UNIVERSITA' DEGLI STUDI DI PADOVA

DIPARTIMENTO DI SCIENZE ECONOMICHE ED AZIENDALI "M. FANNO"

CORSO DI LAUREA MAGISTRALE IN BUSINESS ADMINISTRATION

PERCORSO: MANAGEMENT

TESI DI LAUREA

Artificial Intelligence involved job interviews: Exploring perceptions of prospective applicants

RELATORE:

CH.MO PROF. MARTINA GIANECCHINI

LAUREANDO: ALPENIDZE TATIA

MATRICOLA N. 2008495

ANNO ACCADEMICO: 2021-2022

Declaration of Authenticity

Dichiaro di aver preso visione del "Regolamento antiplagio" approvato dal Consiglio del Dipartimento di Scienze Economiche e Aziendali e, consapevole delle conseguenze derivanti da dichiarazioni mendaci, dichiaro che il presente lavoro non è già stato sottoposto, in tutto o in parte, per il conseguimento di un titolo accademico in altre Università italiane o straniere. Dichiaro inoltre che tutte le fonti utilizzate per la realizzazione del presente lavoro, inclusi i materiali digitali, sono state correttamente citate nel corpo del testo e nella sezione 'Riferimenti bibliografici'.

I hereby declare that I have read and understood the "Anti-plagiarism rules" approved by the Council of the Department of Economics and Management and I am aware of the consequences of making false statements. I declare that this thesis has not been previously submitted – either fully or partially – for fulfilling the requirements of an academic degree, whether in Italy or abroad. Furthermore, I declare that the references used for this work – including the digital materials – have been appropriately cited in the text and the "References" section.

Firma dello studente

Acknowledgments

I consider myself a lucky person since I have many people to thank who endorsed me during my studies at the University of Padova.

First of all, I want to express my gratitude to my family, who supported me at every stage of my life, especially during these last two years. My parents and sister gave me the vast motivation to complete my degree during the challenging pandemic period.

I am extremely grateful to my fiancé, Andrea, who always believed in me and encouraged me on a daily basis. Thank you for your patience and help in completing the final thesis.

I have to acknowledge my supervisor, Prof. Martina Gianecchini who made it possible for me to work on this modern and interesting topic.

And lastly, I have to thank all my research participants who dedicated time to me and gave me the chance to finalize my research.

Abstract

Artificial intelligence is becoming more involved in recruitment and selection, especially at the job interview stage. This study provides insight into the perceptions of prospective job applicants on AI-involved job interviews.

The research was conducted using a qualitative approach and data collection was based on in-depth interviews. the research revealed job seekers' main ideas, motivations, doubts, and concerns about Artificial intelligence involvement at this particular stage of the application screening.

In total 15 in-depth semi-structured interviews were held with applicants from different backgrounds and job experience. they had to give ideas about the traditional job interviews, AI-involved, and AI-led ones. As a result, respondents demonstrated a positive attitude towards new technology, main advantages and disadvantages were highlighted during the discussion, but since everyone agreed that AI is the future and fast-growing technology, prospective job applicants demonstrated readiness to experience it.

The study provides the most important and useful recommendations for companies, that use the AI-involved screening process, or who want to implement it, to make the job interview stage more acceptable and attractive for potential candidates.

This study is among the first ones that researches and analyses perceptions and motivations for acceptance of AI-involved job interviews. This study provides important and thoughtful insights which can be used for further detailed analysis of the topic.

Keywords: Artificial Intelligence, Recruitment, Job interviews, AI in job interviews, Innovation.

List of Figures

List of Tables

Table of contents

Introduction

"Once a new technology rolls over you, if you're not part of the steamroller, you are part of the road."

Stewart Brand

We live in a world where the traditional economy, with its organizational, production, and governance systems, overlaps or merges with the digital economy, using its contemporary approaches in terms of business models, production, business organization, and governance.

At the societal level, digital transformation is leading to changes in communication, interaction, and consumption models that explain augmented demand for devices, software with more features, cloud computing, and data traffic services which creates the need of having basic digital skills to use the technologies. In addition, the digital economy offers consumers the ability to access information and knowledge of all kinds in a variety of formats and creates ways of remote consumption. The transition to the digital economy should result in the ability to meet consumer needs with smart products, often linked to advanced, highly customized services (ECLAC, 2022).

Many industries went through the digitalization phase, and since information technologies develop and upgrade daily, digitalization is not an event that takes place once, it becomes an ongoing process. AI is expected to contribute up to $15.7 trillion to the global economy in 2030 (PWC,2017).

Human Resource Management is different from other areas where AI techniques have been applied, because of the complexity of the HR outcomes (Tambe et. Al, 2019). According to the research held by HRPR (2016), 84% of HR firms thought that AI is useful in recruitment. Technology enables recruiters to save time and process more candidates faster, and in a cost-effective way. One of the first steps of AI in R&S was automated job suggestions on social media platforms, according to the candidate's profile, and a smart application process for the jobs. Later, the involvement of Artificial intelligence increased and become more incorporated in the process, also in the Job interview phase. Nearly 82% of HR teams will adopt more AI tools in their talent management processes before 2025 (HRExecutive, 2021).

This thesis studies in detail technology's effect on society and the business world. How recruitment and Selection have changed through the years, what are the contemporary trends in R&S and further research focuses on exploring job seekers' perception of AI-involved job interviews. How applicants see themselves during the highly digitalized interview, and what their concerns and feelings are about it. To have a better understanding of the job candidates' point of view, the following research question was addressed to get insights from job seekers on AI-involved job interviews.

RQ: What are the perceptions of prospective applicants about AI-involved job interviews?

Using the in-depth interviews (IdIs) approach, opinions, concerns, and motivations are recognized directly from the participants.

This research is significant for several reasons, first, it studies one of the modern and future promising technology trends, Artificial Intelligence in job interviews, which has a fast-growing demand, there are few studies about this topic, especially which examines job applicants' point of view and their perceptions.

The thesis is organized in the following way, Chapter 1 describes the history of technology and society, from the first technological development to artificial intelligence (AI) and its influence on the business world. this chapter also provides information about generations and their technology preferences. Chapter 2 is dedicated to discussing traditional recruitment strategy and its development to contemporary approaches and how AI participates in recruitment and selection, at Job-interviews stages. Chapter 3 delivers theoretical background about people their personalities, abilities, and preferences in adoption innovation. The following 4th chapter describes the research methodology and data collection techniques with a detailed description of the sample. Chapter 5 provides the findings and analysis followed by conclusions and recommendations.

Chapter 1 Technology and Society

Technology and society are tied up together. Technology was always part of society's life. They were developing together. In this chapter, technology is discussed through time lenses, how it was affecting humans and business life. How the way of doing business was chaining and influenced by innovation from the preindustrial era to the modern world. In the following subsections, we will review the history of technology development, contemporary business processes artificial intelligence meaning and usage, and how it is replacing human jobs and, lastly, the discussion is concluded by analysing different generations and their technology preferences and utilization.

1.1 History of technology development and impact on the business world

Technology innovation plays an extremely significant role in social development. Throughout history, many major events lead to changes in human behaviour with the help of technological development and sometimes vice versa.

Technology is a product of human development, which is determined by people's capabilities, scientific expertise, and social norms. For instance, in Preindustrial Europe 80-90% of the Gross domestic product (GDP) was created by agriculture, and people mostly worked in the fields and farms, with a low level of organization and mobility, which rapidly changed during the first industrial revolution, which transformed the world economy where Great Britain gained a significant advantage over other countries, because of its technological innovation and developments. for example, waterpower was the power source of energy, and the introduction of the steam engine, created cheap and efficient energy, and for the first time in history, it was possible to transfer energy from one place to another. After the first steps technology development became faster and increasingly important. Important prerequisites of the existing and future developments are advances in technology (production, electricity, machinery, and chemicals) which lead to many future innovations.

The second half of the 19th century had remarkable importance for communication and transportation networks. New communication tools - Telegram and telephone were introduced to society, which facilitated faster and more effective connections between people. The Telegraph was invented in 1844 which made it possible to exchange information over larger distances, installation fees were low, which enhanced its rapid spread.

Telephone and telegram usage facilitated the world to communicate with each other and brought together the railways and steam navigation which changed everything in the world, especially in the business world. Communication and transportation tools helped companies to explore national markets and quickly respond to and meet customer demands, marketing and sales could ensure regular transportation and delivery of huge quantities of goods at once. At this stage, firms started to distribute the roles regularly and change management approaches. As demand increased for communication technology, telegraph and telephone companies needed more employees, so they started to hire actively full-time managers to coordinate, control and evaluate the various aspects of the company. As the complexity of the job increased managers started to delegate their tasks to other employees which created middle-level managers to complete different functional tasks, such as schedules, track maintenance, accounting of transactions, etc. On the other hand, railway development led to some classical organisational problems and created the need for organizing employee management, training and recruitment for the workers scattered in different geographical areas. Big railroad companies were the first ones who introduced worker recruitment, fixed salaries and defined internal hierarchy and career paths.

After the first industrial revolution technology and the environment continued to develop even faster than before, retail stores took over traditional traders, new business transactions appeared, and the USA become a leader in mail orderings and retailing chains. by that time manufacturing industry started to develop which affected machinery, chemicals, electricity, and electrochemical. Enterprises grew faster than usual, and production volumes notably increased, which led to the Second Industrial Revolution known as the Technological revolution, which was "chemical" by its nature and took over different businesses, including pharmaceutical, refining, food and beverages and steel industries. The following period is defined by modern industries and developments of today namely microelectronics, the internet, jet engines, and nuclear energy, it is the scientific era which goes beyond time, space, and material existence. This is the last Third Industrial Revolution which created new industries, and market opportunities and made significant changes in the modern world (Amatori & Colli, 2011).

1.2 Modern Business processes affected by technology

Technological development changed all the processes in the world, especially in the Business management field. Advanced technology made it possible to expand and modernize business operations. In modern society, technologies are becoming more frequent and connected. Cars, aeroplanes, medical devices, financial transactions, and electricity systems use increasingly more computer software than in the past (Wolf, 2021). United Nations (UN) released a statement (2019) discussing the impact of Digital technologies in the world stating that digital technologies have advanced faster than any other innovation in history. Innovation reached 50% of the developed population worldwide in only two decades. technical development also changed the labour force by creating a new type of work and opportunities.

Over the past decades, technological progress and a fast-developing environment have changed the workforce as well, created new types of jobs and changed the way the employees were managed. The world has become globalized and digitalized, and as a result, old approaches and lifestyles are not relevant anymore.

Many professions which are demanded and popular today did not exist twenty or even ten years ago. Most of them are tech jobs, such as App developer, Virtual Reality (VR) designer, Social Media Manager, Artificial intelligent developer etc. on the other hand, modern changes influenced also the business world and how businesses communicate internally or externally.

With technological development people's need for more authentic and personalized communication dramatically increased, in the social media era Artificial intelligence (AI) made it possible to create possibilities to meet this demand. one example is the chatbots, which are used by many companies, AI uses machine learning to interact with people, and as much as AI will develop communication will become more accurate and human-like (O'Brien, 2019).

Technology did not impact only customer service, but also other business operations. it created a whole new term Digital Marketing, approaching, and reaching target audiences with internet and social media tools, such as Facebook, Instagram, google etc. customers now expect their brand is available everywhere and anytime, People demonstrate more technological acceptance (Fisher, 2018). Innovations also changed the way people were managed in the companies. Human Resource Management activities and processes are being upgraded to modern technologies and human resource management is itself going through a radical transformation

as a consequence of the digitalisation of work processes (Fabbri & Scapolan, 2018, cited in Fenech 2022).

Digital transformation was accelerated after the 2020 pandemic due to the virus Covid 19. it changed the world economy, and affected business processes, products, services, and relationships. Organisations changed the way of thinking and how they were doing business (Hai & Van & Tuyet, 2021). Whole new terms were created and now it is associated with Covid 19, like telework, distance working, working from home etc. Telework expanded beyond traditional work and now it is taking over the business world, where employees worked together in the same room under close managerial supervision (Sanchious,2022). Additionally, after the pandemic, the number of on-site workers decreased, the majority of people have been working online through various platforms such as Zoom, Google meets, slack etc.

Even digital and innovative tools were proposed by the European Commission to monitor and avoid the spread of the coronavirus such as National contact tracing and warning apps, Artificial intelligence to minimize human contacts, and European supercomputing centres working on developing vaccines, treatments, and diagnoses. etc.

1.3 Artificial Intelligence explanation

" It is the science and engineering of making intelligent machines, especially intelligent computer programs. It is related to the similar task of using computers to understand human intelligence, but AI does not have to confine itself to biologically observable methods." (McCarthy, 2007, pg.2).

According to Homoud & Varallay (2019) Artificial intelligence (AI) is not a new term; it can be traced back to the Second World War when Alan Turing published his paper "Computing Machinery and Intelligence", where he posed the question "Can machines think?", thus, the term "Artificial Intelligence" was suggested by John McCarthy (1958). Despite its early appearance AI was introduced after the 1980s along with hardware development. Early applications of AI were in the production of robotics for the automation of precise and complex work tasks, which replaced human jobs in several factories. After the mid-1990 technology advanced after "Deep Blue" smart software was developed by IBM which defeated the World chess champion, Gary Kasparov. Modern understanding of Artificial intelligence consists of software and robots that simulate human intelligence.

Lucci & Kopec (2016) defined Artificial Intelligence as being able "to create computer software and/or hardware systems that exhibit thinking comparable to that of humans, to display characteristics usually associated with human intelligence". In addition to performing tasks instantly, smart systems and robots eliminate errors and bias risks which are associated with humans. There are various recognized disciplines and approaches in AI as follows: neural computation, data mining, genetic algorithms, expert systems, and artificial neural network (ANN) (Kantardzic, 2011).

1.3.1 Classification of Artificial Intelligence

Huang & Rust (2018) have distinguished four types of intelligence according to their development in the history of AI (Figure 1). These are Mechanical, Analytical, Intuitive, and Empathetic intelligence. Mechanical intelligence is precise, consistent, and efficient with a minimal degree of learning and adaption used for simple, standardized, and routine tasks. On the other hand, analytical intelligence requires systematic learning and adaption based on the data, it demands logical, analytical, and rule-based learning with rational decision-making skills. Analytical intelligence is used for complex tasks which require thinking. IBM's "Deep Blue" AI is an analytical intelligence model. Intuitive intelligence learns and adapts according to the understanding, with statistical-based learning, used for personalised, idiosyncratic, and context-based tasks for example Libratus AI which was created for playing poker. and the last one is empathetic intelligence which is formed on experience, and with an ability of emotion recognition and affective computing. Decision-making incorporates emotions. This intelligence is used for tasks which require empathy, emotional labour, or analytics.

Figure 1: The Four Intelligences
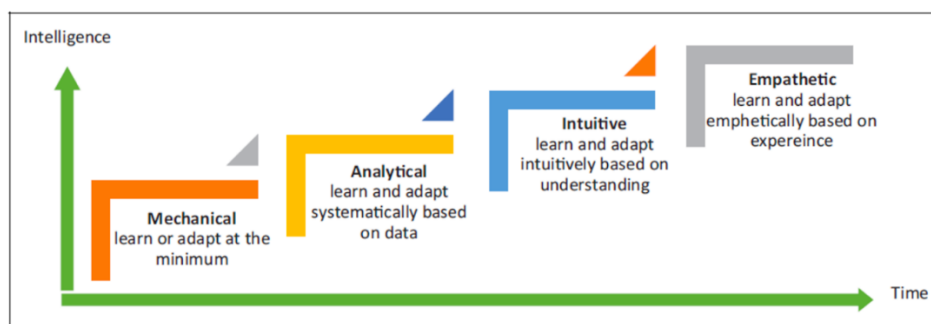
Source: Huang & Rust (2018).

1.3.2 Artificial Intelligence and human job replacement

The more tasks of a job AI take on, the fewer employees are needed for doing that job. The transition stage when a job partially is done by AI and partially done by an employee is called augmentation. (Huang & Rust, 2018). As AI continues advancing it will take over more tasks and step-by-step much human labour will be replaced. Job replacement goes through its stages (Figure 2).

The first stage is where AI replaces mechanical work. This is the stage, which is observed for many years now, when relatively unskilled labour performing routine and mechanical tasks, find it hard to find job placement, because at this stage importance of mechanical intelligence declines, while demand for analytical, intuitive, and empathetic intelligence increases. In this stage, mechanical AI takes over standardized and repetitive tasks. In stage two AI replaces both mechanical and analytical jobs. This stage is not remarkably familiar to the modern world because AI has just now started to take over analytical jobs. we should mention that analytical intelligence, which was emerging in the first stage, will relatively decrease step by step because the "soft" skills such as intuition and empathy are predicted to gain unexpected importance. In the following, third stage AI replaces mechanical, analytical, and intuitive jobs. AI eroding human dominance in intelligence already and in stage four AI will replace even empathetic jobs, which are nowadays particularly important for many businesses, at this stage all human jobs will decrease while empathetic intelligence will be in high demand. In the fifth and last stage AI totally replaces human jobs or fully integrates with them. There are multiple possibilities for integration:

Dual provision segmentation view when people can choose the preferable worker option. Second, the integration model is when humans and machines work together to achieve a goal. another option is when Machine serves humans and does jobs which people do not want to do, humans can choose the tasks they want to do and improve their quality of life. Machine-enhanced humans are one of the integration possibilities when humans are physically and biologically integrated with machines. and the latest integration method is the Internet of brains, Researchers have recently demonstrated a connection between the human brain to the Internet (Andrews 2017). From there, it is a short leap to humans connecting in a big AI network, like the IoT, only connected to people's brains as well. This scenario mimics AI's connectivity for collective intelligence and can be viewed as the "Internet of brains." Such

connectedness will greatly accelerate learning in the service environment—expanding service capability just as the beehive expands the capability of individual bees.

In the worst-case scenario, machines totally replace humans, this is a modern concern as technology becomes increasingly advanced and dominant.

Figure 2: Stages of AI job replacement
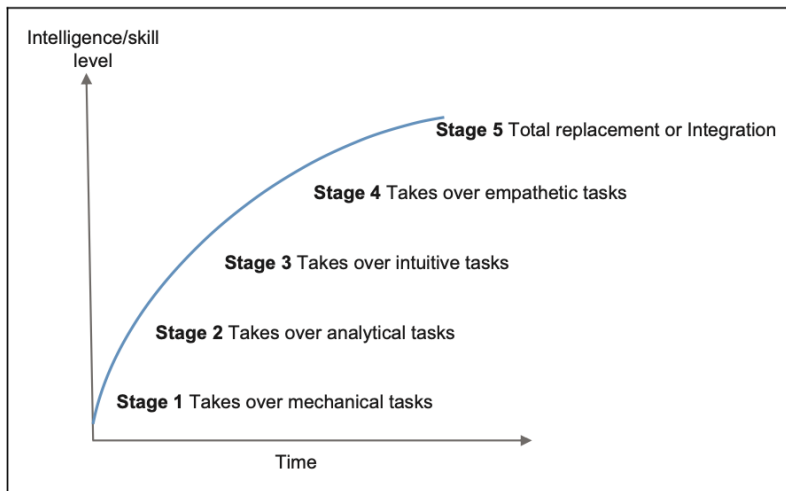
Source: Huang & Rust. (2018)

According to Statista by 2025 worldwide revenue from the AI software market will increase by 126billion USD, which is 2.5 times more than revenue in 2022 (Figure 3). In 2022 AI is widely used in E-commerce, creating personalized shopping experiences, and detecting fraud, fishing or fake reviews, another wide application is in the education system by creating smart content, video lessons, conferences, etc, AI is used in robotics as well, hospitals or factories where they are carrying goods, or cleaning large equipment. Human resources management has an enormous potential to use AI, for creating databases, and blind hiring- using machine learning systems to match candidates to specific parameters, scan information and provide recruiters with insights into the talent pool.

Figure 3:Worldwide revenue from the AI software market
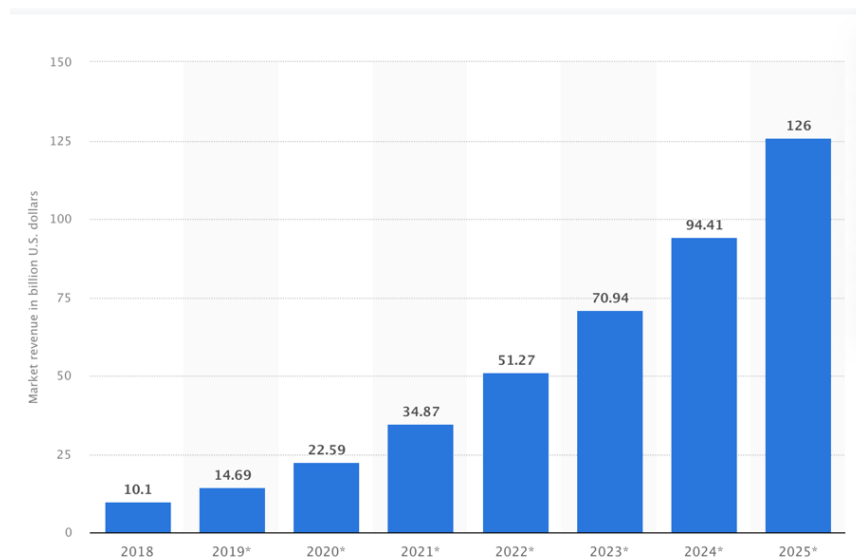
Source: Statista (2022)

MIT Sloan with the collaboration of Boston consulting Group (BCG) researched the companies which facilitate organizational learning with Artificial intelligence (AI). Approximately 3000 managers, executives and scholars were questioned. The majority of participants (57%) reported that they are piloting or deploying AI. 59% of respondents have an AI strategy. 70% of interviewees understand how Artificial Intelligence generates business value. Research stated that more companies recognize the need of improving their AI competencies, despite all the trends only 1 in 10 companies can generate important financial benefits from AI.

Figure 4: Multiple interaction models of AI with Humans
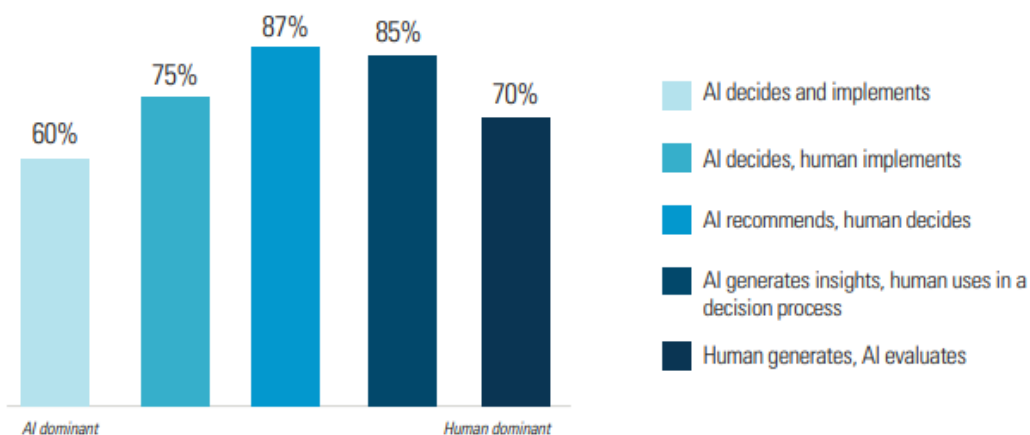
Source: MIT Sloan & BCG (2020)

There are different models of AI and human interactions which is illustrated in figure 4. The percentage on the graph refers to leaders who report success with each mode. The dominant Artificial Intelligence model where AI decides, and implements was reported as less successful by 60% of the leaders. Model, in which AI decides but human implements is popular among 75% of participants. The highest number of respondents (87%) prefer a model where humans decide, artificial intelligence gives only the recommendations and almost the same number of managers (85%) use AI to generate insights that are later used in human decision-making. The fourth model where human generates, and AI evaluates was reported helpful by 70% of the research participants.

1.4 Generations and technology adaption

Technology is developing daily and creates a unique environment but not everyone can understand and keep up with it. Different generations react differently to advances.

Generation, as a term that was researched by many scientists, basically it is defined as "a series of birthdays of a group of people" (Jopling, 2004). The generation classes refer to different historical events which have different impacts on generation experiences (Berkup,2014).

Table 1: Chronological classification of the generations

Generation Name	Chronological Generation Classification
Traditionalists	1900-1945
Baby Boomers	1946-1964
Generation X	1965-1979
Generation Y	1980-1994
Generation Z	1995-…

Source: Berkup (2014).

Table 1 demonstrates generations and its chronological classifications. Traditionalists are the generation called the Silent generation, Matures, Veterans etc. Social, cultural, and economic effects on this generation have been World War I, World War II, the Great Depression, the Attack on Pearl harbour etc.

Baby Boomers were born after WWII consisting of one billion children born soon after the war. It is the largest generation among the generation classes. Generation X are children of baby boomers, and the largest number of women participated in business life. It is the transitional generation between the old traditional generation and the new technology-driven generation. Gen Y is the first technology and global generation of the world called, also Millennials, Generation Next, Generation www, Generation Y is three times bigger than Generation X. Generation Z is the last in a classification called also Children of internet, .com Generation, Digital natives, etc. the distinctive treats of this generation is speed, addiction to technology, individualism, etc. there is a huge gap in the utilization of technology between Gen X and Gen Z. they were born in technology, while Gen X had to adopt it.

Baby boomers (born from 1946 to 1964) were the first people to adopt home computers, but they were sceptical and unwilling to adapt to innovative technologies. on the other hand, Generation X (born from 1965 to 1976) uses more e-mails and phones to communicate and spends more time online, on social media, Internet using their smartphones. Generation Y knows also as Millennials (born 1977-1996) tend to use text messages and social media for communication, this is the first generation for which using technologies, especially smartphones and social media is part of their life. Gen Z, Iren, and centennials (born from1996 and later) is the latest generation which spends most of their time using technologies and is online most of the time.

Brainboxol developed infographics describing all the generations with their technology preferences and usage of different innovations (Table 2).

Table 2: Generations and their technology preferences

Generation	Defining Technological Product	Communication Media
Baby boomers	Television	Telephone
X	Personal Computer	E-mail, Telephone
Millennials	Tablet and smartphone	Text messages, social media
Z, iGen, Centennials	Virtual Reality (VR), Nano computing,3D printing, electric and driverless cars.	Hand-held communication devices such as smartwatches.

Source: BrainBoxol (2017)

The graph shows that the Baby boomers are defined by Television as frequently used technology while using telephones for communication. as generations are changing more smart technologies are introduced into daily use. For example, Generation X uses a personal computer, Millennials use tablets and smartphones, and the latest generations prefer Virtual reality, 3D printing, etc. We can definitely say that communication modes have also changed through the years, it went through major changes and development from telephones switched to e-mails, text messages and social media, to the latest preferable technology- smartwatches.

1.5 Summary of chapter 1

We live in a fast-changing world where technology takes advantage in every field. From the first industrial revolution till today technology is advancing and becoming part of the environment. Innovation is everywhere in daily life, in the business world, in interaction and communication with people, etc. We can see how technology step-by-step is substituting humans and creating an automated smart environment facilitated by AI. Different generations react differently to the advances, but as generation changes tech world becomes more organic and part of everyone's life. future will be more machine-driven, which is the dynamics of development, as professionals, we must keep up with trends and develop ourselves with the world.

Chapter 2 Traditional Recruitment VS Contemporary Recruitment processes

Recruitment and selection (R&S) are developing within the innovations. Since it is the most human-involved field, technology directly affects it. Chapter 2 will discuss human resource functions focusing on R&S, there will be provided development from traditional to contemporary recruitment approaches, including social and e-recruitment, and lastly, job interviews as a main part of the recruitment process will be overviewed, from old-fashioned to new artificial intelligence involved technique.

2.1 Human Resource Management Functions

Human resource management is a function of an organization concerning employees and their management. HRM is argued to be one of the most important roles in the organization. The old understanding of HR was associated with personnel management, but over time role and functions evolved.

Figure 5: Human Resource (HR) Functions
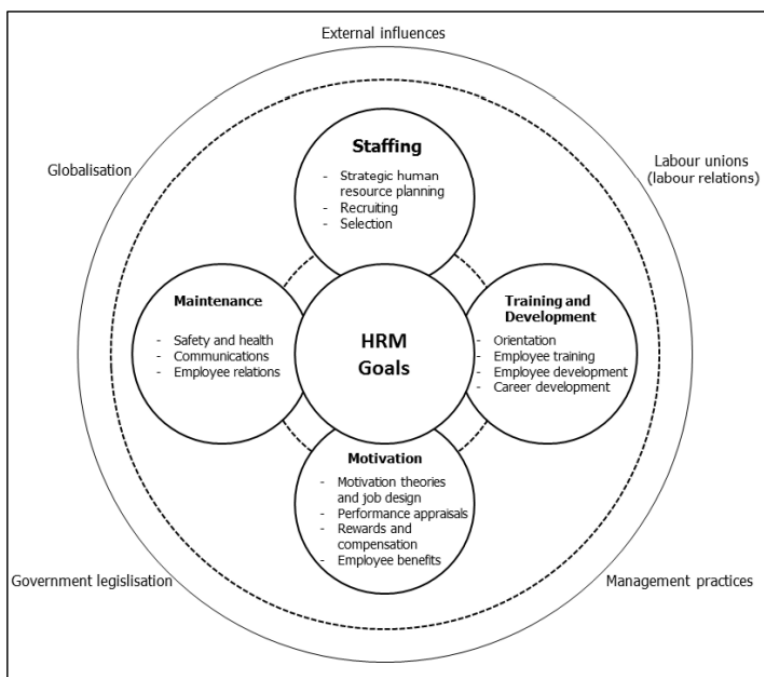
Source: DeCenzo, Robbins & Verhulst (2013).

Figure 5 describes the four main Human Resource functions within the organization. such as staffing which is divided into strategic human resource planning, recruitment, and selection.

The second function consists of training and development which covers orientation, training, employee as well as career development. another HR manager's role is the motivation of the employees which should be managed by facilitating employee satisfaction and motivation trough different theories and job designs, performance appraisals, rewards, compensation, and other non-material benefits. Motivation is interconnected to employee maintenance, which according to the graph is the fourth and the last HR function, which concerns employee safety and health, employee relations and communication between diverse functions of the organization. This model takes into consideration also the external factors that influence day to day HR decision-making process. such as labour unions, management practices, government legislation and globalisation.

During the topic discussion, we will focus on the first function – Staffing, specifically on the Recruitment and Selection (R&S) part.

2.2 History of Recruitment and Selection

The recruitment profession is older than a person might expect. Ancient Egyptians, classic Greeks and Romans employed recruiters to find soldiers for military services. The Foundation of the modern recruitment industry is in conflict. During the second world war, in the west, employment agencies were actively searching for employees to fill the vacant job positions, after soldiers went to war. And later, when they returned recruiters had another goal, to hire veterans in both public and private sectors.

Ancient civilizations used numbers and, later letters to track resources for recruiting quotas of soldiers from different regions. In the twentieth century after the Second World War, recruiting methods changed and started to adopt new tools including advertisements in newspapers, bulletin boards and canvassing in crowded spaces, like train stations. Applications could be made by mail, Rolodexes (a rotating file device) and business cards were used to store contact details. Simultaneously, typewriters were used to track recruitment and employment records on paper in the storehouses.

In the second half of the twentieth century, the wide distribution of telephones made it easier to source and interview candidates, because they had an immediate response. During the 1990s, computers were introduced which made it possible to store information about the candidates in a more compact and convenient digital storage which emerged applicant tracking systems (ATSs). Computers made it easier to upload and promote job openings on their websites, online

job websites, digital advertisements etc. which created an advantage for the early adopters of computer users. Parties started to interact with each other using electronic mail (e-mails), rather than traditional mail, phone calls and face-to-face meetings (Krohn, 2021).

2.3 Traditional recruitment and selection process

Recruitment and selection (R&S) as we already mentioned, is one of the oldest topics in the field of applied psychology and still, it is one of the most important aspects of Human resources and Talent management.

Recruitment strategies differ from each other around the globe, but the main steps are almost unchanged everywhere. These are Attracting, finding, and procuring the candidates. The main idea of the process is to attract candidates and create a talent pool of people with specific skills and knowledge.

The selection itself is to choose the best candidate for the particular job. These two processes are interconnected with each other, without one process there is no other and vice versa.

Recruitment can be the internal function of HR management or outsourced. Outscored recruitment replaces or acts like the internal function but in any case, recruitment should follow specific processes.

Anna Holm in her research (2012) defined a common process of recruitment. Table 3 describes the four main stages that all recruiters go through. These stages are: Identify Applicants, attracting them, processing incoming applicants, and communicating with them. For the first stage, she defined two subtasks, which are: to prepare job descriptions and job specifications and to identify the appropriate pool of applicants. Subtasks for attracting the candidates included selecting recruitment sources and preparing and placing the job announcement. To process incoming applications recruiters should receive, sort, and register applications and make a pre-screening. In the last stage, applicants should be informed about pre-screening results and interviews should be arranged with shortlisted candidates.

Table 3: Recruitment Tasks

Task	Subtask
Identify Applicants	• Prepare a job description and Job specifications • Identify the appropriate pool of applicants
Attract Applicants	• Select recruitment source(s) • Prepare and place job announcement
Process Incoming Applications	• Receive, sort, and register incoming applications • Pre-screen and evaluate the applicants
Communicate with Applicants	• Inform applicants about pre-screening results • Arrange interviews with shortlisted candidates.

Source: Holm (2012).

On the other hand, Thebe and van der Walt (2014) described recruitment steps in a more detailed way, not only in terms of technicality but also considering the strategic aspect of the recruitment process.

The first step in the case is to identify the need for recruitment, which is followed by updating the job description and specification of the work, as the next pace, key performance areas of the job are identified, after which recruitment strategy and procedures are discussed. As soon as a clear idea of who should be recruited is built, recruitment sources are selected, and choosing the appropriate method leads towards the creation of a job advertising strategy and the determination of communication tools. The following step is to ensure a pool of potentially qualified applicants and allow sufficient time for the responses. one of the last steps is to screen the responses and finally, recruiters should evaluate and control the recruitment process (Figure 6).

Figure 6: Common sequential steps in the recruitment process.

- Step 1: Identify the need to recruit/determine whether a vacancy exist
- Step 2: Update the job description, specification and profile
- Step 3: Determine the key performance areas of the job/recruitment planning
- Step 4: Consult the recruitment policy and procedure
- Step 5: Consider the sources of recruitment (searching)
- Step 6: Choose the appropriate recruitment method
- Step 7: Develop the recruitment advertisement/strategy development
- Step 8: Place the advertisement in the most appropriate and suitable communication medium/implement a decision
- Step 9: Ensuring availability of application blanks/ensure pool of potential qualified applications/allow sufficient time for responses
- Step 10: Screen responses/screening
- Stage 11: Recruitment evaluation and control

Source: Thebe & Van der Waldt (2014).

The recruitment is followed by the selection process. the main goal of this step is to choose among the candidates who suit the best for this job. During this phase, all the candidates' information is reviewed.

Figure 7: Common sequential steps in the selection process.

- Step 1: Reception and initial screening interview
- Step 2: Application form
- Step 3: In-depth selection interview
- Step 4: Background and reference checking
- Step 5: Medical examination and physical pre-employment testing
- Step 6: Assessment centres
- Step 7: Make a final hiring decision
- Step 8: Final decision and make a fair job offer

Source: Thebe & Van der Waldt (2014).

Figure 7 is the illustration of the common sequential steps in the selection process, which starts with initial screening interviews, and reviewing the application form, shortlisted candidates have another in-depth selection interview, which is followed by background and reference checks of the successful candidates, if needed they might be asked for medical examination and physical testing, some of the vacancies have also different assessment tests, which are job-

specific and varies from one position to another, after all these steps, the hiring decision is made, and the fair offer is proposed to the potential employee.

2.4 Recruitment Sources

Recruitment sources and tools vary, depending on the company's needs. Choosing the right candidate for the position can be done through internal recruitment or an external one. Recruiting internally refers to promoting talent which is already within the organisation. Internal recruitment is initiated by an employee who wants to change the role (Holm, 2012). There are two ways of job announcement tools within the company: first, via the company intranet or job boards, and second career ladders. Internal recruitment costs less and is faster than external one, which refers to sourcing potential employees outside the company. Traditionally it is built around advertisement: Signs outside the business, word of mouth, newspapers, and employment agencies. According to the individual and organizational psychology paper published by the institute of distance and open learning (IDOL) traditional sources of recruitment include Online search services, employee agencies, placement services of a professional association, job fairs, outplacement agencies, on a college campus, Referrals from current employees etc.

Over time, also recruiting sources have changed, now web-based recruitment has become more popular and useful, simply because it is fast, companies cost-effectively provide large information and applicants can submit online their resumes. Technology development also changed the way how jobs are advertised, because the demand for printed media decreased, and people, spend more time online, as we already discussed generations change and ask for different availability from companies. The digital world has brought a new dimension to recruiting.

2.5 Electronic and Social recruitment

Fast-growing technologies also changed work specifications. Developing companies need more qualified and trained employees. Naturally, recruitment and selection had to adopt modern technologies and develop within the innovations. In the modern world, E-recruitment is widely used in the hiring process. The term stands for electronic recruitment (Holm,2012), also known as online recruitment. Simply, this is the recruiting process with the help of technology (Rathee & Bhuntel, 2017). In Europe, the popularity of online recruitment methods

increased between 2001 and 2004 years, if 40 per cent of organisations were using it, and by 2004 over 70% of companies implemented the contemporary approach to recruitment (Barber, 2006). According to IES Research in 2003 main drivers for companies to incorporate e-recruitment were to improve corporate image, reduce cost, reduce administrative work, and adapt better tools for the recruitment team.

In the beginning, companies were using their website, e-mails, or job-posting websites as the main platform to post and promote vacancies, but later, a number of professional networking websites were created, the platforms which were connecting employers and potential employees, such as LinkedIn, Montster.com, Times jobs and many more. Candidates can source the job, apply for it, get an interview and faster feedback at any stage. Platforms also give the possibility to know in advance who works for the particular company, and who are the recruiting team members. From the recruiters' side, they can screen applied candidates, or directly approach desired ones through headhunting, hiring team can evaluate candidates before receiving the actual CV, based on their platform profile information. Thanks to the online world, more information is available and has become transparent for both parties. Even Job fairs became available online, where the company presents material about their organization and information about job vacancies in the virtual job event. Different companies offer virtual career fair platforms to other organisations to interact better with potential employees. Some of the best-rated platforms are Brazen virtual career fair, CareerEco, Zoom and many others.

The popularity of online networking increased significantly during the past years which lead to the creation of social networking sites (SNSs) initially, these websites were made for socialising with friends and families but later became an important professional tool. In the beginning, it was used as a marketing tool for job seekers who were advertising themselves to employers and vice versa. Later, it also has become the screening mechanism (Broughton et al., 2013). Several examples of social networking sites and tools are blogs, containing discussion or informational posts published on the websites, another one is Facebook with users personal profiles with the possibility to add other users as friends, to exchange messages, information, pictures, and videos. Another example is Google the biggest search engine provider, which created one of the biggest social networking sites Google+ we already mentioned that LinkedIn is one of the business-related professional social platforms where

people share news about businesses, hiring, and achievements. An increased number of SSNs created a new term known as social recruitment.

Robert Walters whitepaper made research about social media trends in recruitment. 900 jobseekers and 280 hiring managers were questioned. According to the answers reported by professionals, the three most used social media sites by the companies were LinkedIn, Facebook, and Twitter (Figure 8).

Figure 8: Social Media sites used by the companies

Employers	
LinkedIn	50.8%
Facebook	11.0%
Twitter	14.4%
MySpace	0.6%
Instagram	0.0%
None of the above	49.2%
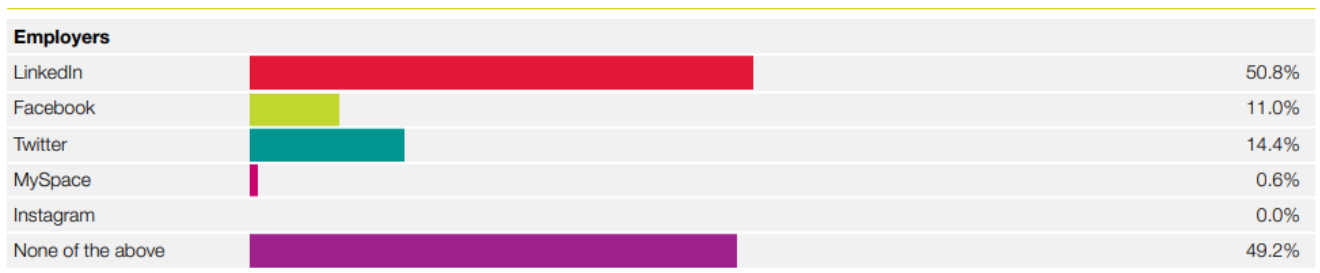
Source: Robert Walters Whitepaper (2013).

According to the figure 9, most (35%) of the professionals reported that they do candidate background checks on social network sites during the application process. Only 25% of recruiters use SSNs background checks during the interview stage, fewer professionals use them in the later stages, such as reference checks and offers. On the other hand, 33.9% of recruiters do not even use SSNs to check the candidate.

Figure 9: Candidate check during different recruitment stages

Employers	
Application	35.0%
Interview	25.0%
Reference Checks	3.6%
Offer	2.5%
Don't use professional social networking sites for this purpose	33.9%
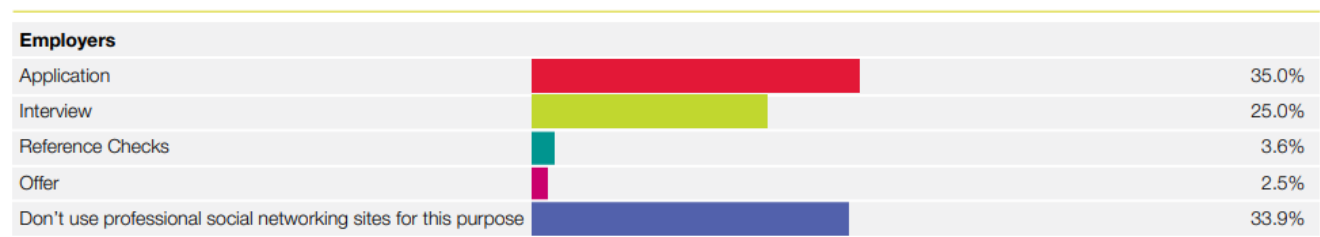
Source: Robert Walters Whitepaper (2013).

From the research we can see that job seekers use more social media during the job searching stages than companies, for example, it is a common trend to research companies on social media platforms before applying for a job. 75.9% of job seekers search for information about

the company on social media, and 66.9% try to understand and get insights into the company's culture. 49,9% of interviewees want to know how a business wants to be perceived, while 54.1% use corporate social media profiles to check on career opportunities, and half of the respondents (50.3%) find it interesting to visit and check the existing employee's social media profiles (Figure 10).

Figure 10: Reasons for checking corporate s social media accounts

Job seekers

Information on the organisation	75.9%
Insight into company culture	66.9%
Insight into how the business wants itself to be perceived	49.9%
Career opportunities	54.1%
Profiles of existing employees	50.3%

Source: Robert Walters Whitepaper (2013).

Job seekers use different social media platforms to research the company and interviewer before attending the interview (Figure 11) The vast majority (79,6%) of respondents named LinkedIn as a research source, only 15.8% chose Facebook, 10.8% prefers Twitter, and almost 20% of candidates use other social media instead of the listed ones.

Figure 11: Social Media platforms used by job seekers to research the interviewer

Job seekers

LinkedIn	79.6%
Facebook	15.8%
Twitter	10.8%
None of the above	19.7%
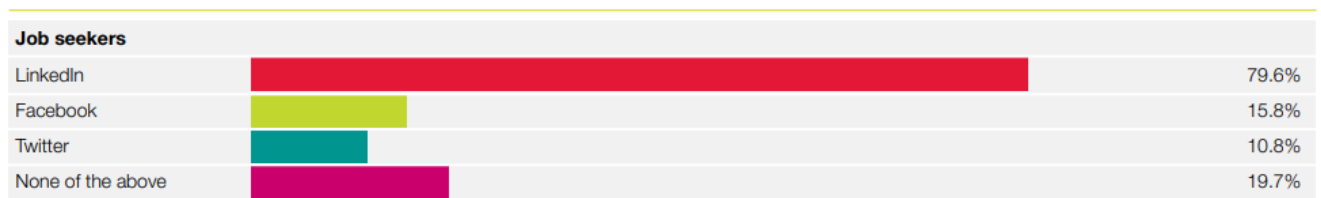
Source: Robert Walters Whitepaper (2013).

The research found that social media is widely perceived as an acceptable recruitment channel, professionals use them to screen and assess job seekers and candidates chose it as a method of market research.

No matter which type of recruitment company chooses all of them traditional, electronic, and social media recruitment are designed to attract the best candidate possible. To move to the next step, which is the selection process.

2.6 Job Interviews and their types

The interview is the most widely used employee selection technique. Even employers prefer it, as it provides the chance to meet the applicant before offering the job. The interview is a two-way process, which allows the company to evaluate the suitability of the applicant for the job, and the applicant can check whether the company and the job are right for him or her. Research has shown that applicants have a positive attitude towards interviews. (Posthuma et al.,2002)

There are several types of job interviews, such as Unstructured, structured, situational, puzzle, and online ones (Posthuma, et al.,2002).

An unstructured interview has no particular format, and the questions are left to the interviewer. but it has its limitations such as lack of consistency, The interviewer may be interested in different information about the applicants. The recommendation might be based on bias and prejudice.

In the structured interview, the set of questions to be asked is decided before and the same questions are asked to all the applicants. this type of interview is rarely used because it is viewed as expensive and time-consuming and takes away interviewers' freedom.

The situational interview is designed to measure specific job behaviours that are required for successful job performance. There are several steps in preparing a situational interview: first, a list of critical incidents that differentiate successful employees from non-successful employees should be defined, that should be converted into actual questions and at the end, the scoring system should be decided. Once structured it is easy to use and interpret, it is clear and related to the job behaviours, and it is often used to select skilled and semi-skilled employees.

On the other hand, in a puzzle interview, applicants are asked to solve puzzles. It helps to measure critical thinking, creativity, flexibility of thought and the ability to reason under pressure. Companies like law firms, banks, insurance companies, airlines, advertising agencies and the military use puzzle interviews. There is little research to validate this form of an interview.

The online interview Computer software is designed for an online interview. The same multiple-choice questions are asked in the same sequence to all the applicants for a position. The advantage of an online interview is that questions on sensitive issues are easy to ask which

otherwise creates hesitation in a face-to-face interview. Most applicants find it comfortable, and they respond to it honestly and it saves time. Personal interviews are conducted only after the applicant passes the online interview. Target, Macy's, Home Depot, and other large retail chains routinely use online interviews.

2.7 Recruiter Characteristics and Interviewer's Judgment

Research showed that interviews are influenced by the subjective impressions of applicants. Candidates use four impression techniques to be memorable for the interviewer. The first technique is using integration by developing links with interviewers by praising them. One of the tactics is self-promotion when applicants praise themselves, some of the candidates try self-monitoring to watch, control, and think about their public presence and the last one is lying, 90% of seniors reported that they faked answers during the job interview.

Psychologists have found that college students' choice of their first job is influenced by the characteristics of the recruiter. These characteristics are smiling, empathy, warmth, eye contact etc. Applicants found the successful recruiters as more personable, friendly, and helpful.

The paper Individual and organizational psychology (2011) stated that fewer than half-corporate recruiters receive training in their interview skills. The recruiters, who are not trained, tend to make the following errors during the interview: they form a positive or negative impression about the applicant's qualifications in the first few minutes. Another mistake is that they spend more time with applicants, they believe, are qualified and less time with applicants they reject, based on superficial judgment. Interviewers Do not follow the guideline for an interview and fail to discuss principal issues with the applicant to find good people for their company, a recruiter may present an idealized picture of their organization and the job.

One of the important aspects that also influence its outcomes is the interviewer's judgment which can be influenced by several factors. like prior information such as recruiter evaluations, application blanks, online screening results, or the results of the psychological test can make the interviewer develop a positive or negative attitude toward the applicants. Another factor is called The Contrast Effect: A person's place in the interview schedule influences their chances of selection. The interviewer's evaluation of the applicant may depend on their slandered comparison. After interviewing three poor candidates, the interviewer is likely to evaluate the next candidate more positively than they are. Interviewers' Prejudices such as interviewers' likings and disliking can influence their judgment. For example, a man who thinks women are

incapable of some jobs may evaluate female applicants negatively for the job. Interviewers are likely to select applicants who display some traits and refuse to consider other abilities. It is called the halo effect. Also, applicants who share the same interest as the interviewer are more likely to get selected.

2.8 Artificial intelligence and recruiting

As we already mentioned, AI is taking over different industries. One industry where AI is actively involved in recruitment. It is the most convenient way to create value for recruiters by getting a shortlist of candidates at the quiet time possible. AI can also speed up interview booking and coordination among recruiters and candidates.

For now, one of the frequently used AI forms in recruiting and selection is Chatbot to personalize and create the best experience for people who are seeking to find new jobs. the software enables the candidate to receive responses on their application faster than in a traditional way.

AI is also becoming to be involved in job interviews, for example, online interviews were advanced, unlike the first versions now modern tools allow recruiters and candidates to participate in a remote online interview, or candidates can pre-record the answers on pre-defined questions, and another version of the online interview is to blend remote and recorded ones.

One of the good AI-involved recruitment illustrations is the platform HireVue which represents a talent experience platform to help organizations automatization of workflow and make the hiring process easier. The platform offers text recruiting, assessments, and video interviewing software, for example, Philip Morris international (PMI) adapted HireVue interview style. They developed pre-defined interview questions which are sequentially shown to the candidate, for answer preparation candidate has 30 seconds, and to answer 2 minutes. Answers are recorded instantly; Total questions might vary from 2 to 5. The HireVue platform is used also by Amazon, British petroleum (BP), IBM Watson, Hilton worldwide etc. This platform is also used by many companies to hire not only professionals but also Graduates, because of its fast and convenient technology, HireVue offers full mobile hiring support, and recruiters can interact with graduates through text messages and live videos. According to the website data, over thirty million interviews have been completed trough this platform, and a million conversations were held in chat. And 90% of candidates found the experience satisfying.

Figure 12: Types of job interviews

Type of interview:
Face-to-face
Conducted in person between parties who are copresent and in the same location.

Video
Conducted on a screen between parties who are copresent but in different locations. Technology is used, but it does not involve AI decision-making tools.

Automated video interview (AVI)
Conducted through screens. Parties are neither copresent nor in the same location. The technology facilitates the recording but is not involved in the hiring decision.

AVI, AI-assisted
Conducted through screens. Parties are neither copresent nor in the same location. Technology can be used to make recommendations based on its interpretation of various features (e.g., facial expressions, gestures, tone of voice, keywords, etc.). These recommendations are often produced as a report for humans to review.

AVI, AI-led
Conducted through screens and recorded. Parties are neither copresent nor in the same location. Technologies are used to make the hiring decision without human revision (i.e., to pass or deny a candidate entry to the next phase of the recruitment process).

Source: Jaser & Petrakaki (2022).

Online interviews have evolved and have become more functional than just multiple-choice question-and-answer tools, they developed and became increasingly popular among recruiters.

The number of companies which use automated interviews is increasing, particularly for hiring young people. Using AI in HR processes is a new and evolving trend, especially after Covid 19 crisis. Gartner HR survey resulted that 86% of organisations incorporating new virtual technology to interview the candidates. Virtual recruiting may become the new standard for recruiting and selection processes. But unfortunately, there is not much research for us to know exactly how Automated Video Interviews (AVIs) or any Artificial intelligence-involved interviews effects different job candidates and how they feel after this experience.

First, we have to discuss what type of job interviews candidates might face and where exactly AI can be involved. According to the Figure 12, first type of interview the job seeker might attend is the face-to-face, this is the traditional type of interview, conducted in person between parties in the same location, the second option is the video interview, where participants can interact online, from various locations, technology is involved but decision making is up to the human. The third version is Automated Video Interviews, which might take place anytime the candidate is ready to do the interview, which is recorded because parties are not present at the same time, but artificial intelligence is not involved in the decision-making step, this is the type of interview, which is used by different companies, as we already discussed HireVue, is the intermediate AI-driven platform between candidate and company. A more advanced AI-involved interview option is AVI but AI-assisted, technology is used not only to record the video but to interpret the candidates and create the report based on, the facial expressions, gestures, tone, keywords etc. The report is created by AI for humans to review. And the last type of AVI, is AI-led. In this case, technology is deciding without human interaction, it is up to the machine to accept or deny the candidates, move them to the next stages etc.

Jaser et al. (2022) made a research where they examined how job seekers react to AVIs, and what were their feelings and recommendations after the interviews. They researched twenty young candidates, from different backgrounds, races and ethnicity, part of them were new graduates. The research found that feelings of humanity were diminished because the candidates were confused with AVI interviews, they did not know how AI would assess them so, they used fake smiles, had unnatural actions, held a fixed glaze etc. They felt they had to behave like a robot but some of the candidates reported that it was more effective and efficient for screening rather than human interaction. In the end, candidates felt that if they were not chosen for the job, it was because of their performance, not because AI has misinterpreted or was biased while making a decision., another finding was that AVIs were emotionally and cognitively exhausting, for some candidates it was really hard to talk to the robot because they understood that company might never see the video, and the found it demoralizing, but on the other hand, one of the candidates felt freer to talk to the robots, because he felt no pressure and process less time consuming, but it gave the feeling that since the company uses the video interviews, that means that they have a lot of candidates, so interviews are not personal anymore, that is why the candidate might prefer to work for a smaller company.

Naturally, people are confused about AVI, since it is a recent technology and there are few practices in the world.

Organizations should keep in mind, to provide the interview candidates with the necessary information to know how AVIs work, what kind of AI will be involved, and how the decision will be made. Candidates should feel safe, and their data should be protected. The most important part is to provide candidates with detailed feedback about their performance and interaction with artificial intelligence.

Statista Research department released data about the benefits of AI-involved recruitment from the professional's view (Figure 13). An E-mail survey was made in 2017 and almost 9000 talent acquisition professionals and hiring managers were involved. 67% of professionals agreed that AI saves time during the recruitment process, 43% stated that Artificial intelligence removes human bias, 31% believed that it delivers the best candidate matches. Saving money was one of the listed benefits for the least number of professionals (30%).

Figure 13: Benefits of using AI-involved recruitment.
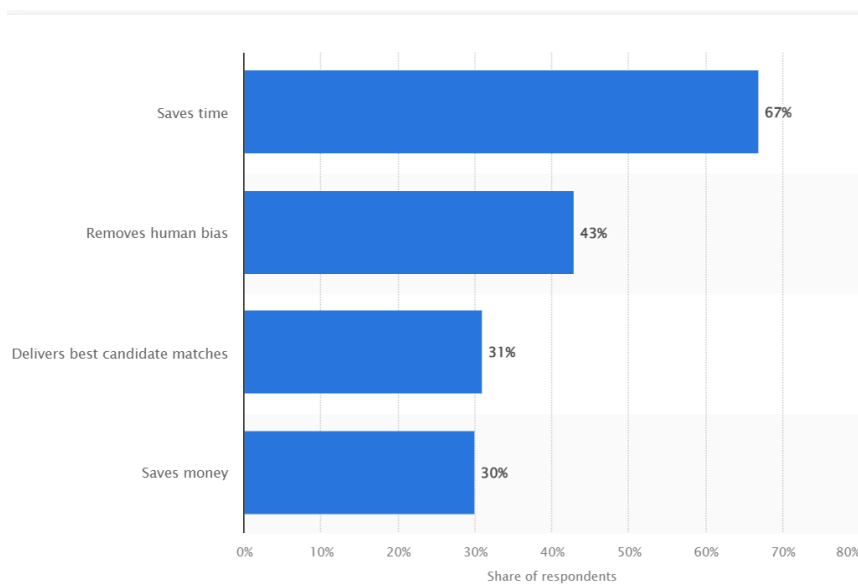
Source: Statista (2022)

2.9 Summary of Chapter 2

The recruitment and selection process exists as long as civilization exists. Over time R&S purpose and application tools are changing. Throughout history, it is evident how R&S is

transforming and adapting to the fast growing-environment. Technology development improved, upgraded, and also advanced the way of doing business, and the economic environment has changed, which created new demand for tech adaption for different business functions. Of course, it impacts most, human-involved jobs, and recruitment and selection are no exceptions. Generations witness fast progress from the ancient recruitment technics, where people were physically going around to recruit people, to the modern approaches where humans might not be involved at all.

During the chapter we discussed what stages of improvement R&S went through, how we step-by-step moved from traditional approaches to e-recruitment, followed by social media recruitment and the last modern trend Artificial intelligence involved recruitment. These trends are adopted by many businesses because they found it efficient and beneficial, but job seekers from different generations use and diversely accept the technology.

AI intelligence is a modern innovation, there is not much research about its effect on recruitment and selection. We have several successful application stories, but still, it is in the growth stage.

Chapter 3 Theoretical Background

Technology and people interaction was actively studied over for past thirty years, during this time many theories were created, reviewed, redesigned and discusses. In this chapter, we will discuss the leading theories at both individual and organizational levels. Starting from technology acceptance models to technology diffusion theories. The chapter also includes the psychological description of people and innovation acceptance according to it and the last subsection overviews the innovation mix, which can be adopted by organizations for smoother tech transition.

3.1 Technology Adoption Models

Organisations need innovative HR practice adoption for being more competitive which leads to shifting HR administrative roles to more employee-oriented practices which help to redefine and reshape employee experiences through advanced functionalities of Artificial intelligence (Matsa & Gullamajji, (2019), cited in Kaur et al.,2021).

Several theoretical frameworks influence technology adoption in organizations. Namely, the Theory of Reasoned Action (TRA) designed by Fishbein & Ajzen (1975), the Technology Acceptance Model (TAM) designed by Davis (1989), the Technology-Organizational-Environmental Model (TOE) designed by Tornatzky & Fleischer (1990), Theory of Planned Behavior (TPB) designed by Ajzen (1991), Innovation Diffusion Theory (IDT) designed by Rogers (1995) while Venkatesh et al. (2003) proposed the Unified Theory of Acceptance and use of Technology (UTAUT).

3.1.1 Technology Acceptance (TAM) and Technology Organizational Environmental (TOE) models

Technology Acceptance Model (TAM) framework targets the forecast acceptance of technology by a user and describes individual behaviour. According to the TAM model (Figure 14), two factors influence the user's decision on technology adoption. Which are "Perceived usefulness" and "Perceived ease of use" (Davis,1989, Cited in Kaur, et al., 2021). TAM is more appropriate to describe individual use of technology, which can be influenced by friends and family.

Figure 14: Technology Acceptance Model (TAM)
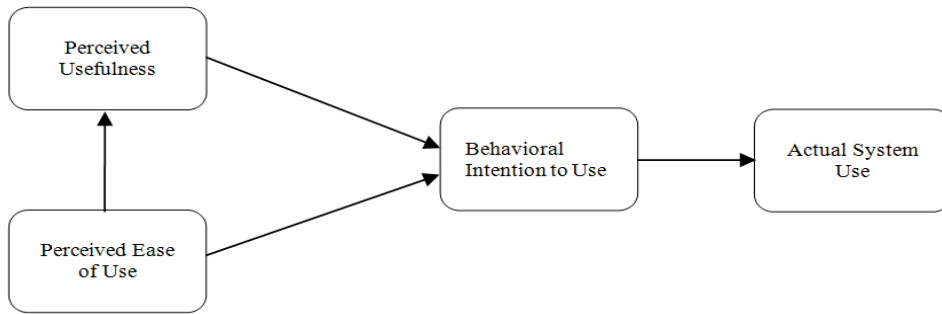
Source: Naeni & BalaKrishnam (2012)

TAM is considered as most influential and commonly used framework to describe Individuals' acceptance of information technology. As we already mentioned the perceived usefulness and perceived ease of use define the behavioural intention to use, which is later converted into actual system use. A list of some factors influencing PU and PEOU on the example of iPad is illustrated in the table below (Table 4).

Table 4: PU and PEOU for iPad

Perceived Usefulness (PU)	Perceived Ease of Use (PEOU)
Using the iPad in my work helps me to accomplish tasks more quickly.	Learning to operate the iPad has been easy for me.
Using the iPad improves my work performance.	I find it easy to get the iPad to do what I want it to do.
Using the iPad increases my work productivity.	My interaction with the iPad is clear and understandable.
Using the iPad enhances my effectiveness at work.	I find the iPad to be flexible to interact with.
Using the iPad makes it easier to do my work.	It is easy for me to become skilful at using the iPad.
I find the iPad useful in my work.	I find the iPad easy to use.

Source: Johnson & Howard (2019)

While TAM model describes technology from the adopters' perspective TOE model studies the decision making process according to the main influential factors, which are environmental influences, guided by industry characteristics and market structure, government regulations and technology support infrastructure, a second influential factor is the innovation adopter organization itself, considering the formal and informal linking structure, size of the firm, slack and communication processes and the last component of TOE model is Technological factors such as availability and innovation characteristics. (Figure 15)

Figure 15: TOE model
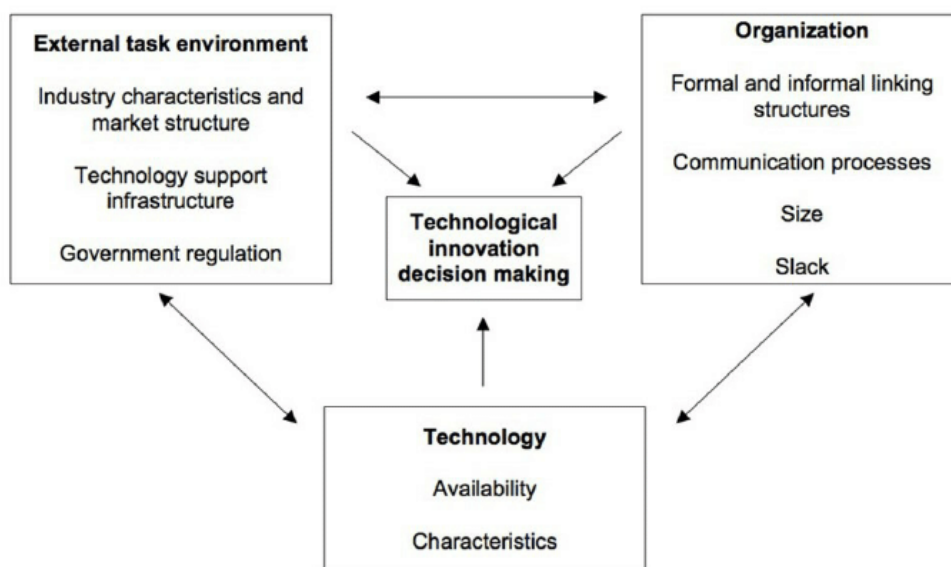
Source: Tornatzky & Fleischer (1990).

Since TAM model is more theoretical practice researchers (Kaur et al.,2021) integrated TAM with Technology-Organizational- Environmental Model (TOE), because it has different technology adoption variables incorporated. By combining these two models, they analysed technology adoption on both individual and organizational levels.

Technology adoption influencing factors have been divided into five key categories which are: Technological, organizational, environmental and HR professionals' input on "perceived usefulness" or "perceived ease of use." According to the paper during the adoption of TOE and TAM frameworks, we have to take into consideration technological factors including relative advantage, meaning how advanced modern technology is compared to the old one, the second component is compatibility - the perceived impression that a technological transformation is influenced by the potential adopter's previous experiences, the value system,

and requirements. One should not also forget the complexity of technology plays an important role, how hard it will be to adopt and use the innovation and the last and one of the key factors is Security/Privacy meaning the safety of data sharing, exchanging information trusting the machine for doing the work.

Organisational factors consider HR readiness and top management support meaning if HR professionals are ready for the possible changes and how prepared they see the organisation for the transformation with the top management support, which depends on how top managers see technological development in the value creation. One of the important factors which influence technological innovation depends on external environmental factors, such as Support of technology vendors, support in all the stages from implementation to training and development of technology and, of course, competition - pressure from competitors pushes organisations to adopt innovative technology and innovate in the HR field.

3.1.2 The Unified Theory of Acceptance and Usage of Technology (UTAUT)

On the other hand, The Unified Theory of Acceptance and Usage of Technology (UTAUT) model is the new approach to technology acceptance. The behavioural intention of the user is determined by three elements which are Performance expectancy, effort expectancy and social influence, behavioural intention contributes to Use behaviour with the Facilitating Conditions. (Momani,2020). UTAUT model (Figure 16), strongly believes that other moderating factors like age, gender, experience, and voluntariness of use might directly influence technological acceptance and use (Barnett et all., 2015, cited in Bano, et al., (2019)).

Performance expectancy which is the capability of technology to enhance performance and provide benefits for users influences behavioural intention, and is moderated by gender and age, effort expectancy which defines users' expectations of ease of use of technology effects behavioural intention as well and is moderated with gender, age, and experience. While social influence signifies the influence of others on the user is moderated by all the factors like gender, age, experience, and voluntariness of use. Facilitating conditions, the expected level of organizational and technical infrastructure does not have an impact on behavioural intention to perform plans and decisions regarding use of technology, it only influences the behaviour of usage (Venkatesh et al. (2003), cited in Momani,2020).

Figure 16: UTAUT Model
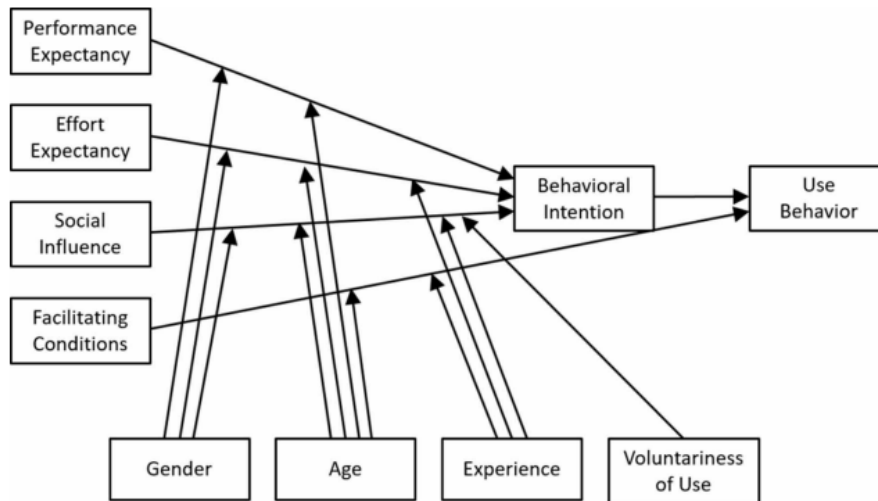
Source: Venkatesh et al. (2003).

3.1.3 Diffusion of Innovation (DOI) Theory

Adopting of innovations has been studied for over 30 years, one of the most popular adoption models is described by Rogers.

Rogers's diffusion of innovation theory studies the four elements as influencing factors in the adoption latest ideas trough diverse cultures. These elements are Innovation, Communication channels, Time, and social systems (Rogers, 2003).

For Rogers' innovation is the idea or practice perceived as new by individuals. Innovation is followed by uncertainty, to reduce it individuals should be informed about its advantages and disadvantages (Sahin,2006). The second element of the diffusion of innovations process is the communication channels, according to Rogers, communication is a process designed by participants to create, transfer, and share information with each other. He stated that diffusion is a specific type of communication and included different elements, like innovation, adaptors, and communication channels, and then he divided communication channels into two broad categories which are: Mass media and interpersonal communications. Mass media includes TV, radio, and newspaper while interpersonal channels consist of the communication between two or more individuals. Time was named as the third element of the innovation diffusion

Rogers (2003), stated that time is ignored in most behavioural research and argued that including the time dimension in diffusion research is one of the main strengths of the theory. And the last aspect of Innovation diffusion is the social system. The author defined the social system as "a set of interrelated units engaged in joint problem solving to accomplish a common goal" (p. 23) (Sahin, 2006). For Rogers, innovation takes place in the social system, which was influenced by social structure, which affects individuals' innovativeness.

3.1.3.1 Innovation decision-making process.

Rogers (2003) described the innovation-decision-making process in five stages, which are knowledge, persuasion, decision, implementation, and confirmation (Figure 17).

Prior conditions which should be taken into the consideration are the previous practice of individuals, the existence of felt need or problem, the degree of innovativeness of individuals, and norms of the social systems.

In the first, knowledge stage, the individual learns about the existing innovation and seeks information. "What?" "How?" and "Why?" are critical questions of this stage. During this stage, the individual tries to understand, what the innovation is and how it works. Rogers stated that there are three types of knowledge: First, awareness-knowledge, second, how-to-knowledge and third, principles- knowledge.

Awareness-knowledge refers to the knowledge of the Innovation's existence, which might motivate individuals to learn more about the innovation and adopt it. How-to-Knowledge represents the knowledge about how to use the innovation and the last, principles-knowledge, contains functioning principles about how and why the innovation works. At this stage, the characteristics of the decision-maker play a significant role, characteristics can be socio-economic, personality treats and communication behaviour of the individual.

The second stage is the persuasion phase when the individual has a negative or positive attitude towards the innovation. An individual creates the idea after knowing the innovation, so that is why the persuasion stage follows the knowledge stage. The perceived characteristics of the innovation can be its relative advantage over an existing solution, also should be considered how compatible is the innovation with the individual's needs, values, and past experiences. The crucial factor is the complexity of understanding and using the innovation, and how fast individuals can become familiar with modernization. Trialability is one of the perceived

characteristics of the innovation, adopters appreciate the opportunity of the trial before fully accepting the innovation, during the trial stage individuals might modify the invention according to their needs. The last characteristic is observability, meaning the visibility of results to others, role-modelling or peer observation is an important motivational factor for adopters.

In the third, Decision stage individual chooses to adopt or reject the innovation. If innovation offers trials, individuals would like to use it in their particular situation and decide later whether adopt it or not. On the other hand, rejection is possible at every stage. According to Rogers (2003), there are two types of rejection: Active rejection and Passive rejection. In active rejection, an individual learns and considers adopting the innovation but, in the end, decides not to go with it. Active rejection consists also the discontinuance when an individual decides to reject the innovation shortly after adopting it. In passive rejection individual simply does not think about adopting the innovation at all.

The following step is the implementation stage when innovation is used in practice. Uncertainty of the outcomes of innovation might be the problem at this step, which might cause the reinvention. At this point, innovation might be changed and modified by a user. Rogers stated that as much as reinvention occurs, the faster the other users adopt the innovation.

And the last stage is the Confirmation one, where an individual looks for support about his or her decision. Two types of discontinuance happen during this stage. First, when innovation is rejected by individuals to adopt another innovation, a better replacement of the offered product, is called replacement discontinuance, and the second one is disenchantment discontinuance, which occurs when an individual abandons the innovation because of the not satisfying performance.

Figure 17: Stages of Innovation-decision making process
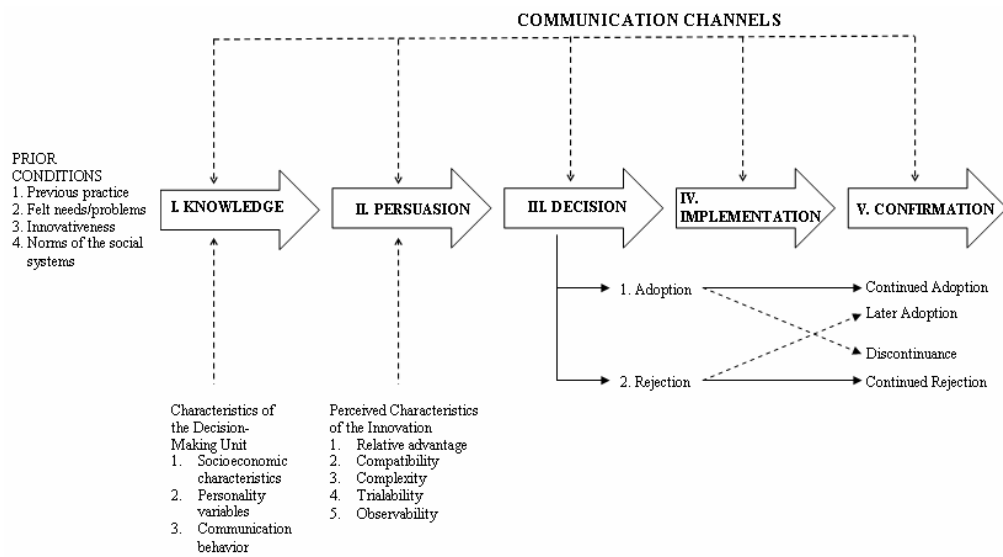
Source: Rogers. (2003)

3.1.3.2 Technology Adopter Categories

Rogers (2003) defined the categories of adopters based on innovativeness. These are Innovators, Early adopters, Early majority, Late majority, and Laggards. This classification does not include incomplete adoption or non-adoption (Figure 18).

Figure 18: Classification of Innovation adopters

Source: Rogers (2003)

Innovators are the first 2.5% of individuals in a system who want to experience innovative ideas. They should be prepared that innovation might be unsuccessful, and they might be criticized by other social system members for their adventurous traits.

Early Adopters are more limited by the boundaries of social systems (Rogers,2003) they are more likely to hold the leadership role and other society members might come to them for advice or information about the innovation. As role models, their attitude towards innovation is especially important. Early adapters are the next 13.5% of individuals in the system.

Early Majority adopters (34%) does not hold leadership role like early adopters, but they have good interaction with other individuals which is particularly important because communication is the key to the innovation-diffusion process.

The late Majority includes one-third of all members, they wait until the majority of their peers adopt the innovation, and they are sceptical about the innovation outcomes. Peer pressure or economic necessity accelerates their innovation adoption.

And the last category- Laggards they have the traditional view they are more sceptical of innovation and change agents than the late majority. It is the most localized group they have limited interpersonal networks. Because of this and the lack of awareness-knowledge, they prefer to wait and be sure that innovation works. 16% of the members represent this category.

3.2 Personality and Technology

Personality defines the actions, behaviours, and characteristics of a person. People's reaction to certain situations creates their subjective experiences (Bano et al.,2019).

In general, personality can be described in different ways such as extraversion, optimism, assertiveness, openness, and emotional stability. There are also rare traits of characters, like conscientiousness and though-mindedness.

Researchers who were interested in incorporating personality into the Unified Theory of Acceptance and Use of Technology (UTAUT) had to consider the number of personalities but within the times, personality was defined with five superordinated constructs called big five personality traits (Digman 1990, cited in Bano, et al.,2019).

According to the Five personality traits or five-factor model (FFM) personalities are: Neuroticism, known as emotional instability, which can be expressed through stress, anxiety, depression, impulsiveness, and anger etc. second type of personality is agreeableness which consists of altruism, modesty, straightforwardness. The Third trait is the openness to experience people demonstrating abilities such as innovativeness, ideas, and values. Personality also can be defined as conscientiousness, individuals with the need of achieving, self-discipline, and order. The last, fifth trait is extraversion, which is described as active, open, and positive emotions.

For example, according to Bano, Ubaid, & Sabha (2019), Rosen and Kluemper 2008 studied the impact of the big five personality traits and acceptance of the social networking website Facebook by analysing two factors of the Technology Acceptance Model (TAM) which are perceived usefulness and perceived ease of use. Findings showed that extroversion positively influences both factors while conscientiousness positively influences only perceived ease of use. Openness and agreeableness did not remarkably influence the perceived usefulness of Facebook.

3.2.1 The big five personality traits

Neuroticism is the tendency of a person to face negative emotions such as guilt, fear, angry, anxiety, and sadness. The biggest problem of this kind of person is stress management. Low neurotic people can cope with stressful situations without much emotion for this kind of people is stressful and threatening to adopt modern technology.

Extraversion is a personality trait when a person is more sociable, open-minded, fun-loving, opportunists etc. Extraverts demonstrate good people skills, interact with society, are energetic and like challenges. Extraverts can accept and adapt to recent technology because of their challenge and change traits.

People's agreeableness traits are confidence, easy-going, and helpfulness. They have socially stable personalities. This kind of person trusts the organization's decision to use innovative technology.

People with openness to experience are curious, risky, creative, and original, they are open to new experiences and exploration. People with this trait seek new opportunities to express their creativity.

And the last trait, conscientiousness describes a person who is hardworking, dependable, and punctual, these individuals have high GPAs and greater job security. These types of people are most likely to accept and use better technologies.

3.3 Innovation Mix

The innovation mix is a contemporary marketing approach concerning the marketing strategies for new, innovation-driven markets. There are different marketing fundamentals to create attention, interest, desire, and action among individuals. But nowadays only AIDA and Traditional 4P (Product, price, place, and placement) models are not enough to achieve a desirable goal.

Just like the traditional 4Ps, there are also Innovation 4Ps (Anchila & Motwani, 2012). Innovation mix components are Product, Process, Position and Paradigm (Figure 19)

Figure 19: 4Ps of innovation
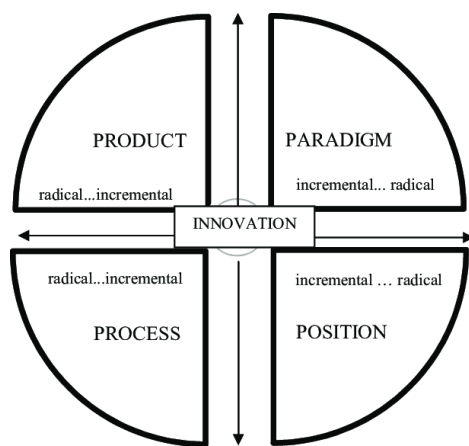
Source: Bessant & Tidd (2013)

Product defines the ways of adding innovation feature to the existing product. Process innovation is anything organization can do to implement innovative ideas, concerning supplying, accounting, recruiting etc. meaning to innovate new processes to add or replace the existing ones. The position is the third pillar of the innovation mix, considering the perception of customers about the organization. The Paradigm which is the last component of the mix is the change in the way something is done in an organization. The changes can be the radical or incremental for every P.

Companies can use all the P at the same time, or just some of them. Improving processes result in improving products, which itself improves the organization's position in the market.

3.4 Summary of Chapter 3

Organizations actively started to adopt technology-involved HR management, especially recruitment and selection function has been integrated with innovations, but there are several aspects which should be considered while offering the candidates AI involved hiring process. This chapter discusses several theories on how individuals adopt modern technologies and what they expected from them. Many researchers studied technology adoption on various levels, perceptions of users and their integration with innovation according to their personality traits.

While introducing new ways of doing things especially less human-involved approaches, an organization should be careful and use different marketing strategies to increase awareness and create the need, to help the candidates adopt and be more satisfied with the experience using an innovation mix for distinct stages of technology innovation.

Chapter 4 Research Methodology

This chapter is dedicated to discussing the researcher's approach to the thesis and what kind of strategies were used to reach desirable research outcomes. The chapter provides information about the conceptual framework, data collection analysis and tools used in topic research.

4.1 Conceptual Framework

According to the literature discussed in Chapters 2 and 3, Recruitment and selection is a complex process, which differs from company to company. Every hiring team have different approaches which develop over time. Based on the literature review conceptual framework was created, which helped to identify the research gap and was used as a background for the empirical research (Figure 20)

Figure 20: Conceptual Framework
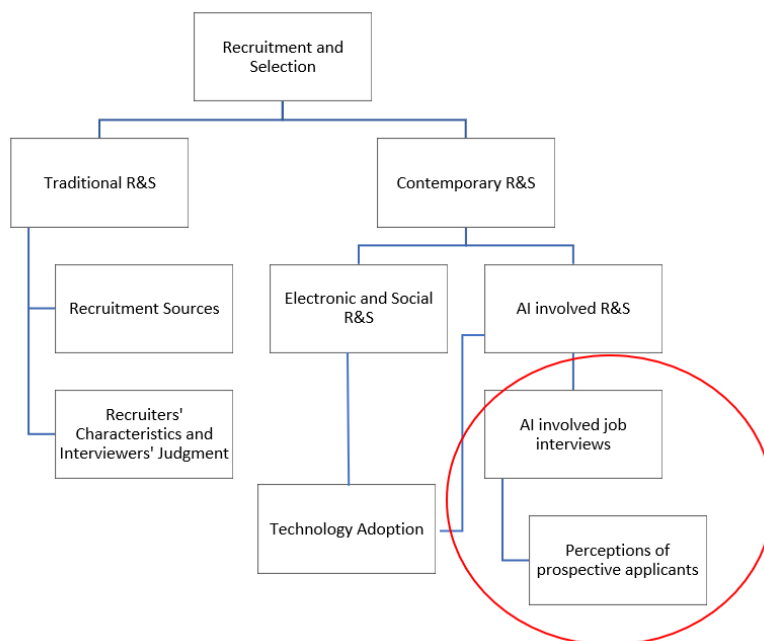
Source: Own research (2022)

To sum up, R&S process can be divided into parts, the first is the traditional approach, the second one is the contemporary one. According to the existing studies, traditional recruitment is affected by the chosen recruitment source, recruiters' characteristics, and interviewers'

judgment, while contemporary companies adopt technologies to fulfil contemporary R&S demands.

Contemporary approaches can be divided into e-recruitment and social media recruitment and the newest approach is the artificial intelligence involved R&S. for over 30 years, researchers studied technology adoption models in companies and their readiness for innovation, but there is a lack of research about AI involved R&S, especially in job interviews stage from the job seeker perspective.

This study is dedicated to examining prospective applicants' perceptions of AI involvement in the job interview stage and what organizations should take into consideration while implementing such kind of technology. This Conceptual framework is dedicated to the current study and the research area is highlighted in red.

4.2 Research Approach

The qualitative approach was chosen as the methodology best suited for learning job seekers' perceptions of Artificial intelligence involved in the recruitment and selection process. According to Kumar (2005) Qualitative style is used to describe a situation, phenomenon, problem, or event. Neuman (1997) Identified characteristics of qualitative style which is listed in Table 5.

Table 5: Characteristics of a qualitative method

Qualitative Style
Construct social reality, Cultural meaning
Focus on interactive processes, events
Authenticity is key
Values are present and explicit
Situationally constrained
Few cases, subjects

Thematic analysis
Researcher involved.

According to Creswell (2003), qualitative research takes place in a natural setting (home, office) and is more interactive and humanistic. In the data, collection participants are involved actively, and research is emergent rather than being strictly prefigured because research questions might change during the process, when questions are defined, and participants are chosen. Qualitative research is fundamentally interpretative, data is completely interpreted by a researcher.

4.3 Ethical considerations of qualitative method

Participants are the most important for qualitative research. Humans are the instrument for data collection. Data analysis, interpretation and findings depend on the participants and their responses. How the researcher treats the participants is vital during the process and may result in the research outcomes. As a result, there are several ethical considerations which should be followed by the researcher.

According to Elmes et al. (1995), There are several ethical considerations to treat the participants (Cited in Hossain, D., M., 2011). The following basic ethical considerations are highlighted:

Informed consent: A researcher should inform the participant about the research procedure before the data collection takes place.

No Deception: Participant deception should be avoided, the only case when deception is justified is when there is no other way to answer the question and the potential benefit of research exceeds the risks.

Right to withdraw: A researcher should make it clear to all participants that they are eligible to withdraw from participation without any fear of being penalized.

Debriefing: A researcher should inform participants about the full aim of the research after the data collection process.

Confidentiality: A researcher should ensure full confidentiality regarding the data and any information about the participants obtained during the process.

4.4 The approaches in qualitative research

The main types of qualitative research approaches are Case study, Grounded theory, Phenomenology, Ethnography and Narratives (Creswell, 2003).

Case Study is not a research method itself; it is used to study singular entities which might involve several data collection methods and analysis. This is an extensive investigation of just one person, group, or event. A case study can be an organization, a city, a group of people, a school, etc. The advantage of a case study is that it takes an example of an activity which is happening and uses different approaches to research it in depth and create a better description.

Grounded Theory is a method which uses a systematic set of procedures to develop a theory about a phenomenon. The theory is developed during the data collection. This is the theory of discovering new theories.

Phenomenology is the method which studies how human beings gain knowledge about the world around them. It approaches different ways of human understanding. A researcher identifies the principle of human experience concerning a phenomenon described by participants in a study.

Ethnography studies the culture and understanding of another way of living. The word "ethno" means people and the word "graphy" is describing something. In this kind of study, a researcher collects the data from a natural setting over a prolonged period of time by collecting primary observational data.

A narrative is a form of research where a researcher studies live an individual and asks one or more individuals to provide stories about their life and later this information is redescribed by a researcher in a narrative chronology.

One of the popular approaches of qualitative research is "Action Research" which results in the solution or improvement of a practical question. This approach can fix the problems in the field of education, social work, library science, etc.

4.5 Data Collection Method

According to Gill et all. (2014), Interviews and Focus groups are the most common methods of data collection in qualitative research. The resulting data is recorded and later examined.

Interviews are used to explore the views beliefs, experiences, and motivations of individual participants. While Focus group use group dynamics to generate qualitative data.

Interviews are believed to provide a deeper understanding of social phenomena it is appropriate when little is known about study phenomena or where detailed insight is required from participants it is used also during the sensitive topic discussion when participants might not be comfortable talking about privacy issues.

During the designing of the interview, it is important to ask questions which will give as much information as possible about the phenomena. In a qualitative interview, good questions should be open-ended.

Interviews can be structured, where questions are pre-defined and a researcher strictly sticks to them, unstructured where questions are not defined in advance and the interview dynamic depends on the conversation flow and semi-structured where there are pre-defined questions about general topics and in-depth questions evolved during the interview.

Focus groups are used to generate collective ideas and views. It can be used to understand participants' experiences and beliefs. Suggested criteria for using groups are first, if a researcher wants to study group norms, meanings, and processes as a stand-alone method, or collect group data for future stages if a researcher uses a multi-method design, focus groups are used also to clarify data collected before and the last criteria is to give feedback results to participants. Focus groups should be avoided if participants are not easy with each other, and they do not want to open up in front of strangers.

There is no particular rule on how groups should be composed. A mixed group always impacts the data. Groups can be mixed according to the gender, age, and social professional status of participants. Group size is the key during the research Stewart & Shamdasani suggested

recruiting the focus group participants rather slightly over than under-recruit them. They state that groups are most likely to have two non-attenders. The optimal size of the group is from 6 to 8 participants, but researchers can work with fewer than three or even more participants like 14. Small groups might have limited discussions while large groups can be chaotic and hard to manage, also participants can be disappointed if they will not have enough opportunity to speak.

Considering the specification of the research qualitative approach was chosen by the researcher as a strategy to get the best possible data for the analysis. Since, the research studies the perceptions of individuals about the new phenomena, Individual in-depth interviews were chosen for the data collection, to have a more deep and more detailed understanding of the respondents' opinions. Data were collected in October 2022.

In-depth interviews were semi-structured by nature, which means that there were the main questions and possibly follow-up questions, which were individual for each respondent, according to their answers. Some of the interviews were made face-to-face, part some of them were online based, in both cases with the respondents' consent, voice recordings were made, which were used later for the interview transcripts and further analysis.

The total number of the main questions was 10, of which three were multiple choices, other open-ended questions. The interview was divided into two sections, first, five questions were general, how participants saw their personalities, their opinions about traditional job interviews and their ideas about AI, after the first five questions, they were informed about the meaning and usage of AI and its involvement in job interviews, after which other five questions were asked. They were given scenarios, with different types of bot interviews and they had to express their opinions and perceptions about the particular type of interview. The duration of the interviews was from 20 to 35 minutes.

Every participant was given information about the data collection procedures, the interviewer made sure they were told the structure and the flow of the interview, no participant deception took place, they were free to express their opinion, and had a right to withdraw anytime they requested. Confidentiality was ensured to all the respondents, they were warned that no personal data would be shared in the paper and the data with the voice recordings would be protected and not shared outside the research after the interviews, in terms of debriefing they

were informed about the aim and importance of the research, this way all ethical considerations were taken into the account.

4.5.1 Questions used during the in-depth interviews:

Q1. How would you describe your personality?

Which the following statement describes you the best

1. I am an adventurous and imaginative person; I love trying new ideas and discovering novel experiences.
2. I am highly disciplined, and always well-prepared, I like planning rather than being spontaneous, I prefer to forgo immediate gratification for the sake of long-term achievement.
3. I am the life of the party, I do not mind being the centre of attention, I am the one who starts the conversation with someone, and I enjoy engaging with other people.
4. I tend to trust people, am very empathetic, like to make other people feel at ease, and prefer to cooperate rather than compete with someone.

Q2. When we talk about new innovative technologies which are not well distributed, from the following scenarios, which one will suit you most?

1. I would like to experience the idea immediately; I do not know how successful it will be, but I prefer to be among the first ones to obtain it.
2. I would not buy it immediately but wait a bit and experience it in the early stages I want to spread the word and show an example to others.
3. I prefer to wait unless technology matures and make a purchase later, in order not to take risks.
4. I am usually sceptical about new inventions; I prefer to wait until the majority of society will have them or wait unless it is highly necessary.
5. I prefer to wait, observe, and make sure that the invention works, maybe I will ask the opinion to my friends and family before making any decision.

Q3. In general, how do you feel about job interviews?

Follow-up questions:

- How are the feelings before them?

- How do you prepare for the interview?

- During the interview, what helps you to be more comfortable?

- Do you prefer group interviews or individual and why?

- Does the Recruiter or a person who holds an interview impact on whole interview outcomes?

Q4. Have you ever had an online job interview?

Follow-up questions:

- If yes, what kind of?

- If not, do you know what kind of online interviews exists?

- Do you prepare differently for online interviews? And what is different for you?

Q5. What words come to your mind when you hear Artificial intelligence?

After the first set of questions, the definition of Artificial intelligence was explained to the participants as was said how it is used in the modern world, especially in job interviews. After this several scenarios were proposed for them, to think about and give an opinion.

Scenario 1.

You want to apply for the job, but interviews are bot-involved. (During the interview you will not interact with people).

Q6. Will this information affect your decision of applying?

Follow-up questions:

- What does this say about the company?

- Would your feelings about the interview be different if you know that interviews will be held by a bot? (If yes, how would you like it more or less?)

Scenario 2.

Before the interview, you received the guidelines that the interview is in video recording format, where you will have to enter on a specific platform answer to pre-defined questions, record them and submit it for recruiters to review it.

Q7: How do you feel about this kind of interview?

Follow-up questions:

- What are the main concerns you have about this interview?
- How useful might be this kind of interview?
- What can be the disturbing factors to hold an interview successfully?

Scenario 3.

After submitting the interview, no human is reviewing it, instead, AI is the decision maker as well, choosing and promoting candidates for the next stage.

Q8: Do you feel differently about this type of AI-led interview than the previous one?

Follow-up questions:

- What will be your main concern about this?
- Can you name the advantages of this kind of screening process?
- How successful would be for you this type of interview?
- How would it help you to get your desired job?

Q9: As a job seeker, what would you prefer companies who practice automated job interviews to do, to make the interview stage easier?

Follow-up questions:

- What kind of communication you would like to receive before the interview?
- How can they make you more motivated or relaxed about this type of process?

Q10. If you have to choose the type of interview which one, would you choose and why?

1. 100% Ai-led.
2. 100% Human-led
3. Partially AI, Partially-human.

4.6 Sample

In total 15 in-depth interviews were held with the respondents. There was the same number of respondents for each age group, 5 participants were between 18 to 22 years, the other 5 were in the age group between 23 and 26 and 5 participants had more than 26 years. The maximum age of the participants was 31 years, minimum of 22. Mean the age is 25.

In the sample, 8 participants were students other 7 were university graduates. 4 participants were students of bachelor's degree programs, 6 of them have already completed it, 4 of them were students of master's degree, and only one participant was PhD student.

Most representatives had Management (20%) and Law (20%) backgrounds, 2 respondents were majoring in Finance and Accounting (13%) and other fields like communication sciences, IT, educational science, public relations, medicine, graphic design, and English literature were represented once in sample.

Regarding their employment status, 5 respondents were unemployed, 3 of them were doing an internship, one participant was a Part-time employee and 6 of them were working full-time. In total 7 participants had less than 1 year of job experience, 6 of them has been working for 1 to 3 years, and 2 interviewees had more than 3 years of experience (Table 6)

Table 6: Demographic characteristics of study respondents

Characteristic	Frequency	%
Age (years)		
18-22	5	33,3 %
23-26	5	33,3 %
26+	5	33,3 %
Student	8	53 %
Graduate	7	47 %
Level of Education		
Bachelor	10	66,7 %
Master	4	26,7 %
PhD	1	6,7 %
Program		
Information Technologies	1	7 %

Communication Sciences	1	7 %
Finance and Accounting	2	13 %
Educational Sciences	1	7 %
English Literature	1	7 %
Public Relations	1	7 %
Graphic Design	1	7 %
Management	3	20 %
Medicine	1	7 %
Law	3	20 %
Employment status		
Unemployed	5	33,3 %
Intern	3	20 %
Part-time	1	6,7 %
Full-time	6	40 %
Experience (years)		
0-1	7	47 %
1-3	6	40 %
3+	2	13 %

Source: Own research (2022)

The following table represents the interviewee classification to refer to during the data analysis, to guarantee confidentiality and privacy, they will be referred to as a Participant (P) and the number dedicated to them and the age will be indicated in the range.

Table 7: Interviewee classification

Participant	Age	Educational Background	Job Experience (years)
P1	27-31	Communication Sciences	3
P2	18-22	Information Technology	0
P3	23-26	Management	2
P4	23-26	Medicine	4
P5	23-26	Public Relations	2
P6	26-31	Law	1

P7	23-26	Finance and Accounting	5
P8	18-22	Graphic Design	1
P9	26-31	Law	0
P10	18-22	Educational Sciences	0
P11	23-26	Management	1
P12	26-31	Law	3
P13	18-22	English Literature	1
P14	27-31	Management	3
P15	18-22	Finance and Accounting	2

Source: Own Research (2022)

4.7 Summary of Chapter 4

Chapter 4 illustrates the conceptual framework created according to the theories which were studied and examined before by other researchers, according to which a study gap was identified, and the following steps were planned. The chapter also describes the qualitative approach in detail, which was chosen by the researcher for this particular study. Data collection methods were described and the most suited one, in-depth interviews, were presented thoroughly. The entire process, interview flow and structure were explained with all the interview questions and in-detail sample descriptions. Findings and analysis will be presented in the following chapters.

Chapter 5 Findings and Analysis

This chapter will provide the findings and analysis based on the respondents' answers. The main topics which emerged during the interviews will be discussed in detail, as well as the similarities and differences in participants' opinions. The analysis also will be divided into two parts as was the questionnaire, the first part will present the participants' opinions about traditional job interviews, and the next their perceptions about AI-involved job interviews will be presented.

5.1 Results

To present the results data was divided into categories and then into themes. The main topics which were discussed during the in-depth interviews were Traditional Job interviews, AI-involved job interviews, Automated Video Interviews (AVIs) and AI-led job interviews. Each of the topics was perceived differently by the participants, as a result, the main themes were underlined.

In traditional job interviews, candidates talked about the *stress*, before and during the job interviews, and how the *environment* influences their performance, they discussed *interviewers' characteristics and attitudes* as the main influential factor.

After moving to the second topic other themes were revealed. Participants' perceptions were divided into the following subtopics*, interest and curiosity* towards AI involved job interviews, how they perceived *no human interaction,* and *Interviewers' perception and judgment* were one of the main issues. Interviewees had their perceptions about what kind of *characteristics of future employees* companies are looking for using AI.

The next themes emerged when job seekers started the discussions about AVIs, topics were covering *usefulness and convenience* of AVIs, and which *stage of the process* it should be used, another theme was *data protection* and privacy, participants talked about *the technology support* which is needed to participate in AVIs, and the last theme discussed was the *lack of two-way communication.*

And finally, conversing AI-led job interviews lead to the following themes, *decision-making process and criteria*, the *objectiveness and structure* of the interview, candidates talked about

their perceived brand image of the companies' practising or desire to implement AI in the job interview stage and last they discussed their own the *preferences* in types of job interviews.

Figure 21: Result categories and themes

Traditional	AI-Involved	AVIs	AI-led
A. Stress	D. Interest and curiosity	H. Usefulness and convenience	M. Decision making process and criteria
B. Environment	E. No human interaction	I. Stage of the process	N. Objective and structured
C. Interviewers' attitude and Characteristics	F. Interviewers' Perception and judgment	J. Two-way communication	O. Brand image
	G. Characteristics of future employee	K. Data protection	P. Preferences
		L. Technology support	

Source: Own Research (2022)

5.2 Exemplary data

5.2.1 Traditional Job interviews

A. Stress

"I think that Job interviews are kind of stressful it determines whether you will the job or not. For my personality it is one of the stressful situations." (P2)

"I am reminded of anxiety, formality, rigour, challenge, new experience and expectations." (P9)

"I have experience having done so many, I can manage emotions." (P12)

"I feel great tranquillity because I believe in my abilities. If the interviewer likes me that's great not it means that a don't match for the job and that's fine as well for me" (P6)

B. Environment

"Thinking about job interviews first that comes to my mind is the unfamiliar environment, and unfamiliar people and it's hard to be open, you are tighter, trying not to say too much, being very specific, and you can't be 100% yourself." (P4)

"During the interview, the first factor is the environment that helps me to be more comfortable, from the place of interview you can say much about the company" (P1)

C. Interviewers' attitudes and characteristics

"Recruiters affect more on my interview outcomes more, their attitude and speaking manner affect me, can make me more nervous so, my answers can be biased, if they ask questions which are leading, my answers will be biased." (P3)

"I think also that interviewer does affect outcomes, if somebody makes you very nervous and not confident about yourself, you might forget what you were about to say. During the conversation, you can feel the tension and their facial expressions. When I feel welcome, and they are nice to me I get very comfortable." (P8)

"People who interview me, impact on the outcomes, their attitude not the professional way, in general regardless your qualification if they can empathize you can move to next stage." (P11)

"It is two side communication, if an interviewer is friendly and you see she likes you, it makes me more comfortable." (P13)

"In general, I have trouble expressing myself and I like to have a feeling that the interviewer can understand as a future employee." (P2)

5.2.2 AI-Involved Job interviews

D. Interest and curiosity

"No, honestly it won't influence my idea of applying it will make it more interesting and stimulating." (P1)

"I will be intrigued if I had not many interactions, but I will very carouse and I would be looking forward to attending this type of interview." (P13)

E. No human interaction

"For me no, it won't affect, me because my weakness is that I am not good at interacting with people, I will have less feeling and fear of being judged, and I will be more relaxed." (P2)

"In my opinion, maybe the nervousness will increase for the interviewers, because in certain situations you may need help from the opposite side." (P7)

F. Interviewers' Perception and judgment

"Humans can be miss judgmental, the first impression can decide everything, and the interviewer is making a precise idea about who you are and that can change the decision, and the bot is just doing a job" (P1)

"I would be calmer because I would not have the anxiety of human confrontation." (P10)

G. Characteristics of Future Employees

In my field, if I see a bot, I will think that the hospital is not interested in personality, in real people, they are looking for a specific skill, and they are looking the same for a thing in every candidate. (P4)

The company is not looking for people but predefined characteristics and want to replace reasoning with a facilitator at the expense of deepening. (P6)

5.2.3 Automated Video Interviews (AVIs)

H. Usefulness and convenience

"I think this kind of interview will be useful, sounds easy and interesting you can prepare and say what you want to say in short and you won't be nervous at all." (P8)

"I think it is a useful and positive thing, especially for me as a shy person" (P10)

"I think this could be sort of halfway, of course, there is no interviewer in front of you but anyway you can express yourself in the video, it won't make me uncomfortable" (P1)

I. Stage of the process

"Not having a direct human relationship, makes it not possible to manage dialogue, which is unidirectional. For an initial selection of candidates is a useful method." (P12)

"I think it is a very time-saving company that can screen faster the candidates, it is very good at the first stage until AI further developed." (P13)

J. Two-way communication

"Two-way communication is important to understand what they can give you and what you have to offer them." (P8)

"Human interaction is important, because not only they should like you but also you have to listen to them and they should create interest in you, to take the job" (P4)

K. Data protection

"Main concern will be privacy, data protection if they will ensure that it is fine." (P15)

"For me, it is very important to know how the data is stored and used" (P9)

L. Technology support

"Technical factors can be disturbing, internet connection, considering it is a video if you start to speak and you stop and you lose what you were saying, you can't make the conversation, it is just you and camera." (P1)

''Since it is a new platform, my concern will be if it works, and how can I navigate and use it. You control more yourself looking in the camera, how you look, etc.'' (p11)

"My main concerns will be if I can retake the video if I don't like it, if I could be mostly myself, not worrying about how I look in the video, etc." (P8)

5.2.3 AI-led job interviews

M. Decision-making process and criteria

"I would be hesitant because I do not know what the criteria for choosing artificial intelligence are." (P10)

"My concerns would increase because I do not know how artificial intelligence is programmed: As for the video interview, it could be useful for the first selection of candidates. However, I would like a human presence as the last step." (P12)

"I will have my doubts in this case, because I don't know any standardization, what is the assessment process, how it can evaluate the candidates." (P14)

"I would feel very different, in my opinion, that decision cannot be right in essence, I am not saying it will be biased, but a human can understand other characteristics which bot won't be able to, my qualities won't be exhibited totally to AI." (P3)

N. Objectiveness and structure

"Removing the human factor would be a more objective assessment. More fairness than evaluating a person." (P9)

"This can have an advantage it will be very objective, if the program will be well developed, then we can avoid the subjectiveness of people who can judge you in their particular way." (P4)

"It would be very practical if there is no human misunderstanding and excludes all kinds of things a human can mess up." (P13)

"It will be more structured, you can go with a flow, with the bot questions will be premade and you can prepare better and know what you are going for." (P11)

O. Brand Image

"First thing I think of is that the company is a high-tech company focused on the proper use of resources and optimizing the involvement of people in processes" (P7)

"For me, it is very positive when companies use AI. I am extremely interested in technological development, and it tells me that the company tries to keep up with the time**."** (P3)

"The company is well organized, of a high standard and they have a lot of demand and manage it in this way" (P12)

P. Preferences

I cannot decide between fully AI-led or partially AI-involved, depending on the situation but fully AI-led as well will not be a problem for me." (P9)

"Depends on the stage of the process, final one should be 100% human-led, in beginning Bots are fine for me" (P11)

"As I already said during the human interview, I am more nervous, but I prefer for now that type of interview because I'm used to it now and in my field, I prefer to talk to people." (P4)

5.3 Discussions

5.3.1 Prospective job applicants and Traditional job interviews

During the interviews main interesting ideas were presented, as expected there were many differences in respondents' ideas, depending on their personality and technology adoption tendencies, but there were many similarities in general perceptions.

In the beginning, respondents had to choose among different personality traits, and what kind of person they thought they were. Most of the participants (53%) chose the personality characteristics which describe the best the trait of Agreeableness as we already mentioned these people tend to trust the company in using the technology, and they are open to accepting what the company offers to them, other 33% chose conscientiousness, people with this trait tend to use technology if it is a better way of doing something and very few participants chose other descriptions.

There was also examined the respondents' behaviour when it comes to modern technology adoption and based on their answers they were divided into classifications. According to their responses 1 participant described themselves as an innovator, because tends to obtain innovation immediately despite the risk, same amount of people represents the group laggards, this is a participant who is sceptical about innovation and waits unless it is proved that innovation truly works and relies only on the opinions of friends and family. the biggest group of participants (40%) fell into the classification as early adopters, these are people who do not obtain technology immediately, but experience it in the early stage, to show examples to others and spread the word. second large group is called early majority, 4 (27%) respondents prefer to avoid the risk and wait unless technology matures, and 20% of respondents which were 3

participants, stated that they prefer to wait unless the majority of society will adopt it or unless invention will be highly necessary for their daily activities.

The first two questions gave a little bit of an idea, of how participants saw themselves and how they would behave when there is a new invention on market. To sum up, the majority of participants (73%) admitted that they will gladly experience innovation, while others (27%) who are not among the first ones who will obtain it, at some point will try to understand and use the technology (Table 8).

Table 8: Classification of respondents according to innovation adoption

Classification	N	%
Innovators	1	7 %
Early Adopters	6	40 %
Early Majority	4	27 %
Late Majority	3	20 %
Laggards	1	7 %

Source: Own Research (2022)

As we already mentioned, the broad questions which were asked to the candidates were the same, they were free to express their opinion and feelings about traditional job interviews. The answers were remarkably similar, there were main answer tendencies which were repeated in almost every interview.

First of all, all the applicants defined job interviews as an important but stressful process, on which people's future depends. Respondents mentioned that the most important for them is the ability to open up in front of the interviewer and be 100% themselves. Almost all the participants tend to prepare before the interview, they research the company, mission, vision, and focal points, to be as prepared as possible during the job interview.

"I find job interviews as an occasion where I can be pretty honest and show who I am to the company or people who want to hire me." (P1)

Another factor which was mentioned was the environment, where the job interviews are held, respondents said that in an unfamiliar environment it is hard to open up and show the best of you. But participants who have more experience in attending interviews feel less stressed at this point, but the most mentioned and concerning topic was the interviewer's attitude and characteristics.

"During the interview laid back attitude of the recruiter and atmosphere helps me to be more comfortable" (P3)

Participants said that the interviewer can change everything, and some of them said that depending on the person their stress level might increase or vice versa. Based on experiences respondents talked about how interviewers' attitudes and questions can impact the whole interview outcomes, prospective applicants appreciate friendly, stress-free, and open communications with interviews. Some of the participants mentioned as well that sometimes interviews are not prepared, they might ask very private questions, which is uncomfortable for the majority of the respondents, and even the interviewer's facial expression and voice tone can cause confusion and stress in job applicants.

"Interviewer cannot be 100% objective, it is highly possible your looks, and first impression can affect their decision." (P15)

5.3.2 Prospective job applicants and AI-involved job interviews.

The first set of questions was summed up by asking the participants if they had any kind of information about Artificial intelligence and if their answer was positive, they had to give the first ideas or words that came to their mind. Only two participants had very scarce knowledge about AI, while others have heard about it and had already developed some ideas. Words which were used mostly for describing AI were: Robotics, computers, and the future, some of the participants mentioned human replacement, progressive technology, software, algorithm, and innovation as well. Figure 21 is a visual representation of the words used in the description of AI.

Figure 22: Frequently used words for describing AI by respondents
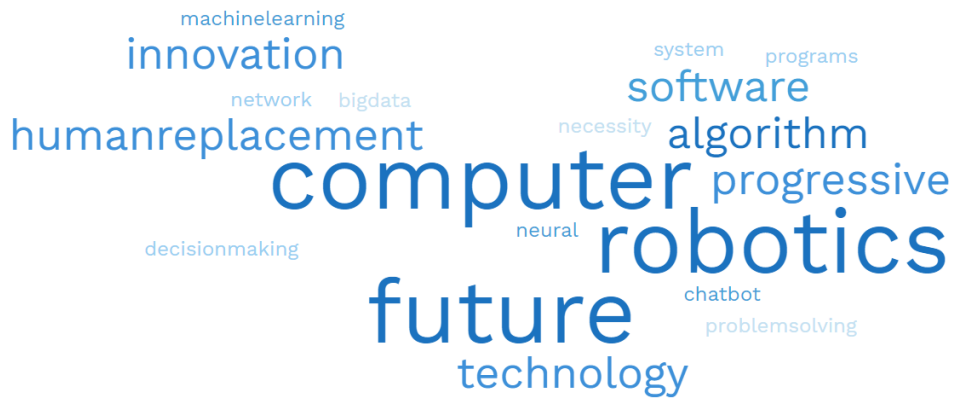
Source: Own research (2022)

After investigating respondents' associations with AI, they were given a clear definition of it with examples, to make sure that respondents understood the main concept of it, before asking another set of questions, which were designed to examine prospective applicants' perceptions of AI-involved job interviews.

Interviews were asked if their decision of applying for the job would change if they knew that company uses bots instead of humans, meaning they would not interact with people during the job interview stage. All the participants responded that this information would not be a game changer for them, but of course, their feelings were different about this kind of screening process. Some respondents were more positive about Ai involvement, while some of them were not much impressed.

Respondents who were more optimistic to attend this kind of job interview stated that this innovative approach would be remarkably interesting for them, and curiosity was one of the main motivations. respondents who described themselves as open to modern technologies were confident to take risks and experience innovation.

"AI won't bother me because I am very open and friendly to every kind of technology" (P15)

Another positive reason was the lack of human interaction, for the respondents who described themselves as shy person and not being good with people interactions. Interviewees who have almost no job experience and have not attended many job interviews found attractive human-less job interviews. On the other hand, respondents with more experience prefer to have job interviews with people since it is a chance for two-way communication, they stated that with the experience they overcame with stress caused by the job interviews, and they know their capabilities and strengths are the reason why they want to have human interaction during the job interviews, for some the applicants human relationship is important because in their opinion they are good at it and brings up more their character.

> "I would not be happy because a human relationship could bring out my personality. I probably would not go through the interview." (P6)

Respondents saw as an advantage the fact that they would not be judged or perceived differently by a recruiter, therefore human-less interviews were mentioned as stressless and easier to be free and show better themselves.

> "It will not affect the decision of applying, I will be more interested in getting a job, not the entire process. First, I believe that it will be less stressful. When you know you, will not be judged or perceived by the interviewer. (P3)

One of the interesting aspects which were mentioned was the type of employees companies try to hire through using a bot, participants had the perception that Bot interviews were standardized, companies try to find people with specific skills, and they are not interested much in human relationships, and they only want to check the specific characteristics of the future employees.

> "I think that company who uses AI says that company searches for very specific skills, I guess bots are programmed to search specific types of people with a specific competence, they are not interested much in human relationships, at least in the first stage, they more focus on technical abilities." (P1)

5.3.3 Prospective job applicants and Automated Video Interviews (AVIs)

After the general ideas were generated, participants were given scenarios and asked about AVIs, it should be mentioned that participants are aware of these kinds of job interview practices, but they did not know that it qualifies as an AI-involved job interview. After giving the information, their attitude and perceptions changed even more positive way, even the candidates who were more sceptical about AI, saw this practice as useful.

First, candidates said that this type of interview would remove the emotional and stress factor since it is recorded and they have time to prepare answers, they saw the new system as practical and perceived that after some practice it would become easier and more useful. Job seekers said that recording the video would not be uncomfortable for them, because they can do it anytime and at any place they want.

> "The good thing is that we can record the video at a convenient time for us. find a suitable place and environment for the video, so that nothing can disturb to show our best" (P7)

Video recordings were perceived more useful in terms of advance planning and preparing to learn how to answer to the questions shortly and highlight the most important qualities and skills about themselves.

> "This kind of interview will remove all the discomfort for me because I will prepare and plan more, I will analyse the questions, and the more prepared." (P4)

Candidates perceive this screening process way faster, they assume that recruiters can process more candidates in a shorter time, as a result, applicants expect faster responses and feedback. Participants saw it as a better chance to get to the job interview stage, since there is no human involved, who is not attending the live interviews, respondents perceived that more job seekers would get the opportunity to record the interviews.

Most of the respondents believed that AVIs are useful during the initial screening process, they are more than welcome to attend this kind of job interview but, they want to have the opportunities to meet the hiring team, or future colleagues in other screening stages, to have the abilities to discuss further the job and their capabilities in details.

"In my opinion, it is better to use AI at the first stage and select exactly those candidates who meet the requirements. This will make it easier and save time for both the company and the candidate, as it will not take as much time to evaluate the applicant as it would with a human"

(P7)

Job seekers also listed the main concerns about the AVIs, first the most important topic was the data protection and safety of private information, and how good is the software to avoid data leakage, if the company is well-known applicants assumed that there will be more attempts of hacking the systems, so they want to be sure their information is safe and not accessible for third parties.

"It's still computer so, technical staff can be problematic, people will try to hack the system so data should be protected very well." (P15)

Other concerns were the technological difficulties, how easy it would be to use the platform, stable connection, and enough time to answer the questions, they would like to have an opportunity to review their answers before submitting them for the reason, not to look fake in the video, manners, smile, eye-contact, they find it hard to maintain natural behaviour in front of the video camera.

"I won't have any concerns about this kind of interview, it is very good to answer pre-defined questions, if you can see it and evaluate later, it would be a great opportunity to present yourself." (P13)

From job seekers' perspective, respondents believe that job interviews are not one-sided and they need to communicate with a human representative, because they as well should be convinced to accept the job in future, for that reason it is necessary for them as well how interviewers will present the company and job, how they will answer to the applicants' questions, with the bot they assumed that they are taken away the opportunity of mutual examination.

"Considering it is a video if you start to speak and you stop and you lose what you were saying, you cannot make the conversation, it is just you and camera." (P1)

5.3.4 Prospective applicants and Ai-led job interviews

Further with the respondents discussed AI-led job interviews, when the decision is made by AI as well, a process with zero human interaction. This type of job interview caused more doubt and questions among interviewees.

First main question was, how AI would be making the decision? What would be the criteria, if it is developed enough to fully understand the candidate and make the decision? Some of the candidates strongly believed that AI is not developed enough to replace humans at this stage.

> "I believe that AI has its limits in this field, it cannot fully replace humans." (P12)

At this point, respondents started to compare human decision-making to AI decision-making. Again, the topic of recruiters' characteristics and interviewer judgment popped up, Prospective applicants assumed that AI would be more objective in decision-making, while humans can be miss judgmental because they perceive your personality from the first CV screening stage, some of the candidates believed that humans could reject you based on your look, they might not listen or ask proper questions. With a bot, there would be pre-defined questions and criteria, on which candidate should match, so respondents assumed that there would not be any unexpected circumstances and questions, as it is during a traditional interview.

> "BOT will assess all the candidates will be assessed on the same level and with the same criteria, recruiters might take into consideration other factors, like looks, and accent. AI will be better in eliminating this kind of bias." (P2)

With the Bot, respondents assume that every candidate has the equal opportunity because human bias would be completely removed, so candidates will be evaluated only based on their skills and knowledge, on the other hand, some of the candidates believed that there are some of the personal characteristics which would not be understandable for the bot.

At the end they were asked about what they would do if a company allowed choosing their preferable job interview type, they could choose between fully human-led, fully AI-led, or partially human, partially AI-led. For the many reasons listed before the vast majority of 10 participants out of 15 (67%) chose partial AI interaction, from the beginning they prefer to do

AI-involved interviews which will be evaluated by humans and to do the next interviews with people for more engaged interaction (Table 9).

"I will choose a mixed option, it will be easier to pass the first step with a bot, to understand what job is about and how is the process and later meet recruiters for the details" (P2)

The trend which was noticeable during the collection of the answers was that bot decision-making was bothering people more with study or work background which requires people involvement, respondent with medical experience (P4), strongly believed that med workers should be evaluated by qualified people since there are more criteria than just good technical skills and knowledge, same reason was stated for the English literature student (P13), as a future teacher he prefers to be evaluated by people, and respondents practising law, repeated as well with their opinions, in contrary, people with a more technical background such as IT, graphic design, finance or management tend to be more open towards AI decision making.

"As the first stage, it will be very useful, my field is based on intellectual and emotional intelligence so, for the second stage it would be better to have human evaluation." (P13)

Table 9: Preferred type of job interviews by respondents

Preferences	N	%
Fully Human-led	3	20 %
Fully AI-led	2	13 %
Partially AI-led	10	67 %

Source: Own research (2022)

Since AI-involved job interviews are not widely used, prospective job applicants have questions and doubts, but they admit that Artificial intelligence is ultimately becoming part of our life, one of the candidates said that we are not able to understand fully the capabilities of scientists and what kind of innovation they can create in future. Research participants acknowledged that AI is our future and will be universally used in our daily life.

On question how they would perceive the company which uses AI at the job interview stage, all of them had a positive perception of the company image and saw them as a competitive one.

First, they assumed that if a company has AI involvement in recruiting, it might be a mature, big organization or tech start-up. Candidates assumed that this kind of company does not hesitate to invest in technologies and always tries to develop and upgrade its IT processes. This aspect was particularly important for an IT student (P2), she stated that in her field this aspect is a game changer.

"As an IT student for me, this kind of practice from the company side means that they are fast growing and learning new things and trying to integrate It and computer science in the company" (P2)

Prospective applicants assume that if a company uses AI in R&S, they also would have implemented it in other business processes, which were very motivating for them, they want to work in a modern, innovative environment and experience innovative ideas and approaches.

"I assume that it is a large company, they try new things, and they are looking into the future and are very initiative. I would like to work and experience that also because I would love to try new things. I will learn a lot of new things" (P8)

Another positive side which was seen by the candidates is that such kind of company is very futuristic and tries to develop constantly to keep up with the time. While trying to use the resources and optimize people's involvement. Some candidates assumed that companies with such approaches have high demand for their job vacancies, therefore they need to manage it in a contemporary way.

"If company tires this type of technology for me it means that they are more flexible and modern, they are not the traditional ones" (P15)

5.4 Summary of Chapter 5

This chapter was focused on empirical research findings and discussions. Analysis of the answers was presented with the highlights of the main ideas occurring during the in-depth interviews. Comparisons between the ideas were done as well as the main concerns and doubts among the job seekers were discussed.

The first part of the chapter represented the perceptions of the prospective job applicants divided into categories and themes for more detailed and in-depth analysis. The following part

was dedicated to demonstrating the data analysis considering the categories and themes and the last part of the chapter is the detailed analysis and discussions of the results of the data collection.

The next Chapter will be dedicated to the conclusion and recommendations to the companies, that already use AI in interviews or want to implement it in the future.

Chapter 6: Conclusion and Recommendations

6.1 Conclusion

In the introduction the following research question was stated: What are the perceptions of prospective applicants about AI-involved job interviews? To answer the question qualitative approach was chosen by the researcher, data was collected from the sample which was composed of 15 respondents, with different academic, and job experiences and backgrounds. In depth-interviews were conducted to examine closely the perceptions of the prospective candidates.

Discussed topics were categorized as follows: traditional job interviews, AI-involved, Automated video interviews (AVIs) and AI-led interviews. These categories were again discussed according to the themes, which are the exact perceptions revealed during the in-depth interviews about the listed categories.

According to the results, traditional job interviews are stressful, and experience influences the stress level, another factor affecting the performance is the environment in which interviews are held, and a most essential element of traditional job interviews was named the interviewers, their attitude and characteristics demonstrated during the job interview process.

The next category, AI-involved job interviews were discussed according to the following themes: Interest and curiosity about new technology were one of the main motivation for the participants, No human interaction was not named as an influencing factor for applying for such kind of job, participants perceived Ai-involved job interviews as a tool to avoid interviewers' perception about the candidates and in advance judgment, future job seekers assume in advance that through AI company searches for the standardized, specific skilled employee, with no interest in human relationship.

AVIs were named as a useful and convenient tool for job interviews, but at the beginning of the screening process, in the late stage of screening, they will be more comfortable and fully informed with human interaction, lack of two-way communication and dialogue absence was perceived as the main concern influencing candidates motivation. Data protection and safety is another influential factor since there is huge technology involvement and technology support was perceived as a disturbing factor, to give all kinds of device owners equal opportunity.

And the last category was chosen the Ai-led job interviews, which were the most concerning type of job interviews, not knowing the decision-making process and criteria might change candidates' preferences about applying for the job, despite it being considered as more objective and structured compared to the humans led job interviews, as well as in terms of brand image AI in job interviews is perceived as a positive and advanced practice, interviewees preferences influence on their perceptions, as a result, all of them are open to the new technologies, but the majority of the respondents 10 out of 15 (67%) prefer in the early job screening stages AI-involved job interviews, (AVIs) since they do not trust AI decision making and prefer at the following stages to have direct human interaction for mutual examination and agreement.

And finally, Table 10 illustrates the summary of the information provided through study by applying innovation mix (4Ps). An innovative product, AI-involved job interviews, has been identified, which is a radical change compared to the traditional way of doing job interviews. Within the technological development business processes are also becoming increasingly innovative, step by step, business activities become more optimized, with the help of constant digitalization and tech development. Modern environment also cause the shifting of the paradigm, especially after covid 19, demand on the digital products increase, lifestyle has changed, people want faster and effective ways to satisfy their needs and solve the problems without leaving the home and the last component position of the innovation is the way of offering the product to the market, how the product will place itself among the customers, how specific product or process is perceived and used among the customers. Perception part was research and discussed in detailed in this study, following section will suggest the recommendations to the companies to strengthen their market position of their innovation and how to make more acceptable the product to the prospective job applicants.

Table 10: 4Ps of innovation of AI involved job interviews.

Product	Process	Paradigm	Position
AI-Involved job interviews.	Automated job interviews without human interaction. Digitalized business activities.	Technology growth and development. Getting things done from a distance.	Futuristic and progressive innovation. Positive brand image. Timesaving, comfortable and useful. Less Biased.

6.2 Recommendations

Based on the respondents' answers and what they expect from the employer several useful recommendations for the companies can be highlighted.

The Platform used for the job interviews should be well-optimized and developed for easier navigation. It should be suitable for all kinds of devices as well. Data protection should be ensured, and applicants should be informed what kind of data will be saved and stored in the database and ask for their consent about it.

Job applicants expected detailed guidelines, manuals about how to use the platform, step-by-step instructions, as well as the proper equipment which would be needed to avoid unexpected difficulties

The decision-making process should be communicated to the candidates, before the actual interview they should know what the process is like, who is making the decision, a bot or a human, what would the evaluation criteria be and how many job candidates there are.

During the interview, they would appreciate having several attempts to redo the video recording, to evaluate and see themselves and review them before the submission.

After the interview they would like to have feedback about their progress, especially it would be important for the candidates rejected for the next stage who want to know, based on what they were excluded, was it their skills and capabilities, or if there were some technical factors, to be prepared for the future AI involved interviews.

Companies should ensure marketing campaigns as an advance communication with the prospective candidates. First, they have to deliver information about Artificial intelligence and its usage in this particular practice, and second, how it is integrated into the company's other activities to provide some knowledge about AI for future candidates, this way, they will increase the awareness and interest among the prospective job applicants.

Chapter 7 Limitations

During the research, several interesting and important points have been highlighted. Original and noteworthy findings have been demonstrated; however, a few limitations should be mentioned. The first limitation is the freshness of the topic since there is not much research that studies perceptions of AI-involved recruitment and selection, especially at the job interviews stage, there is not much literature to analyse and use as an example.

Another limitation is that highly automated job interviews are not widely used yet, it is not quite common which makes it hard to find job seekers, who already have experience with such types of job interviews. Although this research gives data and basics to do further research in comparing candidates' perceptions versus experiences.

Since several similar trends were noted with people having the same type of personality traits, future research can focus on psychological aspects of how different personalities influence AI acceptance and usage.

Future research should take into consideration the educational or job experience background, since same field representatives more or less had similarities in their perceptions and ideas, future studies should examine job seekers' perceptions from the same field.

The last limitation can be the cultural differences, since my sample members were prospective applicants from different nationalities. Even though there were no significant and visible differences in their responses and opinions, future studies can analyse deeper the cultural impact on people's perceptions.

References

Ajzen, I. (1991). The Theory of Planned Behavior. *Organizational Behavior and Human Decision Processes*, 179-211.

Amatori , F., & Colli, A. (2011). *Business History, Compelxities and comparisions.* Abingdon: Routledge.

Andrews, R. (2017, September 16). *Scientists Connect a Human Brain to the Internet for the First Time*. Retrieved from iflscience.com: https://www.iflscience.com/scientists-connect-human-brain-internet-first-time-43726

Bano, S., Ubaid, U., & Ali, D. (2019). Personality and technology: Big five personality. *Library Philospophy and Practice (e-journal)*, https://digitalcommons.unl.edu/libphilprac/2773.

Barber, L. (2006). E-Recruitment developments. *Institute of Employment Studies*, 2-10.

Barnett, T. P. (2015). Five-factor model personality traits as predictors of perceived and actual usage of technology. *European Journal of Information Systems*, 374-390.

Berkup, S. B. (2014). Working With Generations X And Y In Generation Z Period: Management Of Different Generations In Business Life. *Mediterranean Journal of Social Sciences*, 2018-224.

Bessant, J. &. (2013). *Innovation and entrepreneurship-second edition.* Chichester: John Wiley & Sons Ltd. .

Brainboxol. (2017, September 23). *The tech evolution and how we all fit in it*. Retrieved from business.yocale.com: https://business.yocale.com/the-tech-evolution-and-how-we-all-fit-in/

Broughton , A., Foley, B., Ledermaier, S., & Cox, A. (2013). The use of social media in the recruitment process. *Acas*, 4-18.

Colletta, J. (2021, August 19). *HR tech number of the day: AI in HR*. Retrieved from hrexecutive.com: www.hrexecutive.com/hr-tech-number-of-the-day-ai-in-hr/

Creswell, J. W. (2003). *Research Design: Qualitative, Quantitative and Mixed Methods Approach, 2nd edition.* London: Sage Publications.

Davis, F. (1989). Perceived Usefulness, Ease of Use and User Acceptance of Information Technology. *MIS Quarterly*, 319-340.

DeCenzo, D. A., Robbins, S. P., & Verhulst, S. L. (2013). *Human Resource Managment (11 ed.).* Hoboken: Wiley.

Derous, E., & De Fruyt, F. (2016). *Developments in Recruitment and Selection Research.* Ghent: Ghent Univeristy.

Digman, J. M. (1990). Personality structure: Emergence of the five-factor model. *An annual review of psychology*, 417-440.

Economic Comission for Latin America and the Caribbean (ECLAC). (2021). *Digital Tehcologies for a new future.* Santiago: United Nations publication.

Eightfold AI. (2021). *HR's Future State Report 2021: The Impact of Artificial Intelligence on Talent Processes.* eightfold.ai.

Elmes, D. K. (1995). *Research Methods in Psychology, 5th edition.* St Paul: West Publications Company.

Fabbri, T., & Scapolan, A. C. (2018). Digitalization and HR Analytics: A Big Game for HR Managers. In M. G. Cantoni Franca, *Human Resource Management and Digitalization* (pp. 243-254). Routledge.

Fenech, R. (2022). Human Resource managment in a digital era through the lens of next generation human rescource managers. *Journal of Management Information and Decision Sciences*, 1-10.

Fishbein, M., & Ajzen, I. (1975). *Belief, Attitude,Intention and Behavior: An introduction to Theory and Research .* Reading, MA: Addison-Wesley.

Fisher, M. (2018). *Impact of Cross-Channel Marketing Automation Technology Innovation on Customer Satisfaction.* Julliet, Illinois: ProQuest.

Gaertner Newsroom. (2020, April 30). Retrieved from Gartner.com: https://www.gartner.com/en/newsroom/press-releases/2020-04-30-gartner-hr-survey-shows-86--of-organizations-are-cond

GIll, P., Stewart, K., Treasure, E., & Chadwick, B. (2008). Methods of data collection in qualitative research: interviews and focus groups. *British dental journal (BDJ) online*, 291-294.

HireVue. (n.d.). Retrieved from https://www.hirevue.com/.

Hmoud, B., & Varallyai, L. (2019). Will Artificial intelligance take over human rescources recruitment and selection? *Network Intelligence Studies*, 23-25.

Holm, A. B. (2012). E-recruitment: Towards an Ubiquitous Recruitment Process . *German Journal of Research in Human Resource Management*, 241-259.

Hossain, D. M. (2011). Qualitative Research Process. *Postmodern Openings*, 143-156.

Huang, M.-H., & Rust, R. (2018). Artificial Intelligence in Service. *Journal of Service Research*, 155-168.

IBM Cloud Education. (2020, June 3). *Artificial Intelligence (AI)*. Retrieved from ibm.com : https://www.ibm.com/cloud/learn/what-is-artificial-intelligence

IDOL, Unievrsity of Mumbai. (2011). *Industrial And Organizational Psychology.* Mumbai: IDOL, Univeristy of Mumbai.

Jaser, Z., Petrakaki, D., Starr, R., & Oyarbide-Magaña, E. (2022). Where Automated Job Interviews Fall Short. *Harvard Business Review*, https://hbr.org/2022/01/where-automated-job-interviews-fall-short.

Johnson, E. M. (2019). A library mobile device deployment to enhance the medical student experience in a rural longitudinal integrated clerkship. *Journal of the Medical Library Association*, 30-34.

Jopling, J. (2004). Understanding Generations. *West Virginia University*, Extension Service.

Kantardzic, M. (2011). *Data Mining: Concepts, Models, Methods, and Algorithms.* Hoboken,NJ: IEEE Press and John Wiley.

Kaur, M., A G, R., & Vikas, S. (2021). Adoption of Artificial Intelligence in Human. *The Indian Journal of Industrial Relations*, 331-342.

Krohn, J. (2021, February 8). *The Evolution Of The Recruitment Industry*. Retrieved from gqrgm.com: https://www.gqrgm.com/part-1-the-evolution-of-the-recruitment-industry/

Kumar, R. (2005). *Research Methodology A Step-by-step Guide for Beginners, 2nd edition.* Australia: Pearson Education.

Lucci, S., & Kopec, D. (2016). *Artificial Intelligence in the 21st Century: a Living Introduction.* Duxbury: Mercury Learning and Information.

Matar, J. (2021, April 13). *The 21 Best Virtual Career Fair Platforms & Software of 2022*. Retrieved from Brazen.com: https://www.brazen.com/resources/virtual-career-fair-platforms-top-rated

Matsa, P., & Gullamajji, K. (2019). "To Study Impact of Artificial Intelligence on Human Resource Managment. *International Research Journal of Engineering and Techology*, 1229-1238.

McCarthy, J. (2007). *What is Artificial Intelligence?* Stanford: Stanford University.

MITSloan, BCG. (2020). *Expanding AI's impact with organiational learning.* MITsloan Management Review .

Momani, A. (2020). The Unified Theory of Acceptance and Use of Technology: A New Approach in Technology Acceptance. *International Journal of Sociotechnology and Knowledge Development*, 79-85.

Motwani, M., & Anchila, D. (2012). Innovation Mix: A Contemporary Marketing Approach. *GRA- Global Research Analysis*, 124-125.

Naeini, F. H., & Balakrishnam. (2012). Usage Pattern, Perceived Usefulness and Ease of Use of Computer Games among Malaysian Elementary School Students. *Research Journal of Applied Sciences, Engineering and Technology*, 5285-5297.

Neuman, W. (1997). *Social Research Methods Qualitative and Quantitative Approaches, 3rd edition,.* Boston: Allyn and Bacon.

O'Brien, J. (2019). 5 technology trends that are changing business communication. *Communication World Magazine*, 1-2.

Posthuma, R. A. (2002). Beyond employment interview validity: A comprehensive narrative review of recent research and trends over time. *WIley Periodicals*, pp. 1-81.

PricewaterhouseCoopers (PWC). (2017). *Sizing the prize: What's the real value of AI for business and how can you capitalise? .* PWC.com.

Rathee, R., & Bhuntel Benu. (2017). Benefits, Challenges and Impact of E-Recruitment. *VSRD International Journal of Business and Management Research*, 133-137.

Robert Walters Whitepaper. (2013). *Using Social Media in the Recruitment Process.* https://www.robertwalters.co.uk/.

Rogers, E. (1995). *Diffusion of Innovation.* New York, NY: Free Press.

Rogers, E. (2003). *Diffusions of Innovations (5th ed.).* New York: Free Press.

Sahin, I. (2006). Detailed Review of Rogers' Diffusion of Innovations Theory and Educational Techology-Related Studies Based on Rogers' Theory . *The Turkish Online Journal of Educational Technology – TOJET*, 1-10.

Sanchious, C. L. (2022). *An examination of managers' view of telework and business continuity: Utilization level before and during the covid-19 pandemic.* Keiser Univeristy .

Sills, M. (2014). *E-recruitment: Comparison with traditional recruitment and the.* Helsinki: Helsinki Metropolia University of Applied Sciences.

Statista Research Department. (2022, July 6). *Recruitment trands and benefits of artificial intelligence* . Retrieved from Statista.com: https://www.statista.com/statistics/831693/recruitment-trends-benefits-of-artificial-intelligence/

Stuart, R., & Peter, N. (1995). *Artificial intelligence: a modern approach.* Upper Saddle River, NJ: Prentice-Hall,Inc.

Tambe, P., Cappelli, P., & Yakubovich, V. (2019). Artificial Intelligence in Human Rescources Management: Challenges and a path forward. *California Management Review*, 15-42.

Thebe, T., & Van der Waldt, G. (2014). A Recruitment and Selection Process Model: The case of the Department of Justice and Constitutional Developmen. *Administratio Publica*, 6-29.

Tornatzky, L. &. (1990). *The processes of Technological Innovation.* Lexington, MA: Lexington Books.

United Nations. (2019, October 24). *The impact of digital technologies*. Retrieved from un.org: https://www.un.org/en/un75/impact-digital-technologies

Venkatesh, V. M. (2003). User Acceptance of Information Technology: Toward a Unified View. *MIS Quarterly*, 425-478.

Wolf, J. (2021). How Is Technology Changing the World, and How Should the World Change Technology? *Univeristy of California press*, 1.