the recruitment industry is digitalized. Social media plays vital role in recruitment today causing job reaching to be done almost solely on social media. (Prospect Personnel s.a.) Moreover, there is a constant battle of attracting and engage the talent, as the candidates are more selective than during the previous decades. For example, monetary gains are not the most important aspect when looking for a job. Candidates value sustainability, corporate responsibility and the overall employer brand when thinking about applying for a certain company. Nowadays, the artificial intelligence plays a crucial role in recruiting. With the help of AI, the recruiters can handle massive amounts of data and identify the best candidates, as well as, have an access into a wider talent pool in order to find more candidates. (Fatemi 2019.)

According to Lewis (30 October 2019), the role of recruiting is evolving. Recruiting teams will take more strategic role in the business and they are faced to develop new skills, learn new metrics and tools. The report states that there are seven predictions on how the recruiting will be different in five years. Firstly, the importance of recruiting will rise: the need

for recruiters has risen 63% since 2016 and the trend is expected to continue. As automation takes care of the repetitive tasks, talent will be more important. Secondly, the ability to keep up with rapidly changing hiring needs and business environments will be even more crucial. The third prediction is that recruiters will not only do sourcing and interviewing in the future; the recruiters will play vital role in designing hiring plans, for example. Quality of hire, time to hire and sourcing channel effectiveness will be the metrics to concentrate in the future. Better technological tools and skills to engage passive candidates, analyse data and advise business leaders will play crucial role in the future of recruitment. It is also very likely that the recruitment teams will include specialists from other fields.

The Corona outbreak that occurred in the spring of 2020 has taken the recruitment field closer to its future. Global companies have been digitalizing their recruitment processes. Companies have had to conduct job interviews online. As a result, they have realised how effective, time-saving and cheaper it is to interview the candidates online. Several companies have decided to use online recruiting tools even when the Corona outbreak is completely over. (HR-ON 2020.)

2.3   Recruitment Process

An efficient recruitment process leads to happier and more productive employees and lower attrition rate. It also has a positive impact on the work environment and relationships between employees. (Tutorials Point 2020c.)

Especially in today's internationalised world, diversity is an aspect that should be remembered during every step of the recruitment process. Organisations should review their recruitment processes in order to detect possible hidden biases that may block certain type of talent. It is also crucial that every person included in recruitment has the needed talent, skills and knowledge of relevant legislations. (Premiere People 2020.)

The recruitment process starts when a need for a new employee is being recognised (Mondy & Martocchio 2016, 131). It is important to crucially analyse if the need to recruit a new person actually exists or if successful reorganizing of working methods and tools can fill the position. The person fit for the position can also be found from existing resources, as some employees may have studied and educate themselves more in order to accept more demanding positions. When the need for a new employee is recognised and the company decides to recruit externally, the recruitment process starts. There are five stages to the process. These include job role definition, attracting talent, pre-screening the applications, interviewing the candidates, and lastly conducting possible reference and

background checks before making the job offer. (Premiere People 2020.) Depending on the position, a drug test, criminal record check or verification of credit history can be required in the recruitment process (SHRM 2020). The recruitment process (see Figure 2) is discussed in more detail below.
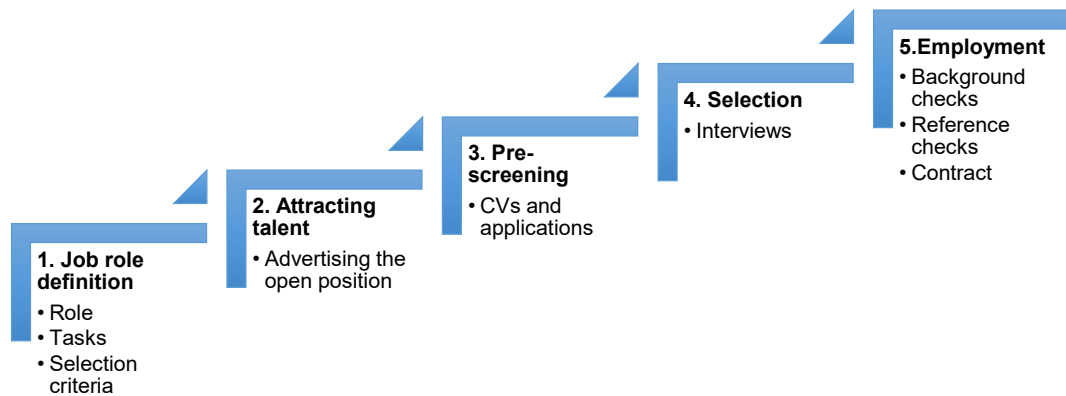
Figure 2. The recruitment process (Premiere People 2020, Mondy & Martocchio 2016, 131)

First stage of the recruitment process is job role definition. This includes gathering important information about the position. The position's content, purpose, output and it's fit within the organisation's culture is to be analysed. The end result of analysing these aspects is the basis of a job description and job profile. Job description explains the position to the candidates more in detail whereas job profile provides the criteria for selection, such as skills and attributes. (Premiere People 2020.)

Attracting talent is the first stage in order to receive applications. Some examples of methods for include for example newspapers, organisation's website and social networking. (Premiere People 2020.) Employer branding activities are a powerful tool to attract talent from outside the organisation. These activities include, for example, nurturing the company's culture, building brand advocacies on social media, using storytelling and being a transparent organisation. (LaunchPad 2020.)

Pre-screening applicants means evaluating the candidate's fit for the position with the help of the applicants resume and application letter. The purpose of pre-screening applicants is to find the best talent in a wide pool of candidates. In the pre-screening process, before the face-to-face interview, a skills test, a phone interview or one-way video interviews are

also options to ensure the candidate is a good fit for the organisation in terms of experience, education and motivation. A reference check can be done either in the pre-screening phase or after the face-to-face interview. (Premier Talent 2020.)

After the applicants have successfully passed the pre-screening, the next step is to interview the candidates. The interviews can be group or one on one. An interview is an excellent opportunity to learn more about the candidates and assess their fit to the possible future team. There are two main approaches to utilise in the interview, structured interviews and unstructured interviews. Structured interviews are interviews in which the recruiter asks the same particular module of questions from all candidates, whereas unstructured interview is closer to a position-relevant discussion, which helps the recruiter to analyse the candidate's experience, soft skills and communication skills. (Change Recruitment Group 2017; Hire Succes 30 January 2019.) The advantages and disadvantages of structured and unstructured interviews are presented more in detail in Table 2.

Table 2. The advantages and disadvantages of the interviewing methods (Change Recruitment Group 2017; Hire Success 30 January 2019)

Interview method	Structured interview	Unstructured interview
Advantages	- - Asking the same questions makes it easier to compare the applicants - - Prepared questions lead quicker interview completion - - The amount of biased opinions reduces	- In-depth conversations - Flexible topics - Improvising relevant questions
Disadvantages	- Planning a structured interview takes time - Fewer in-depth questions - It may feel cold or impersonal to the candidate	- Important questions can be forgotten to ask - Comparing applicants is harder - Prediction of job performance can be harder to evaluate

As presented above in Table 2, structured interviews are great method to compare applicants more quickly and reduce the bias caused by the recruiter's personal opinion of the candidate. However, this method does not go in-depth and it may seem cold or impersonal to the candidate, making it feel more like an interrogation than interview. Preparing

the exact questions for structured interviews can also take time. Unstructured interviews offer the recruiter a great opportunity to go more in-depth during the interview and choose discussion topics more flexibly than structured interview. The disadvantages of this method include harder applicant comparison and job performance prediction. (Change Recruitment Group 2017; Hire Success 30 January 2019.)

The last step of the recruitment process is conducting background checks, contacting the applicant's referees and, lastly, making a job offer job contract for the candidate selected for the position (Premiere People 2020).

Background check refers to the situation in which the recruiter or hiring manager confirms that the information the applicant has provided is accurate. This can include verifying educational and job experience, searching through criminal history, conducting drug tests and checking the credit history of the candidate. (Heathfield 2020.)

Reference checking means contacting previous employers, managers and schools of the applicant in order to gain more knowledge of the educational background, job experience and skills of the candidate (Smart Recruiters s.a.).

The form of the job contract is optional. However, it is highly recommended that the contract is in a written form. Written form is the better option for both the employee and employer, as the details are easy to prove in case of a disagreement or misconception. (Paanetoja 2008, 35.) The obligatory and mandatory contents of the employment contract are listed below in Table 3.

Table 3. The obligatory and mandatory elements of employment contract (Lakimiesliitto s.a.)

Obligatory in employment contract	Mandatory in employment contract
- Sides of the contract - Job beginning date - Validity of the contract - Location of the job - Job tasks - Salary and other compensation - Payday - Regular work time - Overtime compensation - Determination of annual leave - Notice period - Applied collective agreement - Signature from both sides	- Training - Travel time salary and reimbursement - Pension insurance - Travel insurance - Salary in case of re-training - Clauses of non-disclosure and non-compete - Confidentially agreement

2.3.1 Recruitment Factors

Several factors affect recruitment. In order to make sure that the recruitment process stays effective, it is crucial to understand and analyse the sources of factors that influence the recruitment process when the market environment changes. (Tutorials Point 2020b.) These factors can be external and internal. External factors can include supply and demand of labor, demographic factors, unemployment rate and competitors. Internal factors can include human resource planning, size of the company, recruitment policies and growth and expansion of operations. (Tutorials Point 2020b; El-hadidi 2015.) The external and internal factors are presented below in Figure 3.

External	• Supply and demand of labor • Demographic factors • Unemployment rate • Competitors
Internal	• Human resource planning • Company size • Recruitment policies • Expected growth and expansion
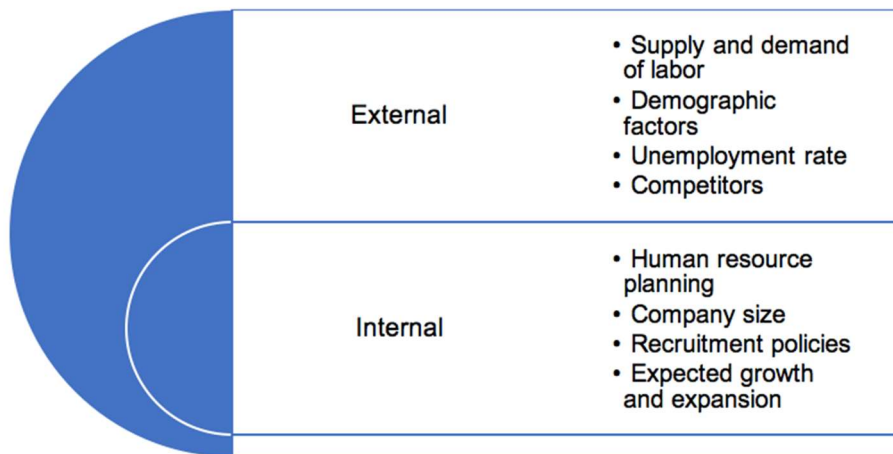
Figure 3. The external and internal factors affecting recruitment (Tutorials Point 2020b, El-hadidi 2015)

2.3.2 Outsourced Recruitment and In-House Recruitment

In an organisation, either the in-house recruitment team or an outsourced recruitment team is responsible for the recruitment processes. The in-house recruitment team consists of recruiters that are working for the organisation. Recruitment process outsourcing providers (RPOs) are external, third-party service providers and they do the recruiting for their client organisations. (Abourahma 12 February 2013.) The main differences between in-house recruiters and outsourced recruiters are presented more in-depth below in Table 4.

Table 4. The differences between in-house and outsourced recruiters (Pavlou 2020)

In-house recruiters	Outsourced recruiters
- Work for one single company - Hire for a specific company culture - Hire usually for permanent positions - Follow processes - Base salary - Shift from administrative tasks to specialist positions	- Work for staffing agencies and their clients - Hire for many different industries - Hire usually for short-term positions - Take initiatives - Commission - Shift from small clients to bigger clients

2.3.3   Legislation in Recruitment in Finland

Legislation affects recruitment. In Finland, the Employment Contracts Act, the Act of Equality between Women and Men, the Personal Data Act and the Act on the Protection of Privacy in Working Life, all include aspects in which it is important to be familiar with when recruiting. (Östberg 2015, 99.)

The Employment Contracts Act (26.1.2001/55) sets many legal requirements that are important in recruitment. The Employment Contracts Act sets guidelines for writing an employment contract, the length and justification of probation and, lastly, the requirements for hiring minors and incompetent persons. (The Employment Contracts Act 26.1.2001/55.)

The Act of Equality between Women and Men (8.8.1986/609) aims to prevent discrimination based on gender and to promote equality between men and women. According to 6 §, the law requires employers to perform in a way that both women and men do not only apply to open positions, but that they are also provided equal tools to succeed in them. The 6 § also requires employers to advance the equality between women and men in terms of salary. The Act of Equality between Women and Men 8 § specifies the discrimination in recruitment; the employer cannot discriminate other gender in the recruitment process, other reasoning needs to be provided. (The Act of Equality between Women and Men 8.8.1986/609.)

The Personal Data Act and the Act on the Protection of Privacy in Working Life aim to protect the personal life and fundamental rights of the candidate. The Personal Data act forbids the processing of candidate's sensitive personal data, meaning that these issues

should not be addressed in a job interview either. Examples of this data include information related to the race, origin, sexuality, social and political preferences, union membership and health of the candidate. (Östberg 2015, 100.)

The Act on the Protection of Privacy in Working Life defines the necessity requirement related to the data processed. The employer can only process personal data that is directly necessary for the possible employment relationship and the position in question. (Östberg 2015, 100.) The position determines what is considered necessary information; the requirements set by the position and the requirements set by the work community (Jarmas 2017). The data must be gathered primarily from the candidate and the candidate has to give permission to interview his referrers. Personal or aptitude tests can be performed if it is necessary to determine the conditions of the position, however the Act on the Protection of Privacy in Working Life requires the employer to ask a permission from the candidate to ensure that the testing methods are accurate. Additionally, the person tested must obtain a statement from the test. (Östberg 2015, 100; Jarmas 2017.)

2.4 Recruitment Methods

The choice of a recruitment method is important for the company as it affects the employer brand and awareness of the company. The purpose of the job advertisement is to engage the talent that would be most suitable and qualified for the position in terms of job experience, education and personality. (Östberg 2015, 94.) Despite the recruitment method, the job advertisement should always include the requirements of the position, mandatory and the possible obligatory criteria for applicants, the organisation's main activities, the geographical location of the job, contract length, remuneration and information about applying for the position. (Premiere People 2020.)

2.4.1 Traditional and Modern Recruitment

HRM Handbook (2020) discusses that there are two most common recruitment methods, traditional and modern recruitment. Traditional recruitment method has successfully provided companies with potential candidates without using interactive media. The rise of social networks and media channels has enabled to take advantage of modern recruitment methods and even more innovative recruiting. (Shalini 30 March 2020; HRM Handbook 2020.)

In traditional recruiting the recruiting channels include newspaper job advertising, internal hiring, recruitment agencies and employment agencies. Newspaper job advertising has been very common for many decades and is still found to be beneficial. Newspapers are mass media and enable the company that recruits to cover a large target population. Newspaper job advertising also helps the recruiting company to spread the brand name and awareness. (HRM Handbook 2020.)

Internal hiring and employee referrals are beneficial, as the person is already familiar with the organisation. It can also offer new possibilities to other talented people in the organisation. (Östberg 2015, 92-93; Campling 18 November 2019.) Internal hiring is easy and time-efficient (Shalini 30 March 2020).

Recruitment agencies, however, are specialised in pre-screening candidates and matching talent with open positions. Recruiting with the help of a recruitment agency is time-efficient as it reduces the workload of the internal HR function of the company. (HRM Handbook 2020.)

Event recruiting and the usage of social media platforms, for example Facebook, Twitter and LinkedIn all are channels of modern recruitment (Shalini 30 March 2020).

Recruiting events, also known as job fairs, career expos or hiring events, are held by schools, recruiters or employers. The events are held at convention centre, school or businesses. The event offers interested candidates an opportunity to attend and meet the recruiters or managers. The recruiters usually offer job interviews to prospective candidates on-the-spot. (Cazenave 2018.)

Recruiting with social media platforms provides the companies wider candidate reach. An average internet user has more than five social media channels. Even 79% of job-seekers use social media to find job. (Recruiter Box 2020; Zivkovic 2020.) Recruiters have benefited from social media, as it enables them to build and nurture connections with job-seekers and link them to the best potential candidates (The Undercover Recruiter 2012). Using social media sites offer the recruiters an excellent possibility to connect with talent that would have been impossible to find through traditional sources (Recruiter Box 2020). However, the effectiveness and usage of the top three networking sites Facebook, Twitter and LinkedIn, varies a lot. Below in Table 5 the differences are combined in more detail.

Table 5. The differences of social media networks in recruiting (adapted from The Undercover Recruiter 2012)

	Facebook	Twitter	LinkedIn
Cost to use for recruiters	Free	Free	764 € / month
Active users	2.19 billion	330 million	310 million
Percent of recruiters using	1% of recruiters	1% of recruiters	48% of recruiters
Combined using	10% of recruiters use Facebook and LinkedIn 1% of recruiters use Facebook and Twitter 19% of recruiters use Twitter and LinkedIn		
Connections added per week	1.5	3.1	18.5
Job applications per network	1	2.5	8.5

As presented above in Table 5, LinkedIn is used the most by recruiters despite it being the most expensive option. The second is Twitter while Facebook is the least used despite it having the biggest number of active users. 48% of recruiters use LinkedIn, whereas only 1% use Twitter and Facebook. Both Twitter and LinkedIn are used by 19% of the recruiters, 10% use LinkedIn and Facebook and only 1% use Facebook and Twitter. LinkedIn also offers the most connections added per week (18.5) and Facebook only offers 1.5. Job applications per network is the biggest on LinkedIn, Twitter being second and Facebook the third. (The Undercover Recruiter 2012.)

According to Recruiter Box (2020), the main four benefits of using social media recruitment are:

- getting in contact with the passive
- opting out the bad candidates
- accessing to resume details quickly
- finding a great personal fit quickly.

2.4.2   Comparison of Traditional and Modern Recruitment

Traditional and modern recruitment differ from each other in terms of time, money and du-ration of the job posting. The main differences are presented below in Table 6.

Table 6. The comparison of traditional and modern recruitment (Shalini 30 March 2020)

	Traditional recruitment	Modern recruitment
Time	- Time consuming; the time between posting a job and receiving applica-tions can be long - Pre-screening can take time	- Jobs can be posted instantly - Applications arrive on real time
Money	- Fixed commission rates can be high	- Recruitment pro-cess is cheap
Duration of the job posting	- Deadlines for visi-bility in the tradi-tional print media	- Postings online stay as long as the company wants

As seen on the Table 6 above, traditional recruiting is more time-consuming than modern recruitment. With traditional recruitment, the time needed for posting a job advertisement, receiving applications and pre-screening the applications can be long. In modern recruit-ment, the jobs can be posted instantly on social media, for example. The applications ar-rive on real time, and it is quicker to pre-screen the applications as the job postings are usually targeted to candidates with certain talent and attributes.

Modern recruitment methods are more cost-efficient and there are not fixed commission rates as traditional methods usually do. Companies that choose to advertise their vacant positions on newspaper, for example, have to also pay a certain amount in order to gain visibility for a certain period of time. In modern recruitment, however, the job posting will stay online and visible for as long as the recruiting company wants. (Shalini 30 March 2020.)

3 Artificial Intelligence and Recruitment

Chapter 3 provides the reader basic knowledge of artificial intelligence. Secondly, the usage of artificial intelligence in every step of the recruitment process is discussed. Lastly, the advantages and disadvantages of artificial intelligence are being presented.

3.1 Defining Artificial Intelligence

Salesforce (5 October 2017) defines artificial intelligence as an inhuman system with human intelligence capable of performing intelligent functions. However, the artificial intelligence that we are familiar with more commonly refers to functions completed by a computer or machine that would normally require human intelligence. The use of artificial intelligence can be divided as follows:

> - human labor replacement with automation
>
> - adding intelligence to processes in which the human intelligence is not beneficial
>
> - adding intelligence to processes in which the human intelligence cannot be used. (Salesforce 5 October 2017.)

3.2 Types of Artificial Intelligence

There are three types of artificial intelligence (see Figure 4). The three types are categorised according to their capacity to mimic human intelligence, technology and theory of thoughts. (O'Carroll 2020.)
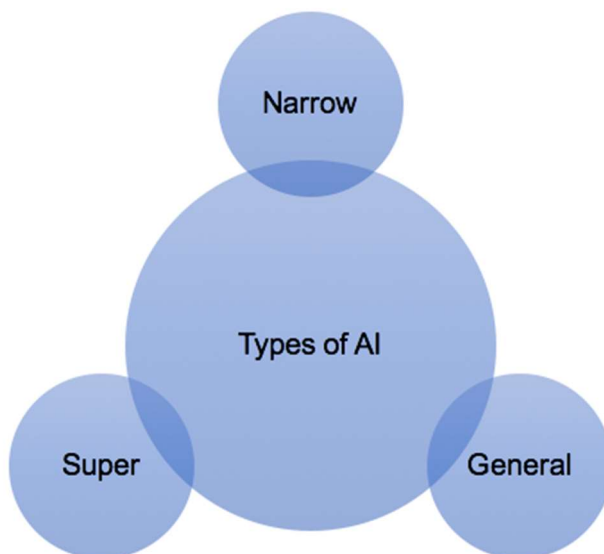
Figure 4. The three types of artificial intelligence (O'Carroll 2020)

Artificial narrow intelligence (ANI) is the most familiar type of artificial intelligence. Its goal is to perform simple tasks, including voice assisting, facial recognition and internet searches. Siri by Apple, Alexa by Amazon, Google Search and recommended marketing content are all examples of artificial narrow intelligence. (O'Carroll 2020.)

Artificial general intelligence (AGI) refers to a machine that has general intelligence and the ability to mimic human intelligence and perform all the same tasks as human can. Artificial general intelligence is also able to learn and use its intelligence in order to solve a variety of problems. Artificial general intelligence aims to use its theory of mind, meaning that the end goal is to truly understand humans. The K Computer by Fujitsu is an example of artificial general intelligence. (O'Carroll 2020.)

Artificial superintelligence (ASI) is when computers and machines are self-conscious and have higher ability and intelligence than humans. However, artificial superintelligence is hypothetical, meaning that it does not exist yet. In theory, ASI would outperform human intelligence in everything; maths, sports, hobbies, art, medicine and emotional relationships. (O'Carroll 2020.)

3.3   The Advantages and Disadvantages of Artificial Intelligence

Artificial intelligence is becoming more and more popular in our daily life and among organisations of all sizes, hence it is important to comprehend the advantages and possible disadvantages of it (Kumar 2019). The advantages and disadvantages are presented below in Table 7.

Table 7. The advantages and disadvantages of artificial intelligence (Kumar 2019)

Advantages	Disadvantages
- Less human error - Constant availability - Less repetition - Faster decision-making	- High cost - Less emotions - Unemployment - Lack of critical thinking

The benefit of less human error refers to the fact that unlike humans, computers tend not to make mistakes if programmed correctly. Artificial intelligence makes its decisions based on previously obtained information with the help of different algorithms which reduces the risk of mistakes. Artificial intelligence is also capable of making faster decisions and can perform actions quicker. However, machines lack human behaviour meaning that they are not able to replace the human connection that makes a team or work community. As the computers can perform only programmed tasks, they lack the creative decision-making and critical thinking. (Kumar 2019.)

Artificial intelligence also works constantly without breaks or vacations. It can perform competitive tasks easily without the feeling of torpor. However, automating repetitive tasks leaves humans with less work which negatively affects the employment rate. (Kumar 2019.)

Artificial intelligence updates itself daily meaning that the softwares and computers need to be carefully and frequently maintained and updated. This is expensive as they are complicated machines. (Kumar 2019.)

3.4   Artificial Intelligence in the Recruitment Process

AI helps make the recruitment process faster with the help of automation of tasks that tend to be a lot of work or performed repeatedly (Eclipse Software 2017). According to a LinkedIn survey from 2018, 67% of the recruiters answered said that AI helps them to save time in the recruitment process (LinkedIn 2018). The Table 8 and the following chapter present and discuss how artificial intelligence can be used in each step of the recruitment process.

Table 8. How AI can be used in each step of the recruitment process (Moteria 2020, Bragg 2018, Boomalingan 2019)

Step in recruitment process (refer to Figure 2)	Usage of AI
1&2: Job role definition and attracting talent	Defining the job role and creating clear and informative job advert; word and phase recommendations
3: Pre-screening resumes and applications	Pre-screening of the candidates; looking for the best candidates amongst them (keywords, key phrases)

4: Interviewing candidates	AI algorithms to create efficient interview questions, analysing the candidates' answers and facial expressions
5: Background and reference checks	AI algorithms study relevant information and generate reports about the candidates for recruiters

Steps 1 and 2: Job role definition and attracting the talent

Artificial intelligence can be used in the very beginning of the recruitment process when the job descriptions for an open position are being created. Writing a compelling and clear job description for candidates is a difficult process. The required experience, qualifications and the possible responsibilities of the candidate need to be carefully considered in order to do so. Artificial intelligence enables the recruiters to generate an effective job description and makes sure the job description is informative and detailed enough for the candidates. (Moteria 2020.)

To help the recruiters to create more interesting and compelling job advertisements, the AI-powered softwares provide information on how certain job posting would succeed at attracting the desired candidates. The softwares obtain the information by searching and analysing language patterns and analysing the phrasing of the job advertisement. In order to make recommendations, the algorithms use natural language processing (NLP). (Bragg 2018.) NLP refers to the computer's automatic manipulation of natural language, for example speech or text (Browniee 2017). The recommendations the software usually provides are recommendations to replace certain words or phrases in order to create successful and attractive job description and advertisement in the beginning of the recruitment process (Bragg 2018).

Step 3: Pre-screening the resumes and application letters

When looking at the recruitment process (Figure 2), the third step is going through the CVs and application letters. Pre-screening candidates for one role can take thirteen hours (Entelo 2018). AI helps recruiters to scan the CVs and application letters with the help of different algorithms. The algorithms help with managing the CVs, application letters and different details of the candidates. (Moteria 2020.) Artificial intelligence can learn the ideal candidate and automatically look for those skills and attributes in the CVs and applications that are received. The ability of artificial intelligence to learn and be more effective increases after every task. Artificial intelligence can also be programmed to follow the law

and not to discriminate candidates based on age, ethnicity or language. (Boomalingan 2019.)

Boomalingan (2019) also presents the disadvantages of pre-screening candidates using artificial intelligence. Being a human-made system, the artificial intelligence is a system made to analyse patterns and to study the information in the system in order to make decisions. If artificial intelligence gets biased data or if it is not properly programmed to exclude physical traits such as race or gender, the result may be a biased, as it may does not take fair treatment into account.

Another disadvantage of pre-screening candidates with artificial intelligence is the accuracy of the process. Artificial intelligence systems learn and improve themselves with the help of data provided and this also applies to the pre-screening process: artificial intelligence learns the ideal candidate's skills and attributes and automatically looks for those in the resumes and application letters received. This, however, makes artificial intelligence inclined to exclude ideal candidates since not being able to find the exact information it is looking for. (Boomalingan 2019.)

Boomalingan (2019) discusses how the candidate's generation may affect the pre-screening process. The generation that is more familiar with tracking systems and artificial intelligence may know how to take advantage of the keywords in the resumes and applications to seem as the ideal candidate. Thus, other candidates may lose their chances to pass the pre-screening due to lacking knowledge of tracking systems and artificial intelligence. Boomalingan (2019) also presents the problem that some AI systems will try to evaluate and rank the personalities of the candidates based on algorithms and information the system finds about them on social media.

Step 4: Interviewing the candidates
Fourth step of the recruitment process is to interview the candidates. As discussed in chapter 2.3, interviewing the candidates is an excellent tool to learn more about the candidates' skills and to determine if they would be a great organisational fit. Recruiters can use artificial intelligence and different algorithms to plan and manage the interview process effectively to ultimately finding the right candidate. This applies mostly on structured interviews where the questions are same for all candidates. (Moteria 2020.)

Artificial intelligence is mainly used two ways in the interviews: firstly, artificial intelligence can help recruiters to assess live video interviews by analysing personality traits with the help of voice and facial expression analysis. Secondly, artificial intelligence is also used

with previously recorded interviews in order to determine the content and quality of the candidate's answer. (Carlson 2020.) Some artificial intelligence platforms analyse the applicant's video answers and determine if there is something suspicious going on. This could be for example the candidate often looking away from the screen which may be meaning that the candidate is reading everything from notes or if the voice recording sounds suspicious, it can mean someone is speaking in the place of the candidate. (Verlinden 2018.)

Step 5: Background and reference checking

As Figure 2 presents, the last steps before making the hiring decision are most often checking the applicant's background and contacting the referees. According to Verlinden (2018), 92% of the organisations conduct background checks. The artificial intelligence software only checks relevant information which does not only make the background checking more private for the candidate but also reduces bias making the process faster. AI-powered background checks do not make any final decisions. However, they offer information recruiters should consider when making the final decision.

One example of a platform that conducts AI-driven background checking is Checkr. Checkr does background checks for new and existing Uber drivers and it performs many searchers, for example criminal history, sex offender and terrorist registry checks and driving record checks. Checkr examines the data found and then makes its analysis whether or not the candidate is able to perform the job. (Background Checks s.a.)

Artificial intelligence and machine learning can be both used when performing background checks. Both sets of data can be used in order to collect and analyse data about the candidates. The data may contain criminal history, social media, sanction lists, blog posts and news. Different algorithms go through this data using language processing and AI's ability to mimic human analyst. The result is a short summary about the candidate presenting the possible current and future red flags. (Background Checks s.a.)

Main advantages of AI-powered background checking are that AI makes the process faster and easier for employers. AI also reduces the administrative work behind it. AI systems can even monitor the employees and thus conduct re-checking easily if needed. AI-powered background checking also protects the privacy of the candidates, as only relevant details for the position are taken into consideration. (Background Checks s.a.)

AI-powered background checking has also received criticism. It is argued that artificial intelligence background technology turns complicated matters into simple pass or fail cases.

Traditionally, the employers analyse the background findings according to the case analysing the severity, how many years ago something happened and whether something similar has happened again. Sometimes the employer may give the candidate an opportunity despite few marks on his record. The AI's ability to analyse and take these matters into consideration has been questioned. (Background Checks s.a.)

Another disadvantage AI-powered background checking systems have is the lacking comprehension of laws behind background checking. The systems do not understand which law they should follow and thus the responsibility to act according to the law lies within the employer. (Background Checks s.a.)

Artificial intelligence can also conduct reference checks, and the tools of automated reference checking tools are simple and easy to use (Curry & Jackson 2020). The process of AI-powered reference checking is presented below in Figure 6.
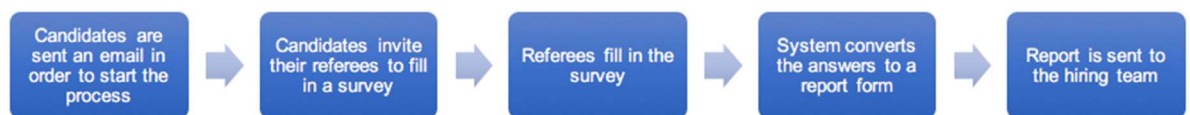

Figure 5. The process of AI-powered reference checking (Background Checks s.a.)

The AI-powered reference checking provides the employer a summary including strengths, accomplishments and improvement points. The identity of the referee is kept anonymous throughout the process which might reduce the referee's hesitations to provide feedback. As the referee gives the feedback about the candidate via the survey, the referees also have more time to prepare their comments. (Curry & Jackson 2020.) Taylor (2017) discusses that automated reference checking has high response rates and it also makes comparing the applicants based on their references easier. However, there are some limitations as well since there is no chance to observe the tone and facial expressions of the referee or ask more detailed questions.

3.5 Advantages and Challenges of AI in the Recruitment Process

The usage of artificial intelligence in the recruitment process has both advantages and challenges. The advantages of using artificial intelligence in the recruitment process (Figure 6) are higher quality in recruitment, the possibility to attract the right candidates, saving time and providing the candidates a better candidate experience (Talent Adore 2019.)
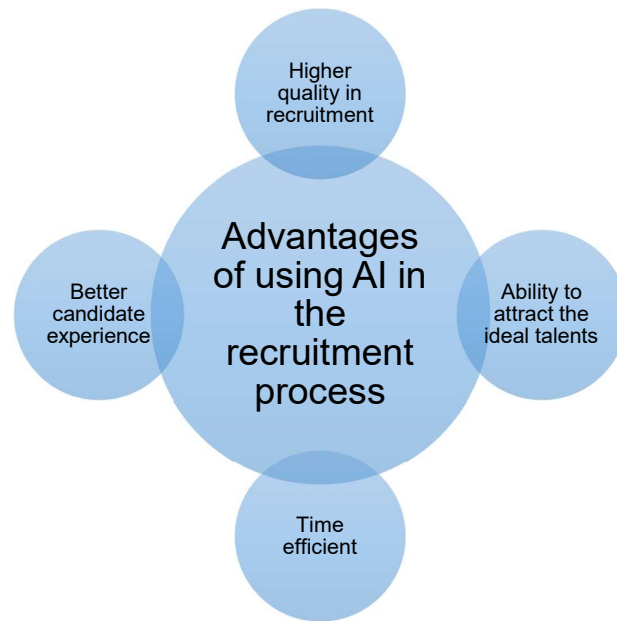
Figure 6. The advantages of using AI in the recruitment process (Talent Adore 2019, Upadhyay 2019)

Enabling higher quality in recruitment

According to Talent Adore (2019), using artificial intelligence in the recruitment process can lead to higher quality of recruitment and improve the objectivity of the process. In recruitment, many decisions can be made based on feelings. Artificial intelligence, however, can provide recruiters unbiased opinions. Artificial intelligence can provide recruiters knowledge of the ideal candidate and help to determine what kind of skills and experience are missing and thus needed in the team.

Attracting the ideal talent

The main goal of recruitment, for any organisation, is attracting the ideal candidates. In order to receive applications from ideal candidates, it is crucial that the job advertisement gives the applicants a clear and detailed picture of the position. The amount of irrelevant applications is minimized when the job advertisements are detailed and informative. Artificial intelligence, as discussed in chapter 3.4, can aid recruiters when writing a compelling job advertisement. Artificial intelligence can also search suitable candidates for hidden positions. (Talent Adore 2019.)

Saving time

Despite the digitalization, going through the applications one-by-one makes the recruitment process time-consuming process. For applicants, it can be very frustrating, and in some cases, this can unfortunately mean that the best candidate may accept a job offer from some other company that is making decisions quicker. Luckily, automation can save time in every step of the recruitment process, from job role definition to background and reference checks. (Talent Adore 2019; Upadhyay 2019.)

Offering better candidate experience

Artificial intelligence enables better communication with candidates. For example, companies can use chat bots to communicate with candidates and analyse them. Chat bots utilize nature language processing when communicating with the candidates. This leads to better candidate experience, as chat bots help to reduce the waiting time and answer the questions the candidates may have during the recruitment process. (Talent Adore 2019; Upadhyay 2019.)

The challenges of artificial intelligence in recruitment are presented in the Figure 7 and discussed in more detail below.
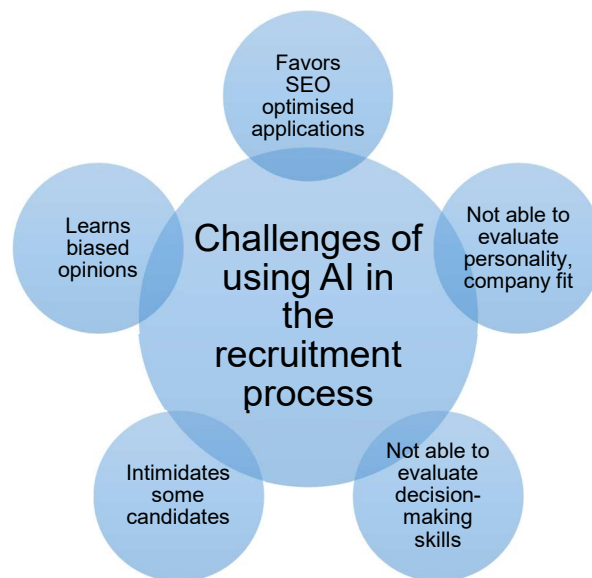

Figure 7. The challenges of using AI in the recruitment process (Upadhyay 2019, Forbes 2019)

Excluding resumes and applications that are not search engine optimised

Despite the rise of the artificial intelligence, unfortunately not that many applicants are familiar with artificial intelligence and understand how it works when creating a resume or

application letter for the position. This means that a skilled and experienced candidate may be ignored in the recruitment process due to the candidate's ignorance regarding artificial intelligence. (Forbes 2019) Applicant screening systems may also neglect applications if, for example, a wrong format or font is used in the applications (Upadhyay 2019).

Lacking the ability to evaluate personality, company fit and decision-making skills

There is a possibility that important attributes for the position may be ignored in the recruitment process when artificial intelligence search engines are used. The AI search engines and applicant screening systems only evaluate the words, format, phrases and font of the applications and resumes instead of the candidate's personality or fit into the company culture. The AI search engines also lack the ability to evaluate the decision-making skills of the candidate and they do not help with evaluating whether the candidate is able to make good decisions when needed. (Forbes 2019.)

Intimidating candidates

Majority of the people searching for a job prefer human touch in the recruitment process rather than having the process completely automated (American Staffing Association 2016). Although the technology is useful, it is important that a human touch is also included in the process. For example, some top candidates may find it uncomfortable if they are interviewed and recorded by a machine in the screening interviews. (Forbes 2019.)

Learning biases

Artificial intelligence learns constantly by observing behaviour, repetition and patterns. In order to manage the screening process, for example, the AI algorithms need a lot of data. There is a possibility that the algorithms learn biased opinions on certain candidates based on age, nationality, gender or name if the system is not updated frequently enough. (Forbes 2019; Upadhyay 2019.)

3.6   Summary of Theory

Recruitment is an old concept that has been in our society since the Roman Empire. Recruitment is an important HR core function found in evert company, whether the company has outsourced the recruitment department or has decided to have an in-house recruiting team. As a process, recruitment is very critical as hiring the right talent can differentiate the company amongst its competitors. Oppositely, hiring the wrong people causes loss of time and money. There are two different recruitment methods, which are traditional and modern recruitment. The traditional method includes for example newspaper job ads and

employment agencies, whereas the second method - the modern one - has taken recruit-ment to a new digitalised phase, where social media recruiting and event recruiting are present for the most part.

There are different factors affecting the recruitment which may come outside or inside the company. Examples of external factors are legislation, competitors and supply and de-mand of labor. Internal factors may include human resource planning, the company's size and expected growth of the company in the future.

Artificial intelligence is a computer system that is capable of mimicking human thinking. There are currently three types of artificial intelligence; the narrow, the general and the su-per artificial intelligence. Artificial intelligence can be used in every step of the recruitment process. When artificial intelligence is used in the recruitment process, the recruiting com-pany can offer better candidate experience, save time and increase quality in the recruit-ment. However, artificial intelligence may intimidate candidates and exclude potential can-didates due to their lacking knowledge of the operation of artificial intelligence.
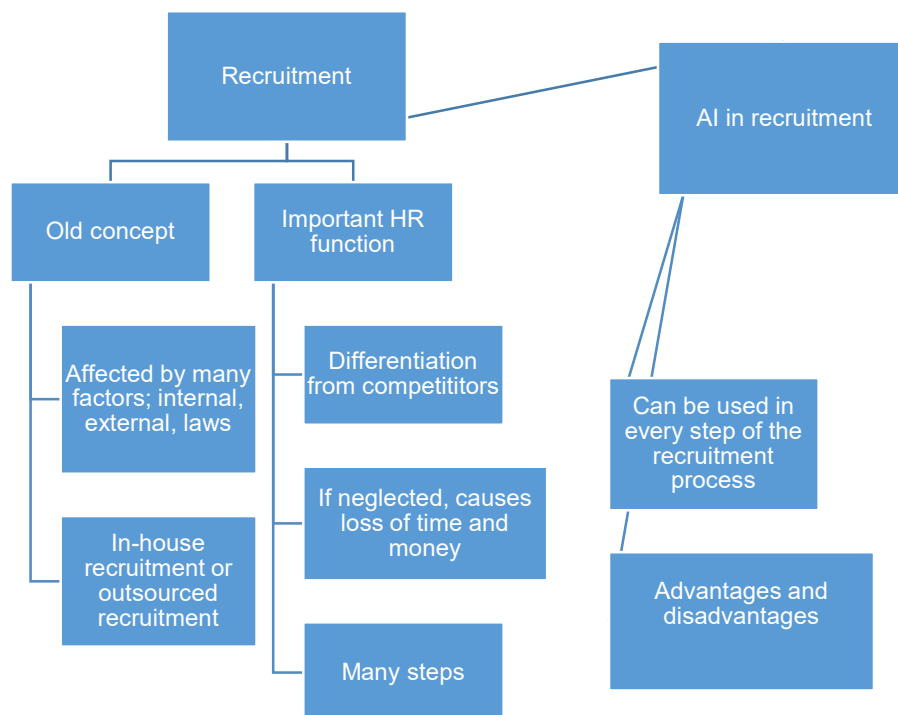
Figure 8. The summary of the theory

In the next three chapters, the research methods, the interview results and conclusions including key findings, recommendations and reflection of learning are being discussed and analysed.

4 Research Methods

This chapter presents the companies intrerviewed for this thesis and explains how the research process is designed. It also offers justifications for the reasons why the research process was chosen. In the end, reliability and validity are discussed.

4.1 Companies Interviewed for the Thesis

I interviewed recruiters from four different international recruitment companies. All companies operate in Finland but also have international operations in 1-6 countries in the Europe in addition to Finland. The companies will be kept anonymous and thus referred to Company A, Company B, Company C and Company D in this thesis.

4.2 Research Design

Quantitative research concentrates on numeric data about different variables and relationships between them (Saunders, Lewis & Thornhill 2016, 166). The researcher of quantitative research aims to quantify the research problem and transform it into statistics (Humphrey s.a.).

Qualitative research on the other hand focuses more on meanings and depth and will provide more in-depth knowledge that quantitative research (Tiley 2017). The researcher of qualitative research aims to find the answer from the data provided in order to understand certain phenomena amongst targeted groups (Crossman 2020).
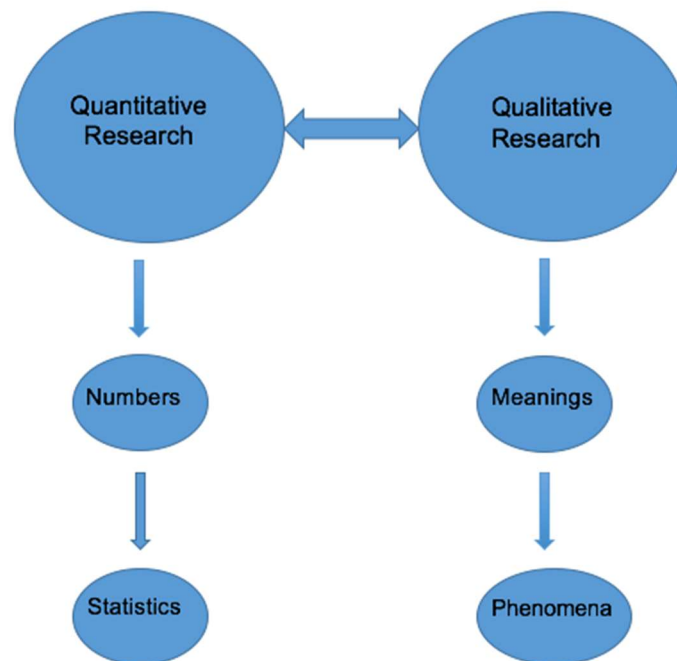
Figure 9. The quantitative research and qualitative research (Saunders & al. 2016, Humphrey s.a., Tiley 2017, Crossman 2020)

Qualitative research was chosen for this thesis. I chose to interview recruiters since the topic is quite recent and the aim was to understand a certain phenomenon, the AI in recruitment. The recruiters knew the practises in Finland and abroad, which was important as I was comparing the domestic and international operations.

The research process included two phases which were desktop research and qualitative face-to-face interviews with the recruiters. Firstly, desktop research was conducted in order to understand the topic and the themes that come with it. Desktop research, also known as desk research, means a research in which the information is gathered from existing sources, for example relevant online sources, authors and data that has been officially published. (Fontaine 2019; MSG 2020.) Due to the relevancy of the topic, I used several online articles as a source of information.

The data collected from the desktop research and qualitative interviews were chosen to be analysed with the help of thematic analysis. After the theory base and the thematic analysis from the interviews were completed, they provided the answers to IQ1, IQ2 and IQ3. The three IQs helped to answer this the research question of this thesis. After the desktop research and interviews were done, it was possible to gather suggestions and development ideas in order to more sufficiently use artificial intelligence in the recruitment processes. The research design is illustrated below in Figure 10.
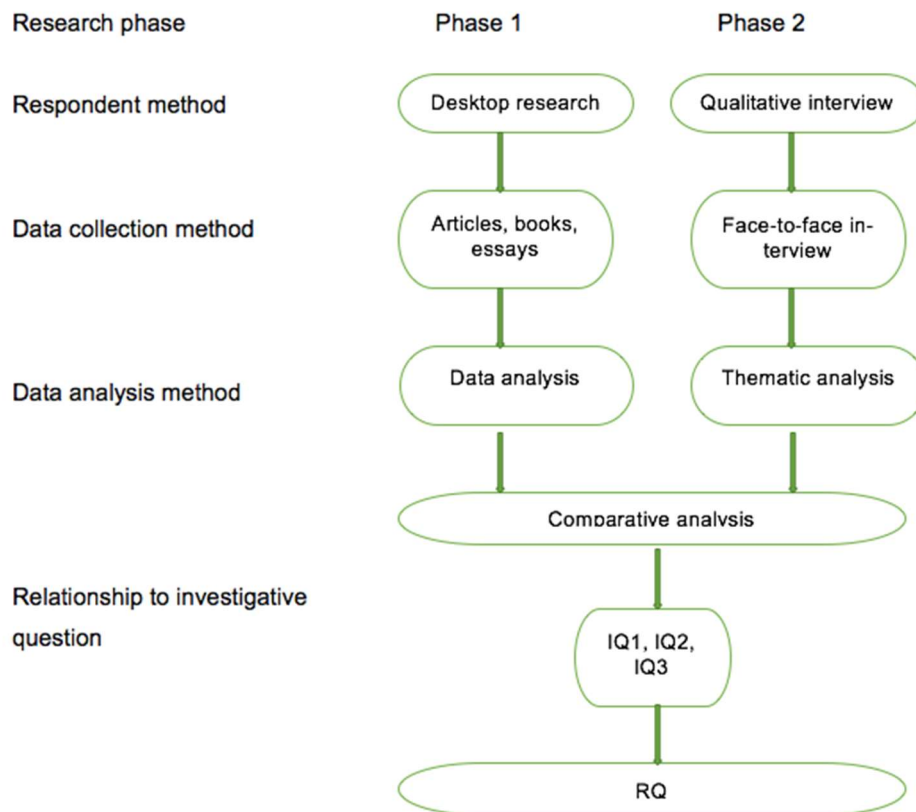
Figure 10. The research design

4.3   Data Collection

The interviews were thematic and half-structured interviews. Half-structured interview stands for interview in which the questions are same to every participant. However, there are no answer options provided and thus the interviewee can answer according to one's own thoughts, opinions and experiences. (Eskola & Suoranta 2008, 85-86.)

The initial plan was to interview the recruiters face-to-face. However, due to Covid-19 Pandemic, I chose to have the interviews via Microsoft Teams, video calls and phone calls. The interviews were not recorded, but I took notes during the interviews. The notes were deleted once this thesis was completed. The interviews were in weeks 41, 42 and 43 and each lasted from 50 minutes to one hour. The method, time and duration of each interview is presented below in Table 9.

Table 9. The interviews of this thesis

	Interviewee referred as to	Interview method	Time of the interview	Duration of the interview
Company A	Recruiter A (RA)	Video call	Week 41	58 minutes
Company B	Recruiter B (RB)	Phone call	Week 42	50 minutes
Company C	Recruiter C (RC)	Teams- call	Week 42	1 hour
Company D	Recruiter D (RD)	Phone call	Week 43	1 hour

4.4 Interview Content Design

The four qualitative interviews were planned based on the theory base of this thesis. The themes were created in order to answer to the RQ and the IQs. More detailed interview questions were formed based on the themes, and each theme had two to five questions. The interview questions can be found in Attachment 1.

The interview had three themes in total. The first theme, "The Recruitment Process and AI in Finland" revolved around the recruitment companies' recruitment process and utilisation of AI in Finland. The aim of the first theme was to see the big picture of the recruitment process, in general, in Finland and to see how AI is used in the recruitment processes of the case companies. The goal was also to find if the recruitment process varies between different business fields.

The second theme, "The Recruitment Process and AI Outside Finland" concentrated on the recruitment process in general as well as the utilisation of AI in the other countries of the recruitment companies. The idea behind theme who was to examine whether other countries utilise AI more in recruitment and if so, how it is utilised.

The third theme, "The AI and its Future" concentrated on the thoughts, opinions, experiences and future predictions of the recruiters regarding AI in recruitment. The aim of the third theme was to understand how recruiters experience AI and how they predict the future of it in recruitment.

In the beginning of every interview I explained the interviewees the aim of my thesis. I also revised that the identity of the recruiters and the companies they represent will be kept anonymous throughout the process.

4.5   Data Analysis

Thematic analysis is a design of qualitative data analysis (Statistics Solutions 2020a). Thematic analysis aims to recognise patterns and themes from the data gathered during the interview rather than analysing the words and phrases of the interview answers (Mortensen 2020; Guest, MacQueen & Namey 2012, 10).

There are two different methods to analyse thematic analysis, an inductive method and a deductive method. Inductive method means that the data collected from the interviews determines the themes of the interview. Deductive method means that there are already unsubstantiated themes based on theory before the data is analysed. (Caulfield 2019.) In this thesis, the themes were regocgnised from theory base, thus the deductive method for thematic analysis was chosen.

The four interviews were analysed in Microsoft Excel. Each question and theme was analysed separately in order to find repeating themes and keywords. The similarities and differences between the recruitment companies were analysed, as well as, the opinions of the recruiters as specialists of the recruitment field.

4.6   Reliability and Validity

Reliability and validity are key concepts in the qualitative research. In qualitative research, **reliability** refers to the terms of consistency or repeatability (Trochim 2020). For example, if a researcher is able to receive the same results with same research design, it means that the research would be viewed as reliable (Saunders & al. 2016, 202).

Validity analyses the truthfulness of the research and determines if the research succeeds to measure what it was initially planned to measure (Bashir, Tanveer, Afzal &

Azeem 2008). A high level of validity can be obtained in semi-structured interviews when the interviewer presents clarifying questions, analyses meanings and answers from many different angles (Saunders & al. 2016, 400).

Since qualitative research is based on human interaction, assessing and assuring validity in qualitative research can be challenging. In order to assess validity in qualitative research, questions such as "Is this logical?" and "Is this reliable?" can be pondered. (Statistics Solutions 2020b.)

5 Results

This chapter presents the results from the qualitative interviews. The qualitative interview was divided into three themes and each of the themes is analysed and discussed separately below. The interview questions can be found in attachment 1.

5.1 Theme 1: The Recruitment Process and AI in Finland

The main goal of the first theme was to see the big picture of the recruitment process and to see how AI is used in the recruitment processes of international recruitment companies in Finland currently. The goal was also to find out if the recruitment process varies across different business fields.

5.1.1 The Recruitment Process in Finland

The first interview question of the theme one concentrated on the recruitment process in Finland. The interviewees were asked to briefly describe every step of the recruitment process (refer to Figure 2) in their company.

Company A

According to Recruiter A, the recruitment process in Company A starts when a person seeking for a job contacts the company in order to find a position. The recruiters in Company A then study the needs, values and hopes for the possible future position and employer of the candidate. After that, they start searching for a suitable position from the client companies. Recruiter A highlighted the importance of knowing the client companies and their values, company cultures and working environments to comprehend whether Company A would be able to help the applicant in the process and recommend the candidate to the client company. Commissions by the client company are very rare but if there was a commission by the client company, the job role definition and selection criteria would be defined by the client company.

 "Attracting talent means more like attracting people searching for a job to use our services." (RA.) Company A markets itself as a side who is willing to help candidates find their dream positions in the companies sharing the same values as them and also promises to support the candidate in the process of possible job interviews. Recruiter A men-

tioned the company promises to add value to the candidate's job searching and career development whether the candidate succeeds in finding his dream position in some of the client companies.

Company A pre-screens the candidates who have contacted them based on their experience and skills. The company compares the open positions and the candidates based on the requirements of the position and the experience and skills. Based on the candidate's skills and experience, Company A then determines if they can help the candidate. The recruiter A said that usually the client companies require a lot of experience and thus candidates with little to no experience are usually excluded. Candidates they can help, proceed to the next step.

The interviews are situations in which the company gets more familiar with the candidate. Company A emphasises the soft skills and looks for

- the skills, experiences and potential development of the candidate
- in what kind of team the candidate wishes to work in
- the level of the position the candidate wishes to work in
- the values the candidate wishes the possible future employer to have
- if the candidate prefers working in the office or from home

Once Company A has discussed with the candidate and formed a clear picture of the candidate in terms of the soft skills and experience, the recruiters start to look for a suitable position within Company A's client companies. If a suitable position is found, Company A recommends the candidate to the client company. The client company contacts the candidate and then the client company is responsible for the rest of the recruitment process. However, Company A will offer guidance and support to the candidate during the job interviews with the client company.

Company A does not take part in reference and background checking. The client company is responsible of these steps.

Company B
The recruitment process in Company B starts when the recruiters in Company B discuss with the client company about requirements and wishes. During these discussions, the profile and the selection criteria for the position are being discussed and formatted. After that the recruiters in Company B write the job advertisement that is defined by the profile of the position.

For Company B's recruitment, they look to attract talent based on the job advertisements and marketing them to the target group on social media. The recruiters in Company B write the job advertisements manually. Company B has no limitations to the job advertisement, which means that the recruiters can write them freely. However, it is important that headlines are ideal for search engine optimization, meaning that the headlines for job advertisements are simple, the words are in basic form and the location of the position shows in the headline, for example

    - marketer, Helsinki
    - HR-assistant, Espoo
    - IT-specialist, Oulu

The advertisements are distributed to different platforms, for example to MOL (employment office), LinkedIn and Duunitori. If the open position is difficult to fill or if there are few applicants, the recruiters in Company B may do candidate sourcing. This means they start to look for potential candidates from their own databases or on LinkedIn. The recruiters then contact the possible potential candidates and encourage them to apply for the position.

Pre-screening is based on the selection criteria set by the client company. Once the candidates have applied for the position, the recruiters do the pre-screening and go through the resumes and application letters one by one searching for the desired skills, experience and knowledge. The applicants who meet the selection criteria are to proceed to the next step in the process. The applicants who lack one or many of these selection criteria will not continue the process. Recruiter B mentioned that the resumes and application letters have different values depending on the field of the open position. For example, in the IT-field, the experience and skills play higher role than the motivation. Whereas in the fields of marketing or customer service, the motivation and reasoning for applying to the position have a higher weight in the pre-screening process than the experience.

The selection process has three phases. The first step is to have round of phone interviews with the candidates selected from the pre-screening phase. The phone call is conducted to get a better impression of the candidate and ask some simple questions. Then the most potential candidates proceed to a face-to-face interview with Company B. The interview questions are formed based on three competencies desired by the client company. The interviews are structured but the possibility of more flexible discussion towards the end of the interview is possible. The questions of the interviews include a lot of questions that seek to analyse the candidate's way of acting and performing in certain situations.

The final step is to present the candidates for the client company and interview them with the representative of the both Company B and the client company. In this phase, there are usually three to five potential candidates. The client company then hires someone for the position or interviews the candidates again. If the suitable candidate is not found, Company B may have to introduce more potential candidates to the client company.

Reference and background checks are conducted by the client company. However, the Recruiter B added there are some exceptions, for example if the client company specifically asks for Company B to call the referees of a certain candidate.

Company C
According to Recruiter C, there are two ways how the recruitment process can start in Company C. First option is that the client company defines the job role and profile online. The information about the client company's definition goes to the recruitment team and then the process starts. The second and most common option is that after the sales team of Company C has initialized the situation of the client company, a recruiter from Company C contacts the hiring manager of the client company via phone or Teams. During these discussions, the needs of the client company and the job profile are being defined.

Recruiters create the job advertisements based on job role and tasks discussed with the client company. Company C has some basic guidelines for the job advert, but the content is created by the recruiter of the position. Company C also utilises social media to reach more potential candidates. Same as Company B, the recruiters Company C may also do candidate screening and search for potential candidates on LinkedIn and from their own talent pool. The searches are done based on search words including competence requirements for the position. The recruiters then may suggest the potential candidates to apply for the position. Recruiter C added that the company has a recruiting system providing them information about the platform the candidates have used to apply for the position. Company C can then analyse and utilise the information in order to share job adverts on platforms on which they are more likely to be seen amongst ideal candidates.

Company C also pre-screens the candidates manually one based on the selection criteria set by the client company. When applying to some positions, the candidates may also do a test in order to find out if the position would be suitable for the candidate in terms of experience and career development. The test generates data for the recruiters and provides them information about the attributes of the candidate. The most potential candidates then proceed to the next step of the pre-screening process, which is the phone interviews

round. The idea of the phone interview is to get more familiar with the candidate and the reason of the candidate for applying to the position in question.

Company C interviews the candidates first either in a face-to-face interview or online. These interviews last approximately one hour. The recruiters of Company C take notes during the interview and later go through them with the representative of the client company. The client company then decides the candidates they want to interview and continues the process with the most potential candidates. Lastly, they make the final decision on who they are going to hire. The interviews Company C holds are usually structured interviews, however in some recruitments competence-based interviews are also used.

The recruitment process of Company C does not usually include reference and background checks as these are usually conducted by the client company. However, Company C conducts both if required by the client company. Recruiter C mentioned that in order to do different checks, Company C collaborates together with other departments of the company C and with partners from outside the organisation. Together with its collaboration partners, company C may conduct credit, drug and criminal history checks.

Company D
Company D recruits for client companies and works as an outsourced HR function to its long-time client companies similarly to internal HR departments of companies. In both cases, the actual need for the recruitment comes from the client company. Company D analyses the market and client company's needs and then determines whether it is possible to get the desired talent based on the frames set by the client company. The actual job role and job definition are determined together with the client company. However, Recruiter D added that some client companies may not need the expertise of Company D in job role definition since it depends on the experience of the hiring manager of the client company.

Recruiters create the job advertisements based on the role and tasks. Recruiter D mentioned that there are job advertisements that do not include the name of the company. This is when the client company wants to stay anonymous or they had the position open but have not succeeded in filling the position. Similar to Companies B and C, Company D also does candidate screening on LinkedIn and on their own talent pool with the help of search words. The search words include desired competences for the position to be filled. On LinkedIn, Company D utilises the methods of personalised content marketing when marketing the position to ideal candidates.

"The same person responsible for the whole recruitment process so the same recruiter also does the pre-screening." (RD.) Recruiter D highlighted the importance of the pre-screening. She also mentioned that it requires expertise and experience in order to read resumes and application letters. According to Recruiter D, it is also crucial being familiar with the contents of the role in order to succeed in pre-screening phase and in the whole recruitment process. Company D utilises video interview as a tool to pre-screen candidates. The video interviews have a certain set of questions and the links are sent straight for the selected potential candidates.

The selection phase in Company D is divided into two parts. After the pre-screening phase, the potential candidates are first interviewed by Company D and then they proceed to a more conversational interview conducted by the client company. Depending on the recruitment, a recruiter from Company D may be interviewing the candidates with the client company. Recruiter D mentioned they use the same structured interview questions with the same specific themes in all interviews in order to compare the applicants more sufficiently. However, the recruiter may modify the questions to be more unstructured depending on the position they are interviewing the candidate for. Company D communicates the results of the first interview to the client company.

Company D conducts the reference checks and credit checks but possible security clearances are conducted by the client company. Recruiter D added that the reference and credit checks are usually done at the end of the process, but they can also be conducted earlier "in case there is something suspicious or inconsistent in the candidate's job history or educational history." (RD.)

5.1.2   The AI in the Recruitment Process in Finland

The second interview question of theme one concentrated on the utilisation of artificial intelligence in the recruitment process of international recruitment companies in Finland. The interviewees were asked to briefly describe how they utilise artificial intelligence in the recruitment process (refer to Figure 2) in their company.

Company A

Company A utilises artificial intelligence in step 2, attracting talent. According to Recruiter A, Company A utilises forms of narrow artificial intelligence if there is a commission by the client company. The company may search for potential candidates on LinkedIn search with keywords that may be set based on the title of the position, knowledge of different systems or job experience.

Company B

Company B does not use artificial intelligence in the job role definition. The recruiting system of Company B is automated in a way that it shares the job advertisements to different platforms such as employment offices, LinkedIn and Duunitori. The recruiters do not need to fill in the same information many times to different platforms. Company B also utilises search engine tools in order to find potential candidates with the help of keywords from LinkedIn and their own databases.

Company B does not utilise artificial intelligence when pre-screening the candidates and application letters. Recruiter B mentioned that if there are few applications, also at this step of the process the recruiters may start searching for candidates from their own talent pool with keywords.

Artificial intelligence is not used in the selection phase of the recruitment process either. In the pre-screening phase "there is nothing used, it is based on people." (RB). The interview questions are created by the recruiters and the interviews are always based on human interaction.

Company B is not usually responsible of this step of the recruitment process, however if the company had a commission to do so by a client company, this step would be done manually without AI.

Company C

Recruitment Company C does not utilise artificial intelligence in the job role definition. However, they also have a recruiting system that automatically shares job advertisements to different platforms meaning that the recruiters in Company C do not need to write the same job advertisement many times to different platforms. Recruiter C added that they currently have a pilot version of a different system that is more automated and helps the recruiters in creating the job advertisements.

Recruiter C said that they are working on a new AI-based tool for the video interviews. "This tool would transcribe the video answers and offer data based on the video interviews for the recruiter." (RC.) There are no other forms of artificial intelligence used in this step of the recruitment process currently.

Like Company B, Company C is not usually responsible for conducting background or reference checks. However, if the company is commissioned to do so by a client company, this step would be done manually without AI.

Company D

Artificial intelligence is not used in Company D when creating the job role definition.

According to Recruiter D, they also have a recruiting system that automatically shares the job advertisements to different platforms. Recruiter D also added that they utilise methods of social media marketing in a way that these platforms automatically market the open positions to people based on location.

Video interviews are used as a pre-screening tool and the links to the potential candidates are sent automatically from the recruitment system. The recruitment system of Company D also utilises artificial intelligence to automatically rank the candidates. This means that when the recruiter goes through the applicants applied for the position, the AI in the system has already ranked the candidates from the potential ones to the least potential ones. Recruiter D added that there are many factors affecting the ranking, for example the form of the resumes and the fact that the candidates do not have coherent information. This ranking tool, however, is not something the Recruiter D believes can be really relied on. Recruiters in Company D may also do candidate screening on LinkedIn with the help of AI's search-engine tools and keywords.

Artificial intelligence is utilised in the selection phase in the recruitment Company D if there are aptitude, personality or skill assessments. The candidate does the test and then AI generates a report for the recruiter. The report is then analysed together with the representative of the client company. These tests generate two different reports: one for the applicant as a method to spar in career development and another for the client company based on hard facts helping to make the hiring decision.

Artificial intelligence is not used Company D when conducting possible reference or background checks. Recruiter D told that the company has previously used the method of sending the referees links to fill in a survey in order to obtain more information in a report form about the candidate. This method did not work as planned and thus is not being used anymore.

5.1.3   Differences in the Process Based on the Field

The third interview question of theme one focused on whether the recruitment process is different depending on the field and in case if it is, how and in which parts of the process it shows.

Recruiter A was not able to answer this question since the Company A recruits to only one business field.

Recruiter B said that the recruitment process is the same regardless of the business field but there may be some differences due to the specific selection criteria of an open position. Positions in the customer service, HR and marketing are the most popular ones, making the job experience, motivation and personality of the candidate to have a high importance. Whereas in the IT-field, for example, the job experience is not always as important since the applicant may have the skills needed regardless the inexperience of the practical job. "If we are in a super hurry they have only a broad phone interview with the candidate." (RA.) The potential ones are then presented to the client company, meaning that the face-to-face interviews with the company B are then skipped.

Recruiter C also said that the recruitment process is the same regardless of the business field. However, there are some differences which are caused by the selection criteria of the position. For example, for customer service roles the soft skills are more important than the hard skills and technological skills that would be important in the IT-field. Thus, in the IT-field, there may be more skill testing in the recruitment process.

"The differences in the recruitment process do not depend on the field but rather the open position and its challenge and requirements." (RD.) Recruiter D gave an example of the recruitment of an assistant and Chief Financial Officer. These two positions have completely different profiles and the role of a CFO is more demanding than the role of the assistant. In practice, this means that the candidate for the assistant's position would be interviewed once or twice before the hiring decision. Whereas, the candidate for the CFO position would have to go through at least three rounds of interviews, followed by participating in aptitude, personality and skill assessments.

5.1.4   Conclusion of Theme One

To conclude, the results of theme one show that the recruitment processes in the case companies are very similar including the same steps presented in Chapter 2.3 and in Figure 2. In Company A, the process is a bit different in terms of the order of the steps. For example, the client company takes part in the process later whereas the other companies collaborate with their client companies from the beginning. Another observation from the theme one is that the recruitment companies studied are not responsible for conducting background and reference checks.

Artificial intelligence is used in all of the Finnish operations of the recruitment companies studied. The companies studied use AI automation tools to distribute job advertisements and search engines tools of the narrow AI to source candidates from LinkedIn and from internal databases. Expect for Company A, that utilises AI only when sourcing candidates. AI is not used in the case companies when defining the job role, when creating the job advert nor when conducting reference or background checks. The results indicate that Companies C and D use AI the most amongst all the recruitment companies studied.

The results indicate that there are no differences in the recruitment processes between different business fields. According to Recruiters B, C and D, the differences to the process come from the requirements, the job role and the selection criteria of the position. The recruitment process and its steps, however, stay fairly the same.

5.2   Theme 2: The Recruitment Process and AI Outside Finland

The aim of the second theme was to study how other countries of the recruitment companies studied operate. In addition, the aim was to see how they use AI in their recruitment processes.

5.2.1   The Recruitment Process Outside Finland

The first interview question of the theme two concentrated on the recruitment process in other countries of the recruitment companies studied. The interviewees were asked to briefly describe the recruitment process (refer to Figure 2) in their company's other countries and describe the possible differences between Finland and the other countries.

Company A

For Company A, the recruitment process in other operating countries, is similar with Finland's (Chapter 5.1.1). However, commissions by the client company are more frequent in other countries. The need to recruit and the job role come from the client company. Company A searches for potential candidates on LinkedIn and other networks, then presents the open position to the candidates. If the potential candidate has interest in the position, then the client company and the candidate discuss possible employment. Company A supports and offers guidance to the candidate throughout the whole process.

Recruiter A mentioned that on the international level, this method has been expressed as a better way to serve both client companies and potential candidates. Especially, during the current Pandemic of Covid-19, this quick method ensures that the client companies get the potential candidates and that the applicants get results quickly.

Company B

For the recruitment process, Company B has common guidelines that need to be followed by every operating country, in addition to every country having their own guidelines. According Recruiter B, there are no significant differences in the recruitment process between Finland and other countries.

Recruiter B believes that even though there are no major differences in other countries, when it comes to attracting candidates to apply, there may be some differences in publishing and distributing the job advertisements.

In regards of pre-screening and interviewing, "it is very similar because every country has the same recruiting systems." (RB.) In addition, every country has the same guidelines to follow internationally. The three-phased-selection process is standard and used in every country. Recruiter B pondered that in other countries, the client companies may be bigger which may bring differences to the interview phase.

Calling the referees of the candidate is more common in the other countries than it is in Finland. "It is probably some cultural thing." (RB.) Client companies of Company B are usually also responsible of the background checks and other possible checks on an international level.

Company C

In Company C, there are no significant differences in the recruitment process between Finland and other countries either. Recruiter C said that the first phases of the recruitment process are similar in every country (Chapter 5.1.1). However, in the other countries of Company C, the soft skills play more important role than the hard skills when defining the job profile. The needs do still come from the client company and the client company also sets the selection criteria.

Recruiter C believes that in the pre-screening phase, the phone interviews may be different than they are in Finland. They are more structured and they focus on the hard skills. The soft skills are analysed in a face-to-face or online interview with the client company. Like Finland, the interviews are structured but the questions of the interview may be more

specifically created for the role in question. In the other countries, calling the referees of the candidate "has been a part of the process more than it is in Finland." (RC.)

Company D

Recruiter D believes the recruitment process as a whole is very similar in all countries of Company D (chapter 5.1.1). Recruiter D mentioned there may be recruitment processes in which the recruiter and the hiring manager are in different countries. These situations may modify the process to be a bit different, but usually it is standard and similar in all countries. There may be some differences caused by the variety of positions and by different markets between the countries. Recruiter D did not know whether the process of reference and background checking is different in other countries than it is in Finland.

5.2.2   The AI in the Recruitment Process Outside Finland

The second interview question of the theme two concentrated on the utilisation of AI in the other countries of the recruitment companies studied. The interviewees were asked to briefly describe how the other operating countries of their company utilise artificial intelligence in the recruitment process (refer to Figure 2).

Company A

According to Recruiter A, artificial intelligence is used in Company A's international operations the same way as it is used in Finland (Chapter 5.1.2). When there is a commission by the client company, the recruiters search for potential candidates on LinkedIn with keywords set based on the title of the position, knowledge of different systems or job experience.

Company B

Recruiter B believes that in the recruitment process, artificial intelligence is used the same way internationally as in Finland (Chapter 5.1.2). Artificial intelligence is not used when defining the job role. The other countries also utilise the same recruiting system than Finland. Recruiter B did not know if other countries have different systems in use that could use more AI. On an international level, it is important that the titles of the job adverts are simple for search engine optimisation.

In the pre-screening phase, other countries also do candidate sourcing from their own databases and from LinkedIn, based on keywords. Interviewing candidates and conducting possible reference and background checks are done manually without AI, like in Finland.

Recruiter B added that the pilot versions of new tools and systems are never in Finland, so she does not know if the company is planning to implement new systems that use artificial intelligence.

Company C

Artificial intelligence is not used in the other operating countries of Company C when defining the job role. According to Recruiter C, in other countries the applicants are sent a link to do an aptitude test after applying for a position. The link is sent automatically from the recruiting system. Artificial intelligence then generates the applicant's answers to a report form. There are two reports generated, one for the applicant as a tool and second for the recruitment company to analyse the suitability of the candidate for the position. These reports are then also presented to the representative of the client company.

Recruiter C believes other countries have implemented more automatized recruiting systems. For example, the answers of reports help the recruiters to rank the applicants, as the data from the answers gets transformed into different colours by the system. The colours have different meanings and they automatically compare the candidate's ranking amongst other applicants.

In other countries of Company C, the recruiters also use AI's search engine tools in order to find potential candidates from LinkedIn and their own databases. Artificial intelligence is not used when calling the referees and conducting possible background checks.

Company D

Artificial intelligence is not used when defining the job role in other operating countries. Recruiter D believes that in other operating countries, the job advertisements are distributed automatically to different platforms like in Finland. Recruiter B also believes other operating countries do not have more advanced systems for deeper automation and is quite sure that in other countries, the AI ranks the candidates similarly as it does in Finland. Recruiter D added that if this function does not work properly in Finland, it probably does not work properly in other countries either.

Recruiter D was not able to tell if artificial intelligence is used when going through the referees and conducting possible background checks.

5.2.3 Conclusion of Theme Two

As a conclusion, the results of theme two indicate that the recruitment process in the other countries of the case companies is very similar with Finnish recruitment process. There are some differences, for example Company A has more commissions in the international operations and Company C uses different kind of phone interviews in the international operations. Reference checks are more often a part of the process.

The results indicate that the other countries of the recruitment companies seem to utilise artificial intelligence in the recruitment process the same way the Finnish departments of the recruitment companies do. However, there are some differences, as for example Recruiter C mentioned that in one of its operating countries, artificial intelligence generates report data based on aptitude tests for recruiters as a ranking tool for the pre-screening process.

5.3 Theme 3: The AI and Its Future

The aim of the third theme was to understand how recruiters experience AI in general, whether the companies plan to increase the utilisation of AI and how they predict the future of AI in recruitment.

5.3.1 Opinions and the Advantages and Disadvantages of AI in Recruitment

In the first and second question of theme three, the recruiters were asked to evaluate AI in recruitment and to discuss the advantages and disadvantages they think AI brings to the recruitment process.

Recruiter A said that despite the potential of AI, she does not believe it will be able to evaluate candidates properly. She believes, however, that it could save time in some parts of the process, for example in the pre-screening process. She added that before she could trust AI and its ability, concrete examples of it as a recruiter would be needed.

Recruiter A sees more disadvantages than advantages in using AI in recruitment. As an advantage, she believes adding AI to recruiting could be positive when searching for candidates from internet and other databases in terms of speed and search results. She does not believe that AI could possibly evaluate the candidate's feelings and other non-verbal cues, which is important in recruitment. She also pointed out that it is important to analyse the applicant's experience and AI would not be able to do so.

Recruiter B admitted that her first impression of artificial intelligence was sceptic. "Oh no, AI is going to take my job." (RB.) After careful thought, she concluded AI can bring positive things to the recruitment process. Nonetheless, she still considers recruiting as humane field due to the necessary interaction between humans.

Recruiter B sees both advantages and disadvantages of AI in recruitment. As advantages Recruiter B sees the ability of AI to reduce discrimination and manual work and speed up the recruitment process. She also thinks AI can improve the candidate experience and the thought of transparent recruitment process. One major disadvantage in Recruiter B's opinion is the fact that it reduces the human focus in the recruitment process. She also wonders if a machine would ever be able to have such interaction and intuition as humans do.

Recruiter C thinks that AI is not being properly used yet, as major organisations do not take advantage of the potential AI has. Since manual work takes a lot of time, Recruiter C sees AI as a tool to be more productive and being more present with the applicants. However, she is a bit sceptic stating that AI needs to perfectly if going to be used in the recruitment process. Otherwise the quality and candidate experience may suffer.

Recruiter D believes that AI can be very beneficial in the recruitment process. However, she believes that even though machines can be smarter than humans, the AI needs to be programmed properly before deciding on careers of the candidates.

Recruiter D thinks one benefit AI could bring to recruitment is that it can prevent personal bias, leading to more unbiased pre-screening. "Robots do not have bias." (RD.) Recruiter D sees that adding AI to the manual tasks of the recruitment process "would save time and give time to concentrate more on other things." (RD.) However, Recruiter D thinks the concept of AI in the recruitment process feels impersonal for the applicant. "How can it be made not so obvious that a computer has been involved in the process?" (RD.)

5.3.2   Future Plans to Increase the Utilisation of AI and Companies' General Opinions on AI

In the third question of theme three, the recruiters were asked whether the recruitment company they work for are planning to add AI to its recruitment process and if yes, how the company is planning it. They were also asked to briefly describe how AI is viewed in the company in general.

Recruiter A has not heard any plans on increasing the utilisation of AI in the recruitment process of Company A. She added that in Company A, the employees are sceptic and the employees do not believe Company A could benefit from it.

Recruiter B believes Company B wants and aims to utilise AI more in the recruitment. The discussion about utilising AI more is active. "I do not know what exactly is being planned." (RB.) Nonetheless, the company sees it as a possibility.

Recruiter C said that Company C sees AI as a possibility rather than a threat. AI that automates the manual work and is seen as a positive thing. "There is going to be more AI." (RC.)

Recruiter D said that in Company D, AI is seen as a positive thing and that the company is researching more information about it. "AI could possibly be a competitive advantage against the competitors." (RD.) Recruiter D also added that Company D aims to integrate different operating systems and that is done with the help of AI.

5.3.3   Steps Recruiters Would Add AI to

In the fourth question of theme three, the recruiters were asked to briefly describe the steps of the recruitment process in which they would like to utilise AI more. The results are presented in Figure 11 and discussed in more detail below.
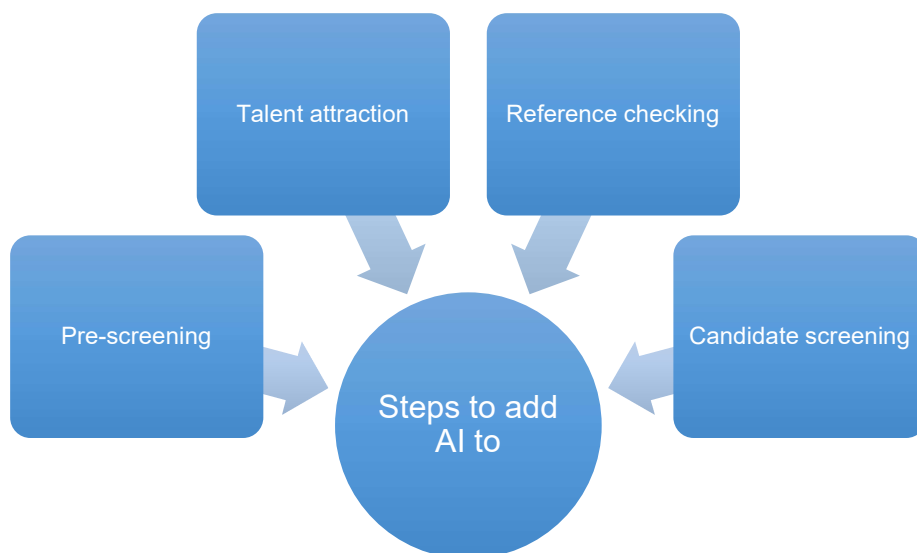

Figure 11. The steps in the recruitment process the recruiters would use more AI in

Recruiter A would like to add AI in to the search engine operations, as AI would make the searching faster and also give more high-quality results. "This is the only step I want to mess with machines." (RA.)

Recruiter B would like to utilise more AI in the pre-screening process. "AI could shame-lessly filter out candidates who do not qualify for the position in terms of language skills, for example." (RB.) Recruiter B believes AI could also be added to the pre-screening pro-cess in a way to filter out the names and genders of the candidates. Then the pre-screen-ing could be done based on location and skills only.

Recruiter C would like to add AI to many steps of the recruitment process. In the pre-screening phase, for example, "AI could analyse video interviews or surveys so that the recruiters could obtain more comprehensive data about the candidates" (RC.) Recruiter C thinks AI could be utilised when distributing the job adverts and when communicating with the candidates. "AI could be used for more personalised communication with the candi-dates." (RC.) Recruiter C believes AI could be beneficial when conducting phone inter-views and when discussing about the time and date of the job interviews.

Recruiter D believes AI could be added to the pre-screening process. She believes that it could be beneficial if AI knew how to suggest potential candidates for the position from previous recruitments. These candidates would be suggested by AI based on the re-cruiter's notes from previous interviews and the skills and experience of the applicant. Re-cruiter D thinks this AI tool would serve both the applicants and the recruiters.

Recruiter D believes it would be beneficial to add AI to the process of reference checking. "Recruiter's job cannot be dependent on another people." (RD.) Hence waiting for an-swers to the survey sent to the referee could be problematic and a traditional phone is still call a better way to contact the referees.

5.3.4   Changes AI Will Bring to the Recruitment Business

In the fifth and last question of the interview, the recruiters were asked how they believe AI will change the recruitment field. Their thoughts are presented in Figure 12 and dis-cussed in more detail below.
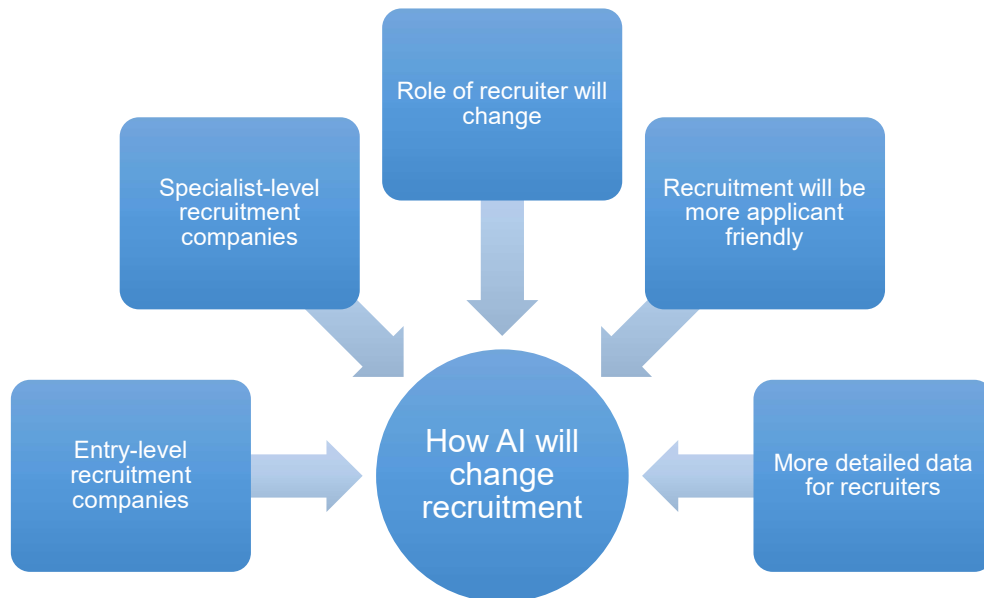
Figure 12. How recruiters believe AI will change recruitment

Recruiter A believes that AI will bring changes to the recruitment field and believes that in the future, recruitment companies will be divided in to two types of recruitment companies. She believes there will be recruitment companies recruiting to entry-level positions and recruitment companies recruiting to more demanding specialist positions. The competition between the entry-level recruiting companies will grow and the focus will be on the speed of the recruitment process. The competition with the companies that recruit to more demanding positions will also grow. The focus, however, will be on the quality of the recruitment and on the acquisition of the best candidates rather than the speed of the recruitment. In the end, she added: "For the candidate it is good if the process gets faster. But I am scared of the thought that human touch would be wanted to take away from a human-based field". (RA.)

Recruiter B believes that AI is going to be used more frequently in the future. In addition, she thinks recruitment will be more outsourced. The role of recruiter will change and this may bring more work to the recruiters. The competition between the recruitment companies will grow and the utilisation of AI is something that the recruitment companies will use as a tool to sell their services and attract client companies.

Recruiter C said, "I believe and hope that AI will change recruitment to be more agile and applicant friendly. Recruiting systems will be more advanced and the applicants will not have to upload several files to the system for the application to go through. AI together with recruiters will be able to do better recruiting." (RC.)

Recruiter C sees that the speed of recruitment will be important in the competition between large and medium-large recruitment companies. Recruiter C believes marketing and selling the services of a recruitment company with the utilisation of artificial intelligence would need a change in people's conceptions of artificial intelligence. "AI would be needed to be marketed as a positive concept." (RC.) This implies a change would be required in the marketing and sales processes in order to change the current sceptic conception on artificial intelligence. "Internal service would get better and this would also increase the competition between the recruitment companies." (RC.)

Recruiter D believes that the increasing utilisation of AI means that the role of a recruiter will be more sales focused. Additionally, the skills of comparing the applicants will not be that crucial in recruitment business anymore. She believes with the help of AI the recruiters will retrieve various data that was not available previously which will make the recruitment process faster and higher in quality. Additionally, she mentioned that there is a possibility for client companies to replace their use of recruitment companies with AI. AI would enable them to independently complete the recruitment process. "But this kind of situation is far away in the future." (RD.)

5.3.5   Conclusion of Theme Three

As a conclusion, the results of theme three indicate that the recruiters see both advantages and disadvantages in the utilisation of AI in recruitment. All of the recruiters interviewed think AI would save time in the process by decreasing manual work. However, they are uncertain if they could rely on AI when it comes to its accuracy and ability to act as a recruiter. They all seem to be worried about its lack of emotional intelligence and human feel.

Recruiters have a vision on where they want AI implemented. Examples of this include pre-screening, talent attraction in terms of more efficient distribution of job advertisements, candidate screening and reference checking. These are the steps in which active human interaction is not being needed. This is most likely why using AI in these particular steps is seen positive. The fact that none of the recruiters would like to use AI when interviewing the candidates also supports this conclusion.

The results also indicate that the general opinion on AI in recruitment companies is positive and that the companies are eager to learn more about AI and its ability. Company A was the only company that seems to be very suspicious and sceptic about artificial intelligence. The opinion of Company A comes from its values, as Company A places greater

emphasis on soft skills than hard skills. As the theory suggests, artificial intelligence is better at analysing the hard skills instead of the soft skills.

The results indicate that AI is going to change the recruitment business in many ways in the future. For example, the recruiters believe there will be different types of recruitment businesses and that the role of the recruiter will change and become more sales-focused. The possibility of AI replacing the recruiters is also being recognised. The overall results of theme three indicate that both the recruiters and the recruitment companies see possibilities and advantages of the utilisation of AI in the recruitment process, but the threats and disadvantages are also recognised.

6 Conclusion

This chapter concludes the key findings of this thesis. Recommendations for further research, as well as the reliability and validity of the research are also discussed. Lastly, the chapter presents what I have learnt during the thesis process.

6.1 Key Findings

Investigative question one asked how artificial intelligence is used in the recruitment processes of international recruitment companies currently in Finland. As presented in Chapter 3.4 and in Table 8, artificial intelligence can be used in every step of the recruitment process. The research shows that some forms of artificial intelligence is being utilised in the recruitment processes of the recruitment companies interviewed. However, none of the companies utilise it in every step of the recruitment process. Most of the time, in the Finnish recruitment process, artificial intelligence is used the most when sourcing candidates and when distributing job advertisements to different platforms. These two methods are both included to the second step of the recruitment process (refer to Figure 2).

Investigative question number two aimed to find out how AI is used in the recruitment processes in other countries of the case companies. The results indicate that in general, the recruitment processes are quite standardised in the companies internationally. There are no significant differences in the utilisation of AI in the recruitment process between Finland and other countries of the companies studied. The AI is being used pretty much the same way internationally as it is used in Finland.

Investigative question number three focused on finding out how the recruitment companies are planning to use AI in their recruitment processes in the future, in Finland. The results show that the current and future presence of AI, as well as the different changes it is going to bring to the field of recruitment business are recognised by the recruiters and their companies. Seventy-five percent of the recruiters interviewed view AI more as a possibility than a threat to the field. However, this is only as long as AI is being used for the tasks in which human interaction is not that vital, for example in candidate sourcing, pre-screening and in more sufficient distribution of job advertisements. The recruiters would like to utilise AI more in the steps of pre-screening the candidates, distributing job advertisements and while conducting reference checks.

The results show that the recruiters see both advantages and disadvantages in using AI in the recruitment process and they are similar to the ones presented in the theory (Chapter

3.5). All the recruiters believe that AI would expedite the process by decreasing the manual work but also decrease the humanity in it. They all seem to be a bit sceptical in regard to its operation and ability to make good decisions regarding emotional intelligence. All four recruiters pointed out that if AI is going to be used in the recruitment process more, it needs to work impeccably.

Despite the fact that majority of recruitment companies studied see AI as a possibility for the field, the results do not to indicate very strongly how exactly the recruitment companies are going to utilise AI more in the recruitment process in the future, in Finland. There are pilot versions of more automated recruiting systems, video interview analysis tools and plans to integrate the recruiting systems for deeper automation. However, the curiosity towards the AI, the intense opinions of it as well as concrete examples about the utilisation of it in the recruitment strongly indicate that artificial intelligence is a hot topic in the field currently. Thus, the utilisation of artificial intelligence is most likely to grow in the recruitment processes of international recruitment companies in Finland.

6.2   Reliability and Validity

Reliability of this thesis was ensured by creating a theory base with the help of reliable sources. The validity of the sources was analysed before using the sources. Thus books, articles, online sources and researches only from credible authors were used in this thesis.

Creating a reliable and clear theory structure helped when preparing the interview questions. Preparing the interview questions from the theory and dividing them to themes were done in order to ensure the validity of the research. Validity of the research was secured also by ensuring that all the important questions were studied and answered to. Throughout the interviews, questions of the reasonability and credibility of the answers were also assessed.

The interviews were conducted only with the Finnish recruiters, which may affect the results. Interviewing recruiters from other countries probably would have provided more accurate answers about the utilisation of AI in other countries of the recruitment companies. This may have had an effect on the validity of the study.

Recruitment and artificial intelligence are large concepts and thus it was not possible to include every existing piece of theoretical knowledge regarding these two concepts in the scope of this thesis. Due to the small number of interviewees and companies included,

this thesis should not be viewed as single truth about the utilisation of AI in the recruitment process in Finland. This thesis should be viewed as a tool to get an overview on how artificial intelligence can be used in the recruitment process or how recruitment companies operate in general in Finland.

6.3 Recommended Further Research

A recommendation for further research would be to interview also the recruiters from other countries. By doing that, the results would be more accurate and more reliable and thus would help to compare Finland with other countries more in detail.

As the topic of artificial intelligence is highly relevant currently, an interview with an AI specialist would be beneficial. The specialist would be able to provide reliable and specific information in a way that it is easy to understand and use as a theory base of a research.

6.4 Reflection on Learning

This thesis was a very useful learning tool for me, as during this thesis process, I have learnt about recruitment and artificial intelligence which are subjects that interest me. I have also learnt how to conduct and analyse qualitative research while revising my academic writing skills.

Some challenges were faced during the qualitative research. It really took time to think of the interview questions and to analyse the data. I feel like this was very valuable research for me and everyone interested in recruitment. Interviewing the professionals was rewarding and interesting. I am very happy I had professionals taking part in my research.

Time-management and finding motivation were the biggest obstacles during my thesis process. In the beginning of the process, I was highly motivated to complete my thesis quickly and graduate earlier than expected. Unfortunately, right after starting the process, Covid-19 Pandemic broke out. Covid-19 had a big impact on the advancement of process as obtaining sources was difficult. I found it really hard to find motivation to write my thesis while working from home and having almost zero social interactions. This resulted in a two-month break from writing my thesis and being in a strict schedule for the final weeks of the process. Luckily, I managed to complete the thesis on time.

During my thesis process, I have understood how important it really is to ask help when I feel like I need it - this applies to work life as well. Discussing, sharing thoughts, providing and receiving feedback from my colleagues and thesis advisor have been the best ways to learn.

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Attachment 1. Interview Questions

Theme one: The recruitment process and AI in Finland

1. Could you please describe each step of the recruitment process in the Finnish operations, when
- defining role, tasks, selection criteria
- attracting candidates to apply
- pre-screening applications
- interviewing candidates
- conducting possible reference and/or background checks

2. Please describe how artificial intelligence is used in every step of the recruitment process in Finland, when
- defining role, tasks, selection criteria
- attracting candidates to apply
- pre-screening applications
- interviewing candidates
- conducting possible reference and/or background checks

3. Are there any major differences in the recruitment process between different business fields? If yes, can you please briefly describe the differences?

Theme two: The recruitment process and AI outside Finland

1. Could you please describe each step of the recruitment process in your company's other operating country / countries, when

- defining role, tasks, selection criteria
- attracting candidates to apply
- pre-screening applications
- interviewing candidates
- conducting possible reference and/or background checks

2. Please describe how artificial intelligence is used in every step of the recruitment process in your company's other operating country / countries, when

- defining role, tasks, selection criteria
- attracting candidates to apply
- pre-screening applications
- interviewing candidates
- conducting possible reference and/or background checks

Theme three: The AI and its future

1. What is your opinion about utilising AI in recruitment?
2. Please describe the advantages and disadvantages you recognise there being or may being when utilising artificial intelligence in the recruitment process.
3. Is the company you work for planning to utilise AI in the recruitment process more in the future? If yes, do you know how? If no, do you know why not?

4. As a recruiter, how would you like to use artificial intelligence in the recruitment process more in the future? Which steps of the process it would help the most?

5. How do you see the AI changing the recruitment business in the future?