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An investigation into the viability of bringing emerging technology into the DVLA as a way of streamlining the recruitment process.

Date:

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DECLARATION

This work has not previously been accepted in substance for any degree and is not being concurrently submitted in candidature for any degree.

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Date: 27th/September/2022.

STATEMENT 1

This dissertation is being submitted in partial fulfilment of the requirements for the degree of MBA.

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Date: 27th/September/2022.

STATEMENT 2

This dissertation is the result of my own independent work/investigation, except where otherwise stated.

Other sources are acknowledged by footnotes giving explicit references. A bibliography is appended.

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Abstract

The research focuses on recruitment and section within the Driver and Vehicle Licensing Agency (DVLA), and if this process can be streamlined by using technology such as artificial intelligence for some straightforward tasks, leaving more time for Human Resources staff to focus on other more important parts of their role.

The research methodology is qualitative, deductive research, undertaken by interviewing willing DVLA staff, particularly those working in Human Resources (HR). Extensive secondary research is also used to gain context into the subject of emerging technology.

The main findings reveal that emerging technology such as Artificial Intelligence (AI) are not appropriate for the DVLA, and most of the staff interviewed would not want to include AI into the recruitment process, although some can see how AI might be useful with certain tasks such as filtering applications and much more as required.

The conclusion is that the DVLA should not use AI at this point but should consider it for the future. It is recommended that the DVLA to continue to provide alternative options for applications for people who are uncomfortable with technology, or do not have access to it. If the DVLA can consider AI in the future, the recommendations are to limit AI use to screening applications and answering basic queries, consider the cost of AI and how it weighs up against staff costs, and to use change management theory to help guide HR staff through changing to working with AI.

Abbreviations

ADHD: Attention Deficit Hyperactivity Disorder

AI: Artificial intelligence (intelligence exhibited by machines)

CIPD: Chartered Institute of Personnel and Development

Covid-19: A coronavirus that caused a global pandemic in 2020

CV: Curriculum Vitae (short career summary) also known as résumé

DfT: Department for Transport

DVLA: Driver & Vehicle Licensing Agency

DVLC: Driver & Vehicle Licensing Centre

HR: Human Resources

HRIS: Human Resource Information Systems

IT: Information Technology

SHRM: Strategic Human Resource Management

SJT: Situational Judgement Test (test used to assess decision making and judgement)

UK: United Kingdom

VR: Virtual Reality

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Chapter 1: Introduction

1.1 DVLA

The Driver and Vehicle Licensing Agency (DVLA) is a UK government agency under the Department for Transport (DfT), with its main offices based in Swansea. Originally named the Driver and Vehicle Licensing Centre (DVLC), the DVLA has been in business for over 50 years and currently employs over 6,000 staff. The DVLA's customers include individuals, businesses, and public sector organisations. The agency holds and maintains the records and registrations for nearly 50 million drivers and over 40 million vehicles in Great Britain. The agency is also responsible for issuing high quality photocard driving licences, tachograph cards, vehicle registration certificates and personalised registration plates. The DVLA record driver disqualifications, endorsements, medical conditions that could impact driving. The agency takes enforcement action against vehicle tax evaders and work with the police and intelligence agencies to tackle crime (Gov.UK, 2022).

The DVLA describe themselves as a 'dynamic, digital organisation' that continuously redesigns the services to make customer-focused, data-driven, and ambitious about the future. The DVLA has undergone radical changes since its beginning, most notably, moving away from being a paper-based business to a digital one. The DVLA's digital services are multi-award winners (Gov.UK, 2022).

1.2 Background

The situation to be investigated within this dissertation is the problem with the current recruitment process in the DVLA and the potential to use emerging technology to solve this issue. The Covid-19 pandemic highlighted the problem with

the way DVLA conducts online recruitment. Due to the pandemic, the DVLA launched a careers website in 2020 to give information about job vacancies to prospective employees and links to online applications for jobs (Jennett, 2022). However, research had shown that “our recruitment process can be a daunting experience for first-time joiners and long-term civil servants alike” (Debbie Clarke, Human Resources Business Partner cited in Jennett, 2022). Because of this, two new pages were added to the DVLA careers website in 2022 to provide a positive experience for candidates. These were ‘How we Hire’, added to explain how the hiring process works and what to expect at the different stages of the application process, and ‘Recruitment in Detail’, which provides additional guidance and sample applications to help more people apply for jobs at the DVLA.

Although the technology used for recruitment during lockdown had proved useful, there were still some issues with screening and vetting. Indeed, the DVLA recently hired an undercover reporter for the Times as a call handler, who then wrote a damaging story in March 2022 about why there were record backlogs in driver applications, which was summarised in a video on YouTube. The report revealed that during the investigator’s training, many DVLA civil servants were doing little work from home on full pay during the pandemic. A call centre manager was even recorded discussing watching Netflix at the public’s expense, instead of working (Morgan-Bentley, 2022; The Times and The Sunday Times, 2022). Although this was unacceptable behaviour from Civil Servants, the DVLA could have avoided the embarrassment of this going public with better vetting systems in place when hiring new recruits.

The recruitment problem is exacerbated by the changing role of Human Resources (HR) meaning some of the recruitment process is no longer the main priority for HR. The role of the HR professional has changed over time, resulting in the simple,

routine tasks involved in recruitment no longer being top priority. As part of the increasingly complex tasks HR departments must handle, they have to have expert knowledge in Human Resource Information Systems (HRIS), intercultural sensitivity, ethical decision making, and improving the workplace (Richard & Brown-Johnson, 2001; CIPD, 2015; Pomffyova, 2018; Ahmed, 2019). Emerging technologies such as artificial intelligence (AI) could be a solution, as it could take on some of the more routine tasks involved in recruitment such as screening applications. This would give the staff more time to concentrate on their array of complex tasks.

Online services and remote working where staff work away from where the employer is located, have become increasingly popular in recent times. Agile working and flexibility[1] boomed in popularity long before the Covid-19 pandemic (Wong, 2020), but the pandemic caused an urgent shift to remote working for any job that can be done from home. Many businesses were forced to make this transition in order to survive, but this quickly became the 'new normal' with many companies continuing with remote working and hiring based on skills instead of location (Loubier, 2021). This gives companies a better chance of finding top talent, and the search area widens (Hill, 2021). From improvements of software to first class video and digital communication, modern technology has made all this possible (McAlister, 2021).

Technology-led recruitment and selection has been driven by organisations since the Internet became a tool for advertising jobs and applying for jobs. Since then, newer technology has emerged, enhancing the flexibility of recruitment and selection by enabling applicants to apply for jobs anywhere they had access to the Internet. This

[1]Agile working refers to the practice of finding new ways of working that can increase productivity, improve motivation, and boost staff physical and mental wellbeing. Flexibility refers to allowing bespoke work patterns tailored to the needs of the individual (Wong, 2020).

also helped companies as it provided a wider pool of candidates to choose from, due to easier communication of job opportunities from anywhere in the world through the use of technology. Sifting through and assessing applications can also be done electronically (Cook, 2016). Technology has altered how suitable candidates can be identified and contacted about potential opportunities, and it has created more sophisticated job previews to allow speculative and active job seekers more insight about the details of the job role (Searle, 2003). Furthermore, technology allows psychometric assessments to shift from paper tests to more sophisticated tools.

Modern technology is key for companies such as the DVLA who keep up to date with the digital trends. However, the DVLA is also a pioneer in technological advancement, so it is essential that they embrace new technology, not just to improve remote working, but to revolutionise the way they select and recruit new members of staff. Even before the Covid-19 pandemic, the DVLA used the online Government platform for all its job advertisements and application submissions. This meant that moving the entire process online was only a small step for this already digitally competent company. The DVLA then made a further change to the way they recruit as a reaction to the Covid-19 pandemic. The recruitment process was conducted entirely online using video calls for interviews.

1.3 Justification of the Study

This research will address the above problems by investigating how the DVLA can use emerging technologies, particularly artificial intelligence (AI), to optimise the recruitment process without compromising the human interaction and the expertise of the HR staff. The hypothesis is that with the right programming and maintenance, certain technology can take on some of these routine tasks to free up HR staff to accomplish more important goals.

It is hoped that the study will benefit the DVLA by highlighting the strengths and weaknesses of investing in certain technologies. This could potentially contribute to a change in HR practices in the DVLA. Alternatively, the research could reveal that using emerging technology to streamline recruitment will not benefit the HR department and will save the directors the hassle of investigating this option themselves. This research will also be of interest to the wider HR community as it will discuss options for using technology in recruitment that can be applied to other companies, and it will show how real people working in HR feel about technology taking on some of the recruitment tasks.

1.4 Aim and Objectives

The aim of the research is to investigate how artificial intelligence and emerging technologies can help DVLA Human Resources with recruitment and selection in the future, and evaluate how using technology for certain time-consuming tasks can free up time for staff to perform other duties within their HR roles.

The objectives are as follows:

- To evaluate if there is a need for the DVLA to invest in further technology to take on some of the recruitment and selection tasks.
- To assess if the IT department in the DVLA have the means to manage new technology for taking on some HR roles.
- To investigate how HR staff feel about artificial intelligence/chat bots taking on some of their roles.
- To analyse the practical considerations of implementing technology for taking on some HR tasks.

1.5 Research Questions

The following questions make up the main thrust of the research:

1. Can the DVLA manage new technology for recruitment, and is there a need for such technology?

2. Do the HR staff want technology to take on some of the recruitment tasks to free them up for more complex tasks?

1.6 Research Scope

The scope of the research is technology that can be used for recruitment, and its potential application within the DVLA. As the focus is on how technology will help the recruitment process, the research will not go into the potential technologies for other DVLA departments, or technology that can be used alongside HR in areas other than recruitment.

1.7 Outline of Research

The research will commence with a literature review into some of the key areas for this study. The literature review will begin by highlighting the changing role of HR across all sectors, to show that there is a need to change the way recruitment is handled in modern, effective businesses. This will help to provide justification for investigating a need for streamlining the recruitment process by showing that the role of the HR professional has become more complex over time. The literature review will also provide some background in the digital expansion of the DVLA by analysing some of the literature published by the DVLA and the UK Government. The

final part of the literature review will focus on emerging technology for recruitment with a focus on artificial intelligence, to illustrate the gap in the DVLA's current recruitment technology and evaluate the effectiveness and appropriateness of such technology for the DVLA.

Chapter three will go into the methodological approaches to this study. The methodology used will be qualitative, deductive research. The data will be collected using secondary data for a contextual background of emerging technology for recruitment, before moving on to the primary research method of interviewing DVLA staff. The purpose of this will be to assess their thoughts and opinions about the possibility of working alongside technology such as artificial intelligence to take on some of the less challenging aspects of recruitment. This chapter will outline the research methodology using Saunders' Research Onion (Saunders, et al., 2015). It will also evaluate the chosen methods, defend the reliability and validity of the research, discuss the limitations of the research and provide the ethical factors that were considered for this research.

Chapter four will provide a curated analysis and discussion of the data collected from primary research by evaluating the comments made during interviews and how these answer the research questions. This will help to learn if the DVLA have the scope to handle new technology as part of their recruitment process and if the HR staff at the DVLA are want to or are willing to work with such technology. The most relevant data will be presented with charts to show a visual representation of results, but the majority of data will be presented as a summary of main points and quotes directly from the interviewees to show their views. The chapter will be organised by topics covered in the literature review, and additional secondary research will be included to add further discussion to the research.

The final chapter will draw conclusions from the research and make appropriate recommendations.

Chapter 2: Literature Review

2.1 Introduction

This literature review evaluates a range of appropriate literature in a thematic structure. The first theme is the changing role of Human Resources (HR). An important piece of literature included for this theme is a journal article by Richard & Brown-Johnson (2001) that focuses on how HR department must commit to embracing and supporting diversity in the workplace, and the HR tools that can be applied. Although this article was written from the perspective of professors from the United State of America, the research is still relevant as it considers the global trends in business and diversity practices that HR have to deal with. The article posits that globalization and increased demographic diversity in workplaces have created a need for a change in human resource diversity practices. They propose Strategic Human Resource Management (SHRM) as a way to develop a diversity orientation as part of HR policy. The thinking behind a diversity orientation is to make it clear that diversity management requires more than a few policies put in place to decrease discrimination and hiring a diverse workforce. Instead, Richard and Brown-Johnson argue that a full integration of diverse perspectives into the organizational culture and a system of procedural fairness is needed. Richard & Brown-Johnson go on to discuss a new type of HR system that is better suited to self managed teams that had been adopted by many organsations at that time, as a reaction to the enhanced competitivenss that had been observed in this type of organisation.

Also evaluated in this theme is a book about agility by Wong, (2020). Michael Wong is the founder of a management consulting firm providing strategic execution and operations consulting. His book was based on his experience of founding and being CEO of his own company, as well as applying the latest practice and research to the

book. This is included because it outlines that HR must be able to keep up with the demands of agile workers. This is supported by similar research by Denning (2018), who is a consultant on leadership, innovation, management and business narrative for businesses around the world.

The next theme is current technology in the DVLA, which evaluates the literature surrounding the technological advancements and existing technology in the DVLA. This is included to provide a background to the culture of technology that exists in the DVLA. It also illustrates what technology the DVLA are currently using in order to establish if there is a need for further technology. The literature in the section mainly consists of articles and government papers by the DVLA or about the DVLA, including the DVLA's Information Technology (IT) Strategic Plan 2017-2020. This outlined how they not only keep up with new technology but are often ahead of similar agencies in other countries. Although this document is now outdated, it shows many of the innovative practices at the DVLA which illustrates the technological culture at the DVLA.

The final theme is emerging technologies for recruitment, which will focus on how technology for recruitment is changing. It begins by researching the technology that currently exists and is used for recruitment, and then focusing on the benefits of AI for recruitment. It takes a broader look at the future of technology in recruitment before going into criticisms of over reliance on technology. The literature for this section includes an article called '21st Century Staffing', by Mahmood (2017), which talks about artificial intelligence (AI) as an emerging automation innovation that is transforming the HR industry. Mahmood argues that AI is uniquely equipped to deliver more productivity and profitability, and it can offer more time to HR professionals to accomplish their important goals to the best of their abilities. Soban

Mahmood is a researcher at COMSATS University Islamabad, but his research can be applied globally.

Another important piece of literature for this theme is Nihilism and Technology' (2018) by contemporary philosopher Nolen Gertz. This is included to provide balance, as he is a fierce opponent of technology. Gertz is Assistant Professor of Applied Philosophy at the University of Twente in Enschede. In his book he supports concerns about technology, albeit from an extreme viewpoint. His main argument is centred on the idea that technology is destroying us.

2.2 The Changing role of Human Resources Professionals

Traditionally, HR professionals acted as a support network for managers to help manage staff effectively (CIPD, 2017). HR staff are also traditionally responsible for recruitment and staff wellbeing. However, this role has changed over the years to involve more complex tasks and skills. "It's a truism that the world of work is ever-changing, and the standards to which professionals and professional services are held are also evolving" (CIPD, 2017, p. 2). This evolution of professional roles means that current HR staff have a different set of skills in order to keep up with the changing role and reflect contemporary needs. For instance, digital Human Resource Information Systems (HRIS) are used for managing information such as hiring, payroll and performance evaluation (Pomffyova, 2018). It is essential for modern companies to be aware of this system in the digital age. The Covid-19 pandemic caused an acceleration in an already changing world of work.

> Every single human resource professional out there had to deal with an explosive cocktail and often create new processes from scratch to ensure that their employees had enough support to cope with change and keep their organisations afloat (Sympa, 2022).

2.2.1 Intercultural sensitivity and development of diversity

Among the new skills HR professionals must have, are intercultural sensitivity and development of diversity. Richard & Brown-Johnson, both professors of management, discuss the role of HR and diversity in their article 'Understanding the impact of Human Resource Diversity Practices on firm Performance' written in 2001.

> Members of protected classes and women are hired and expected to conform to the majority's norms. Instead, organizations with a diversity orientation hire minorities and women and embrace the unique perspective that each group brings with them *(Richard & Brown-Johnson, 2001, p. 185)*

This ensures that diversity is not just accepted, but it is seen as an essential aspect of the company and is unconditionally valued. Procedural fairness ensures that no group (majority or minority) feel diminished, undervalued, or misunderstood.

To this end, they recommend a system called 'high-commitment' or 'work system commitment-maximizing system' (Osterman, 1995; Arthur, 1994 cited in Richard & Brown-Johnson, 2001). A high commitment system relies on commitment from staff. Many HR professionals therefore are tasked with inducing and encouraging this commitment. Richard & Brown-Johnson argue that diversity practices can be used as tools to achieve greater commitment. This supports earlier research by Barry & Bateman (1996) which argued that HR systems should develop a work design that can encourage diversity with 'asymmetric preferences'. What this means is that for unique problems such as employees who are struggling to balance work and family obligations, HR can accommodate these needs with alternative practices, such as agility and flexible working, removing unnecessary barriers to advancement.

Richard & Brown-Johnson, made an important point when they noted that “the relationship between diversity orientation and performance will be contingent on an organization's human resource strategy” (Richard & Brown-Johnson, 2001 p.184). This illustrates the importance of HR, and challenges they are faced with. Research for their article was conducted by introducing a concept of a diversity orientation, and then challenging several propositions. The research was well-informed but lacked any primary data. This has left a need for further research which should use relevant organisations as case-studies, with consideration of variables to rule out other reasons for the relationship between diversity orientation and organisational performance.

2.2.2 Understanding and Managing Agility

As touched upon above, an important topic for HR, especially since the Covid-19 pandemic is agility and flexible working. In his book ‘Corporate Agility’ (2020), Wong points out that as these are becoming more and more commonplace, HR must be able to keep up with the demands of flexible working, which can include working from home. As such, HR staff need to stay on top of the technology required to make it work. Agile toolkits, frameworks and processes transformed the world of work and can allow the workforce to thrive in uncertain times, respond to rapid change and can increase revenue in most cases (Wong, 2020).

Wong’s position on the benefits of agile mirrors that of Steve Denning. In his book ‘The Age of Agile’ (2018), Denning argues that organizations that adopt agile management are better connected to everyone and everything, and the value they deliver is intimate, instant and frictionless. He argues that agile working responds to the needs of the majority of companies coping with a rapidly changing business world. This is because it better allows companies to adapt and upgrade products and services to meet the changing needs of customers and the continuous development

of technology. He explains that the agile principle can be used in any company regardless of age. In a later article written in 2020, Denning noted that the covid-19 pandemic was a great accelerator of change, creating an even greater need for agile working in many sectors. With agile working becoming more relevant in many sectors, HR departments in these companies need to respond to the ongoing changes of not only staff needs but also changing needs of the company.

2.2.3 Skills in Technology

Emerging technologies for recruitment are discussed in more detail in section three of this literature review, but utilising such technology would create a need for HR to develop more skills to be able to work alongside this technology. Mahmood (2017) highlights the skills HR staff must have to be able to work with and maintain Artificial Intelligence (AI) systems in his article '21st Century Staffing'. He notes that any new technology can be disruptive and takes time to mature, but for AI there are unique challenges that recruitment professionals will be expected to overcome if working alongside it. One challenge is that HR will need to upload as much accurate data as possible for a machine to be as effective as a human in screening job applications. This leads to another challenge of programming human error into AI, such as unconscious bias. Furthermore, HR may hold some concerns about such technology if it is still in its early stages and therefore be reluctant to fully utilise it. This reluctance would be exacerbated further if HR professionals feel they are doing a good job of screening, selecting and hiring candidates, and are resistant to their changing role. Change management theory highlights the causes for resistance to change, which includes being 'frozen' in their old way of thinking (Burns, 2014), and having 'change blindness', which exists when staff hold onto an old belief without considering the benefits of change (Gallagher, 2019). Mahmood (2017) concludes his research by pointing out that HR professionals must become more technologically literate if companies implement AI for some of the recruitment tasks, but this will

lead to an improved hiring process overall. The time saved by allowing AI to screen candidates will give HR professionals more time to spend with candidates and "conduct more informed and efficient hiring processes with problem-solving, critical thinking skills and teamwork capabilities in real-time" (Mahmood, 2017 p.4) to assess their skills and cultural fit for the role.

2.3 Current Technology in the DVLA

The DVLA are pioneers of new technology. The key tenets of IT used at DVLA are that they are user friendly focusing on user needs, automated to allow for "repeatable builds of software defined environments from templates, frequent release cycles and support for continuous delivery" (Driver & Vehicle Licensing Agency, 2017, p. 10), and able to build real-time solutions. The IT must also be self-healing to automatically detect errors and recover from failure without human intervention, whilst continuing to operate normally during error handling. The DVLA's IT must use auto scaling so that capacity is increased during demand spikes and scaled down when not in use. Finally, the IT must fall in line with expectations.

When it comes to modernisation, the DVLA's IT Strategy notes that the on-premises infrastructure will be aligned with the existing capabilities of the cloud environment. The DVLA also note their commitment to embrace modern infrastructure and programmes, tooling and processes are standardised across the cloud environments.

2.3.1 DVLA's IT Strategy

The IT strategy not only outlines the technology used and plans for redesigning operating models, but also acknowledges the changed job functions:

> The growth of digital services, stabilising IT services, moving to a new IT platform and the development of new business

> opportunities, will have a significant impact on the number and types of jobs we need, the skills our people require and on other things like grade mix *(Driver & Vehicle Licensing Agency, 2017, p. 16)*

The DVLA confirms in their strategy that the existing talent pool will be upskilled where possible, and new hires will be needed for new, IT-based roles. An argument can be put forward from this that the DVLA is in a good position to embrace new recruitment technology as part of their drive to keep up to date with current technology, but also that the existing changes to technology has created a need to improve the recruitment process due to the number of newly shaped IT roles.

2.3.2 Innovation at the DVLA

The DVLA's technological culture is supported by an article by Perry (2018) which delves into the innovation within the DVLA. The article explains how new ideas contribute to the continuous modernisation of the agency, to allow it to change as rapidly as the world. Perry also draws attention to the team members who are actively encouraged to come up with new ideas for technology usage to continuously transform the DVLA, and the facilities where they can brainstorm. The purpose of Perry's article is to inform readers of the IT changes being made at the DVLA. It puts the DVLA in a favourable light, but it should be noted that it was written by a DVLA employee.

In a more recent report, the UK Government (2019) wrote about the DVLA as one of the most progressive companies in the British government when it comes to adopting emerging technology. The report highlights the DVLA's experiments with virtual reality and simulation, and their ideas for voice computing with virtual assistants. This further supports the argument that AI for recruitment could work within the DVLA. Like the article by Perry, the report mentioned how the staff at

DVLA are encouraged to come up with new technological ideas. One of the ways they do this is with the 'Scalextric Challenge', which challenges staff to develop software solutions capturing live data by using a sensor on a moving Scalextric car.

2.4 Emerging Technologies for Recruitment

Emerging technologies refers to new technology, existing technology that is continuously being developed, and older technology that is still in its early revolution and not yet used and discovered by many business models (Halaweh, 2013). Within recruitment, this mainly consists of intelligent chatbots and machines that mimic cognitive functions like problem solving. These both fall under the category of artificial intelligence (AI). In addition to artificial intelligence, video technology can also be used to interview and show candidates around a virtual space.

2.4.1 Artificial Intelligence

According to Ahmed (2018), one solution for allowing HR to shift their focus to more strategic value-add tasks is to use AI to automate low value add, repetitive tasks. Mahmood (2017), in his article '21st Century Staffing', discusses how AI tools can be programmed to screen applications by identifying the applicant's previous experience, skills, qualifications and knowledge. AI can analyse this data to arrive at informed decisions about candidate selection. Mahmood argues that using AI for some of the recruitment processes in this way saves the time, reduces costs and removes the need for third party involvement. By utilising AI, Mahmood argues that companies have better opportunities to reach the top talent and passive job seekers in a short time and without the same money consumptions as traditional targeting.

As well as screening, AI can engage with the candidates during the recruitment process by answering questions and providing feedback. This includes real-time communications as well as automated emails. This assists HR staff when assessing candidates and speeds up the process. AI can also help HR professionals to re-engage with candidates after a job has closed. By capturing and storing candidate data, suitable candidates could be contacted for new roles if they meet the criteria. Previous candidates could also update their own records held by the company, to reflect any new experience or skills they have gained since the last time they engaged with the company and update their level of interest in working for the company and the type of roles they are interested in. This helps target talented groups of candidates that have already engaged with the company when new positions become available.

When a suitable candidate has been chosen by HR to fill a role, Mahmood suggests that AI can take on the responsibility of following up with the candidate to increase the acceptance-to-start rates. To criticise Mahmood's theory, although AI can be highly beneficial in the screening stages, most candidates would prefer contact from a staff member to offer them the job, as, a message from AI could seem impersonal and clinical. This is supported by Heathfield (2019) who suggests that contacting a candidate after the interviewing process is complete, to reject them or make them an offer, is one of the main opportunities for HR to communicate with candidates and exhibit professionalism and grace. Communication at this final stage also shows respect to the successful and unsuccessful candidates. Although Heathfield does not specify that this communication must be made by a person as opposed to an automated message, it is implied in her statement: "Yes, employers are very busy. You are also currently swamped with applications for every job you post. But communication with your candidates is critical to your status as an employer of choice"(Heathfield, 2019, p. 2). While Mahmood's arguments on the use of AI for

recruitment are valid, Heathfield's article shows that there needs to be a balance between automation and human interaction.

Mahmood goes on to discuss how AI can be used after a candidate has been recruited. He argues that AI can be effective at welcoming a new member of the team, introducing them to the role, the culture of the organisation, policies, and processes. However, it could be argued that this again is something that would be best performed by a member of staff. A blog post by Marnie Williams for Greenhouse, whose purpose is to "make every company great at hiring" (Greenhouse, 2022), discussed the process of new hire orientation as something that should happen in several stages over a period of weeks, and involve building trust and connections to create the best new hire experience. The post refers to this as "the art of being human at its best" (Williams, 2022). The post recommends the use of a buddy in their first week, to give them an office tour and introduce them to the people they will be working with. It is also recommended to arrange a team lunch so the new hire can get to know the team members. This suggest that AI would not be suitable for all aspects of new hire onboarding as proposed by Mahmood, but it could be used to answer common questions, provide information, and to set up an account on the platform use by the company if needed. Mahmood points out that "AI helps in providing the answers of the simple and routine questions" but recognises that "sometimes HR manager have to come in between for the human touch especially when the questions are very complex and complicated"(Mahmood, 2017, p. 4).

2.4.2 Balancing Artificial Intelligence with Human Intervention

Unlike Mahmood, Elsey (2019) promotes the benefits of using artificial intelligence for recruitment without losing sight of the necessity for human intervention at key

points. The article was written Founder and CEO of Elsey Enterprises, a company that promises to deliver “intelligent solutions to your digital marketing” (Elsey Enterprises, 2022). Elsey argues that “the use of artificial intelligence could allow [recruiters] to more efficiently filter through applications so they can meet with the people that most closely align with their objectives” (Elsey, 2019, pp. 1-2). Finding candidates who are aligned with the organisational culture and can successfully deliver on company goals is key to finding staff that are likely to remain within the company.

Elsey then goes on to discuss the importance of balancing AI with human intervention. He points out that HR professionals would still need to review the decisions made by AI. Perhaps more worrying is the notion that when candidates are required to video themselves as part of the recruitment process, AI could eliminate potentially suitable candidates by using a scorecard to pick up on certain non-verbal cues such as facial expression, by misinterpreting the micro-expression within the context. Elsey developed three strategies for making AI work. The first is to develop policies about how and when HR will review decisions made by AI. The second is to ensure that AI is ethically programmed to safeguard against human bias that could negatively judge applicants based on race, gender, or age. The final strategy is to make sure that AI does not replace human HR professionals.

> Humans understand matters of ethics, integrity, and morality from the human perspective. Humans also recognize that humans are social and care about relationships -- including in the workplace -- which is a human trait that AI may never fully grasp but that may need to play a part in hiring decisions to ensure hires are good cultural fits (Elsey, 2019, p. 4)

Furthermore, AI recruitment only works for the ‘right person’ approach, which uses pre-programmed algorithms to select the best qualified person for the job. The

success of AI technology for recruitment depends on the accuracy and completeness of its algorithms. For screening application forms, there needs to be a lot of data to program the AI system to do an effective job. Alternatives to 'right person' models include a 'culture-fit 'model, which changes the job characteristics to better fit the skills and abilities of the staff, and the 'flexible person approach', which trains people to perform effectively if they are not currently qualified (Price, 1997). Current AI capabilities would not be able to select according to the latter two models as they would require human intervention to see 'potential' in people without qualifications.

While Elsey echoes Mahmood's theory by suggesting that using AI for mundane busy work is a good way to afford HR staff more time to focus on more strategic work and professional development, he argues that AI should work alongside HR. For all the benefits AI could provide to the recruitment process, it is just one tool for improved recruitment.

2.4.3 Criticism of Technology

While Elsey does promote the use of AI in the recruitment process, he is critical of over-reliance on technology. Contemporary philosopher Nolen Gertz agrees that technology is advancing to perform mundane tasks for us; "technologies can clean for us, they can buy and sell for us, they can check the weather for us, they can write texts for us, they can drive for us, they can do manual labor for us, and they can even kill for us" (Gertz, 2018, p. 2). However, he argues that this is making humans less capable and more dependent on technology.

> Technologies can do so much for us that we are beginning to wonder which of life's tasks, if any, will be left for us to do… while it is clear that technologies are advancing at an incredible rate, that

> technologies are becoming more and more capable of performing tasks previously assigned to humans, it is not as clear that humans are necessarily advancing, that humans are becoming more capable rather than merely more dependent on the capabilities of technologies (Gertz, 2018, p. 2).

Although Gertz accepts that technology can provide instant information and entertainment through our screens, he argues that the knowledge we obtain from the internet is not real knowledge because of the bias of the search engines used. He also argues that although online shopping saves time, what people do with the saved time is meaningless as it is spent doing more activities online or through technology. Gertz does not provide any evidence that time saved by shopping online is spent doing other activities online, making his argument speculative.

Gertz views technology as dangerous, and anyone who argues about the proven benefits of technology has been 'deeply corrupted' and are victims of 'techno-hypnosis'. Instead of being liberated by technology, we are 'de-humanised'. Rather than becoming freer, we are becoming more deluded. His arguments are highly suspicious and neglecting to address the benefits that technology has given to the world, such as the important scientific knowledge which has advanced due to technology. Gertz takes on a philosophical, nihilist approach to technology. This can be appropriate as an abstract thought but is not practical or relevant in business.

Gertz's main concern about technologies is what it is they are turning us into, whereas there is a concern that has been around for a long time that machines would replace human labour and take jobs. British textile workers in the 19th century felt so threatened by the introduction of new technologies in the factory that they destroyed them (Mueller, 2021). Also in the 19th Century, Karl Marx commented on the threat of machines on people's jobs, as well as their rights to appeal for better working conditions:

> machinery does not just act as a superior competitor to the worker, always on the point of making him superfluous. It is a power inimical to him, and capital proclaims this fact loudly and deliberately, as well as making use of it. It is the most powerful weapon for suppressing strikes, those periodic revolts of the working class against the autocracy of capital (Marx, 1990 [1867] p.562).

To argue against the idea that technology might take jobs away, economic historian Robert Skidelsky points instead to the ways technology can improve working life. “If one machine can cut necessary human labour by half, why make half the workforce redundant, rather than employing the same number for half the time? Why not take advantage of automation to reduce the average working week… counting as a full time job?” (Skidelsky, 2013). As logical as this may sound, it is a very idealistic, unrealistic point of view as it would be difficult to get businesses to reduce human hours without reducing pay, especially as AI costs money in initial purchase, maintaining it, training staff to use it, installing updates, and making repairs. That said, it could be argued that even with these costs, machines do not require sick pay, annual leave, pension contributions etc. but this would be an argument for reducing staff, rather than reducing hours for the same pay.

2.4.4 Recruitment Options Using Emerging Technology

Despite the criticism, there are arguments to be made for utilising AI for recruitment. An article by Jain (2017) argues the importance of a suitable hire by pointing out the cost of a bad hire, which could be “as much as 30% of the salary of the hired employee” (p.2). This is because as well as the immediate cost, a bad hire could lead a drop in morale for other workers, leading to a drop in productivity. For Jain, the solution is using artificial intelligence for recruitment to reduce bad hires.

'Bot Mya' is an AI recruiting assistant created by FirstJob. Mya interacts with applicants to check that they satisfy the requirements of the job, answer basic questions and keep applicants informed about their status in the recruitment process (Ahmed, 2018). Indeed, Mya is capable of mechanising over 70% of the recruitment process. 'Mya' can be installed as part of the organisations' website, email and social media sites to screen candidates, ask questions and send updates. A member of HR will then select and contact candidates for formal interviews based on the information collected by 'Mya'. By utilising this technology for the initial stages of recruiting, it allows HR more time to design interviews and make suitable offers. Artificial intelligence automates the screening process by grading candidates to match the criteria of the job. This is quicker than HR professionals doing the same thing because AI can scan 20,000 data points on word choice, intonation, body language and facial expressions from a 15-minute video interview (Jain, 2017).

HPE is a solution for AI that is capable of performing psychometric testing as part of recruitment and selection (Hewlett Packard Enterprise, 2022). The benefits of such testing can include an improved accuracy of matching the correct person to the role, leading to better productivity and retention (Edenborough, 2009). This can be done without human intervention, but the tests are still "patchy, variable and often idiosyncratic" (Edenborough, 2009, p. 5). This would suggest that there is still a need for other types of recruitment method to be used.

Another piece of AI software is Fetcher. This works alongside HR by curating batches of candidates that match the job criteria saving the staff time to engage with the right candidates in a more meaningful way once selected. Fetcher "combines machine learning with human insights to allow top teams to build diverse, qualified pipelines of candidates quickly – without spending all of their time sourcing" (Fetcher, 2022). The appeal of this is that it can be programmed to think in a similar

way to the HR team. However, it could be argued that this could program biases into the machine.

Advanced AI can do more than chat and collect data. Some of the technology created by HireVue can cope with customised algorithms, designed to find potential job candidates that best fit unique performance measures. One of their AI programmes can perform video interviews and develop questions designed to draw out responses that can help gage the probability of job success and desired behaviours by analysing answers, body language, emotional state, keywords used and tone of voice (Ahmed, 2018). Similarly, Affectiva has developed emotion recognition software to help gage the emotional intelligence and honesty of a candidate.

Finally, another recruitment tool is virtual reality (VR). VR can provide a simulated environment to replicate job-related tasks for candidates to tackle. VR is described as “an immersive, interactive experience that works through a headset to simulate another reality” (Heaslip, 2022). This virtual world can be shared with others wearing a VR headset, and avatars representing each person can interact with each other. VR is like AI in that it is able to change how we interact with the environment by extending the user’s existing space with superimposed layers of virtual and sensory objects. When VR is used with AI, the environment or task can change depending on the candidate's response. VR can provide employers with realistic previews of how a candidate will handle certain situations and interact with other people (Newell-Brown & Swain, 2012).

2.5 Conclusion

The changing role of HR shows there is more complexity to the job than previously, validating the argument that some of the time-consuming recruitment tasks could be better suited to AI to free up time for staff to perform their other roles. The literature covering the technology that currently exists in the DVLA shows that there is a technological culture at the organisation, which creates a path for new technology in recruitment to be introduced. It illustrates that the DVLA likely has the skills and infrastructure to manage new technology. However, the literature review has revealed some limitations of using AI, such as the lack of ethical or moral human behaviour, or intuitive judgement.

The overall conclusion from the literature review is that AI should be used as a tool to improve the efficiency of HR's hiring strategy, not replace the HR professional or take on the entire recruiting process. Using AI in this way would allow HR staff to spend more time with candidates to check that they have the required skills and are a good cultural fit, and ensure that there are no unfair barriers to applicants cause by human bias.

Chapter 3 Methodology

3.1 Introduction

This chapter outlines the selection of appropriate research methodology used for this research. The survey techniques and sample framework will also be discussed, and an evaluation of the chosen methodology will be included.

The initial steps taken to design this research followed Bourner's 'Research Journey' framework (Bourner, 2002). Step one was reviewing the field. This step was to identify gaps in current knowledge in emerging technology and recruitment, identify key researchers and writers in the field, identify opposing views to technology being increased in the workplace, and to discover suitable research methods. Step two was to start building a theory. This included data collection for preliminary research and arriving at a hypothesis to be tested (the hypothesis being that emerging technology can be beneficial for recruitment tasks in the DVLA). The final two steps were theory testing, and reflection. The methodology below outlines how the theory was tested. The reflection stage will be discussed in chapter four: Data Analysis and Discussions.

The research methodology for this study is qualitative, deductive research. The main data collection method is using secondary research to gain context into the subject of emerging technology. This was supplemented by primary research which consisted of interviewing DVLA staff to get their thoughts and opinions about bringing in more technology such as artificial intelligence to take on some of the less challenging aspects of recruitment. The initial research aim was to analyse emerging technologies for recruitment. The literature review revealed that almost all recruitment technology can be categorised as artificial intelligence. This led to a shift in focus towards AI technology during the interviews.

3.2 Research Design

Saunders' 'Research Onion' (fig.1) is a useful tool for breaking down research methods into the important components (Saunders, et al., 2015). The following outlines the research design using the Research Onion as a framework.

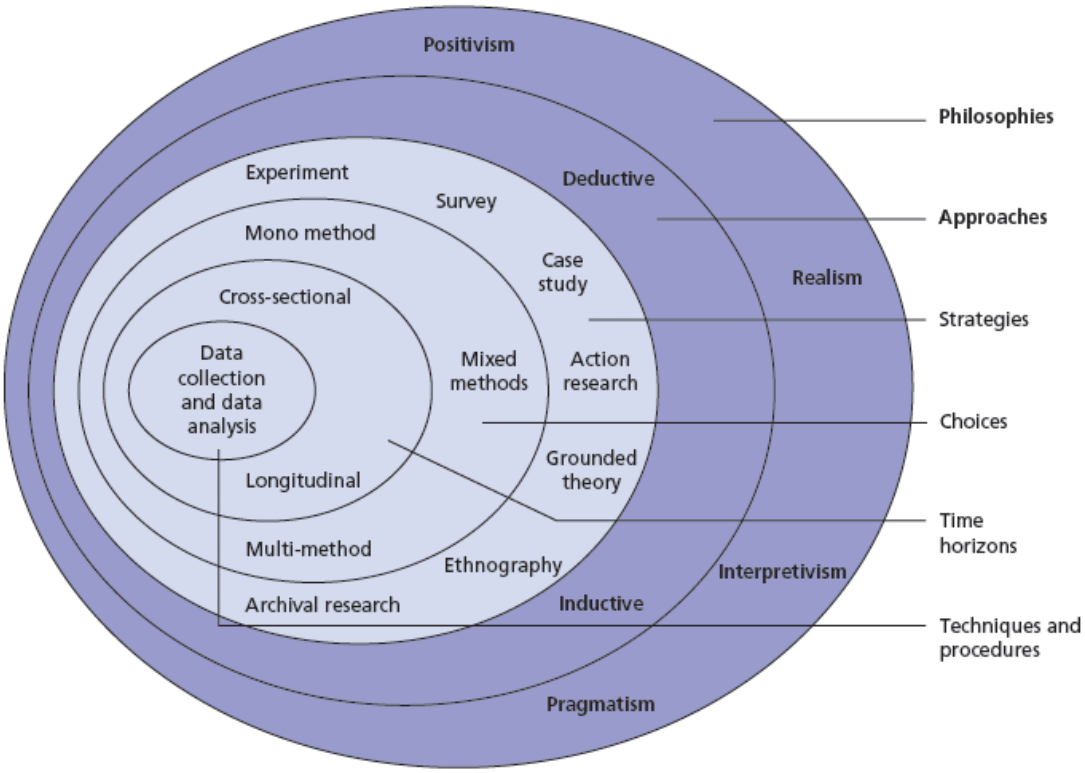

Figure 1: The Research Onion, reproduced from Saunders et al., (2015)

3.2.1 Research Philosophy: Pragmatism

This study uses the pragmatism approach to research. "The main aim of pragmatism is to approach research from a practical point of view, where knowledge is not fixed, but instead is constantly questioned and interpreted" (Crossley & Jansen, 2021). This is a suitable research philosophy for this project as the study assesses the practical application of certain technology and interprets the findings to predict the viability of the technology for the DVLA.

3.2.2 Research Approach: Deductive

This research is deductive in its approach because the aim is to show that the newest technology should be implemented to get the best out of HR. New technology is already being used in the DVLA, so this research will show how certain recruitment technology can assist the HR staff as other technology has assisted other departments. While the secondary literature is balanced, offering criticisms of technology, the main secondary sources are selected to support this argument for implementing new technology into the HR department of the DVLA.

3.2.3 Research Strategy: Case Study

The research strategy is a case study into the DVLA. More specifically, the Human Resources Department within the DVLA. According to Crossley & Jansen (2021), a case study is a detailed study of an issue within a real-life setting. The single subject studied in this research is emerging technology for recruitment, and the real-life context to which it is applied is the HR department in the DVLA. A case study strategy was selected to allow for a detailed analysis of the benefits that certain technology can bring to the DVLA.

3.2.4 Method: Mono Method

The method choice for this study is mono method. The focus is on qualitative data which is gained from suitable secondary research into the subject of emerging technology, and primary data in the form of thoughts and opinions of DVLA staff on the subject. This method has been chosen because it is an appropriate method for deductive research due to the increased detail in which the subject can be evaluated (Merriam, 2016). As the research relies on human experiences and thoughts, a qualitative method is essential.

3.2.5 Time Horizon: Cross Sectional

The time horizon for the research is cross sectional. Unlike longitudinal studies that involve repeated testing over time, a cross sectional study looks at people at one specific point in time (Crossley & Jansen, 2021). This study focuses on the emerging technology that exists in the present time and the potential benefits they could bring to the DVLA if implemented in the very near future.

3.2.6 Sampling: Non-probability

Within any study, the research needs to choose how to find a representative sample of people to observe or interview. This study uses non-probability sampling, as this is suitable for qualitative studies. Unlike probability sampling, which is random, non-probability sampling does not give everyone an equal chance to participate. This is often because participants are chosen because they meet a certain criterion, or because it is not important to get an accurate representation of the population as a whole. As Honigmann (1982) put it, this type of sampling is mainly used "to not answer questions like 'how much' and 'how often' but to solve qualitative problems, such as discovering what occurs, the implications of what occurs, and the relationship linking occurrences" (Cited in Merriam, 2016 p.96).

3.2.7 Data Collection and Analysis Instruments: Interviews

Data was collected by utilising the resources available within the DVLA and other secondary data, and by delivering interviews with members of HR staff at the DVLA at different levels including management. The interviews are semi-structured, meaning the interviewer came to the interview with a set of questions to guide the discussion, with scope to change the direction of the discourse according to the responses.

3.3 Survey Technique

The interview questions (see appendix 3) were designed following extensive secondary research to get a better insight as to the most appropriate questions to

ask that would help answer the research problem. The first theme of the literature review was the changing role in HR. Some of the interview questions acknowledge this change by asking about changes in recruiting since Covid and using new technology.

The second theme of the literature review was existing technology within the DVLA. This highlighted a technological culture within the organisation. This is acknowledged in the interview questions by asking if IT staff would be able to handle new recruitment technology.

The final theme of the literature review was a focused look at recruitment technology. This highlighted the importance of diversity and inclusion in the workplace, and how artificial intelligence (AI) could eliminate human bias, or potentially reduce suitable candidates that do not fully meet the criteria due to a lack of human understanding. A question about this was posed in the interviews with the DVLA director. The reviewed literature also showed the criticisms of technology. This shows that there are differing opinions about technology, so the interview asks for the thoughts and opinions of such technology from the people who would be using it if implemented in the DVLA.

As previously stated, the interviews are semi-structured to allow for a more conversational approach, so the interview questions are guidelines for the interviews. There are variations in emphasis depending on who is being interviewed.

Some studies suggest that age can be a factor in people's acceptance of new technology (Selwyn, et al., 2003, Warnick, 2020, Chimento-Díaz, et al., 2022). Because of this, age brackets are included for all interviewees, to see if this impacted their attitudes to new technology. Similarly, there are studies that suggest that

women tend to be more sceptical about artificial intelligence than men and technology in general (Eagly, 2017; Gelles-Watnick, 2022). For this reason, gender was also asked in the interviews, including an option for people who identify as non-binary to gain gender identification data respectfully. The McLean & Company 'Guide to using self-identification questions respectfully in HR' was consulted (McLean & Company, 2022).

The data was recorded by noting the date of the interview, purpose of the interview, content of the interview (handwritten notes transcribed later and voice recordings, also transcribed later), and any agreed action such as allowing the participant to review the record of the interview. Such record keeping is important as it allows the researcher to supply and use the details of the whole picture if needed (Martin, 2002).

The data was then analysed by interpreting the responses given from the interviews. The data was transcribed, theme coded, and interpreted. This was done by firstly, reducing the amount of data by theme coding to categorise key points, and then reconstructing meaning from the data by looking for links in meaning which are characteristic for the interviewee. The final phase was to infer invariants by making comparisons with individual meanings (UWTSD Resource, 2022).

Excel can cope with "large amounts of data, provide multiple attributes, and allow for a variety of display techniques" (Meyer & Avery, 2009 p. 91). As such, Excel was used as a tool for organising the coded data.

3.4 Sample Framework

For non-probability sampling, this study uses a hybrid of convenience and criterion sampling. Convenience sampling is where a sample is selected based on ease, such as choosing people nearby or who are available at a certain time. Criterion sampling involves selecting people from a sample that fits a criterion. The criterion for this study is that the participants must work at the DVLA and have responsibilities in recruiting or in IT in order to answer the questions. Due to COVID restrictions and many HR staff working remotely, convenience sampling is applied once the criterion has been met, by interviewing the HR staff who are available and willing to be interviewed.

3.5 Evaluation of methodology

The advantage of taking a pragmatist approach is that it uses people's opinions and beliefs as problem solving tools. In this case, it will be the opinions of people who work in the DVLA with recruitment responsibilities. This is important for this type of research as it involves testing the hypothesis that HR would benefit from recruitment technology by asking the people who would work alongside it. A weakness of pragmatism in research is that it is "not an argument against evidence but allows only a tentative epistemic worth to evidence" (Improvement Science, 2012). However, as this research only applies to the DVLA, the epistemic knowledge will be valuable to the organisation it is intended for.

An advantage of qualitative research is that it is a good way to understand the thoughts and opinions and experiences of the sample group. This makes the data less viable than quantitative research, but the information is richer as there are less stringent questions to answer, meaning the participant can elaborate on answers. Qualitative research is often more versatile than quantitative as questions can be

adapted to optimise results depending on the person, circumstances etc. Another advantage of qualitative research is that the researcher can “speculate more on what answers to drill down into and how to approach them. They can use instinct and subjective experience to identify and extract good data” (Christiansen, 2021). A weakness is that the sample size for qualitative research is usually much smaller than quantitative research, which can lead to insufficient data. However, as the population of this study (DVLA staff) is already small, a sample from this group will be sufficient.

The main advantage of interviews as a survey technique is that they are an easy way to collect detailed qualitative data using conversation and reading body language(Rahman, 2016). A disadvantage is that interviewing and collecting responses, anonymising, theme coding, organising, and analysing is time consuming. Semi structured interviews with a loose structure and a more conversational tone increases the salience and relevance of questions and responses. However, this does make data collection difficult because there will be different information from different questions (Hughes, 2002). The main disadvantage of doing interviews in an internal organisation is that the interviewees “may give a popular answer that colleagues agree with rather than a true opinion” (Christiansen, 2021). This can have a negative impact of the results. Having private interviews will reduce the chance of such bias.

3.6 Reliability and Validity

Every care was taken to ensure that secondary sources consulted are reliable and valid. Many sources used are published in well-established peer-reviewed journals. Books used are written by experts, scholars, or industry professionals. Online sources and magazine articles are used when they are written by authors or companies who

are credible. To ensure validity of sources, most sources on technology and the changing roles of HR were published within the past five years. Sources on other topics relevant to the study were published within the past ten years. Older sources are consulted if the work is still relevant and valid and are usually supported by newer studies.

The questions asked in the interviews for gathering primary data are clear enough to allow for reliable and valid responses. The questions are probing enough to gather important data but are straightforward enough that a second interview with the same person at a later date would provide similar results, giving it 'test/re-test' reliability. The answers provided are based on the interviewees' opinions, and for the most part, does not rely in specialist knowledge (IT would be expected to have some knowledge of their capability of managing new technology but HR would not be expected to have such knowledge).

Information gained from participants is highly probable to be the same if gathered from another data collection method such as questionnaires or surveys taken by the same participant. This gives it 'parallel form reliability' (Saunders, et al., 2015). Each question is designed to provide opinions that can be used to answer the research questions. This gives it face validity and keeps it valid within the scope of this study.

Finally, triangulation is applied by using multiple secondary data sources to inform interview questions and support the results.

3.7 Limitations

One of the limits of this study is available funding. The means that data collection and analysis tools that are chosen were based on affordability and accessibility.

Health and safety is a consideration in any study, but the Covid pandemic has placed a new limitation on this kind of study as some DVLA staff still work from home, and others may not want to be in an enclosed room in order to conduct an interview.

The participants are limited to a sample of DVLA staff, as these are the requirements of this study.

The primary research is limited to the DVLA. The primary research cannot be applied to other government agencies or any other organisation because the research considers the technological culture that is unique to the DVLA, and the specific roles of HR professionals at that organisation. However, the secondary research can be applied to any organisation.

Finally, the study is limited by time constraints in order to meet the deadline for submission.

3.8 Ethical Considerations

Prior to undertaking this research, an ethics approval form was completed and approved (appendix 1). The ethics form highlighted that some research material that is not in the public domain would be consulted from the DVLA internal portal, with permission from the relevant managers.

The research also relates to one or more of the seven aims of the Well-being of Future Generations (Wales) Act 2015. The DVLA is based in Wales and is one of the biggest employers in Wales. By staying up to date with new technology, it is contributing to a prosperous and resilient Wales. By improving the employment

process in the DVLA, it can help improve employment opportunities and experiences for the people of Wales, leading to healthier lifestyles as employment allows access to better food and exercise equipment, and staff at the DVLA are encouraged to look after their health by providing them a gym and promoting well-being. By improving the recruitment process, it will ensure more equal employment opportunities for the people of Wales as using artificial intelligence should eliminate unconscious bias from the process, thereby also encourage a cohesiveness of diverse communities. The DVLA encourages the use of the Welsh language, so improving the recruitment process through using technologies could encourage applications through the medium of Welsh.

The ethics form also confirms the following:

- No participant observation without their knowledge
- No access to personal or confidential information without the participants' specific consent
- No administration of any questions, test stimuli, presentation that may be experienced as physically, mentally or emotionally harmful / offensive
- No performance of any acts which may cause embarrassment or affect self-esteem
- No investigation of participants involved in illegal activities
- No use of procedures that involve deception
- No administration of any substance, agent or placebo
- No working with live animals
- No procedures that may have a negative impact on the environment

Below are further ethical considerations for this research using the six principles of ethical research from UK Research and Innovation (UKRI, 2021) as a framework:

1. *"Research should aim to maximise benefit for individuals and society and minimise risk and harm".*

This research aims to find out if emerging technologies can benefit the HR department in the DVLA. The potential benefits could be passed on to future candidates and the DVLA as a whole. The research does not endorse risk or harm to the jobs of staff at the DVLA, or to potential candidates for employment at DVLA.

2. *The rights and dignity of individuals and groups should be respected.*

All participants are anonymised to respect their privacy. All participants are treated with respect and dignity during the interview process.

3. *wherever possible, participation should be voluntary and appropriately informed.*

Participants are engaging with this study voluntarily and are able to pull out of the study at any time and ask for their responses to be removed from the study. All participants are informed of the purpose of the study and why they are asked to contribute.

4. *Research should be conducted with integrity and transparency*

The director/manager of the DVLA was informed of this study during the research proposal stage.

5. *Lines of responsibility and accountability should be clearly defined.*

The researcher holds responsibility for the safety of participants at the time of interviewing if on-site. A risk assessment is carried out for all on-site interviews.

6. *Independence of research should be maintained and where conflicts of interest cannot be avoided they should be made explicit.*

The researcher is an employee of the DVLA but not in either of the two departments being studied (IT and HR). The researcher will not gain personally or professionally from undertaking this research.

In addition to these points, it is also important to ensure ethical research practice by making honest claims about the data obtained, not eliminating any data that does not support the hypothesis or obfuscating by using long winded paragraphs and sentences in an attempt to confuse or obscure information (Greenfield, 2002).

Chapter 4: Analysis of Results and Discussion

4.1 Introduction

This chapter will analyse the data collected from the primary and secondary research and present the information in a curated way. Excel was used to record data from the interviews, and key words from responses were sorted and thematically coded. The information from this process will be analysed in the chapter, along with graphs to show a visual representation of any patterns that emerge. The full transcripts of the interviews can be viewed in appendix 3. The information will be presented with discussions about the results, and how they relate to the literature review and how they contribute to the research question.

The interviewees consisted of seven staff members at the DVLA. Five of the interviewees were HR professionals, one was one of the directors of the agency, and one was a manager with recruitment responsibilities.

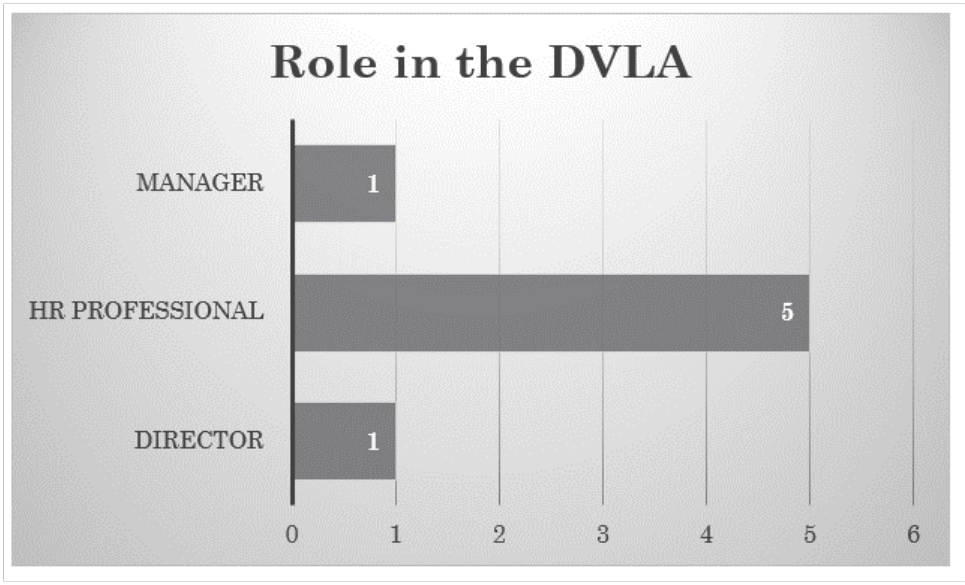

Figure 2: Interviewee roles in the DVLA

There were slightly more males than females, with four being male, three being female, and none identifying as non-binary. The age range was the same balance, with three being 26-45, four being 46+, and no one was under 25. Coincidentally, all three females were 26-45 and all four males were 46 or over.

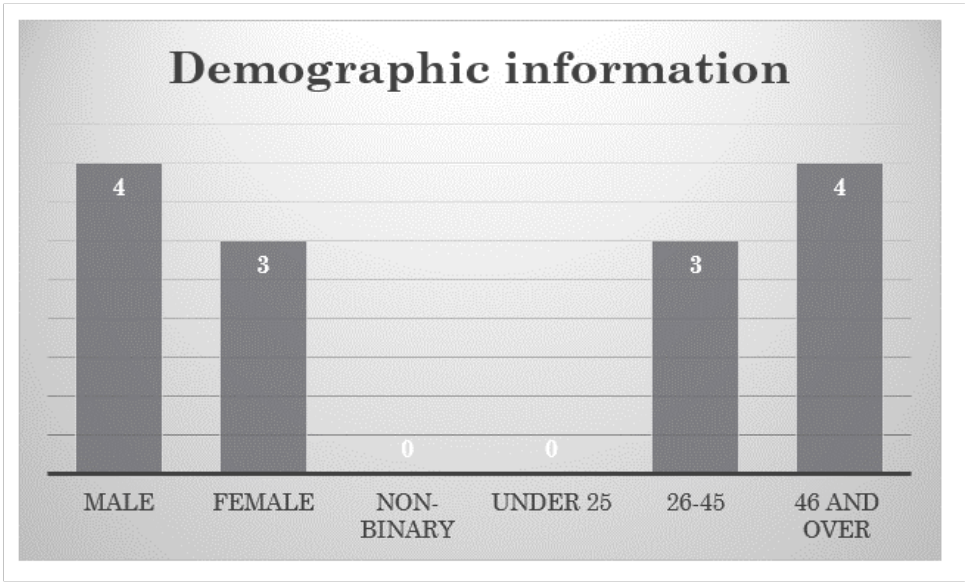

Figure 3: Demographic Information

4.2 Summary of changes to interview questions

The interviews were semi-structured, meaning the interviewer came to the interview with a set of questions to guide the discussion, with scope to change the direction of the discourse according to the responses. The interviews stayed close to the structured questions, with a few variations to ask for more information. For example, the first interview was with the director of the company and as such, it was important to get as much information as possible, so several follow-up questions were asked. This interview lasted a lot longer than intended, so it was important to manage the time more effectively for subsequent interviews. Although the long interview provided rich insights to the topic, the detailed follow-up questions asked in interview one were not necessary for subsequent interviews.

Interviewee 2 was a HR professional who was very open to using emerging technology to help take on some HR tasks but stated that; “I wouldn’t want to be responsible for programming it…” when talking about programming responses in chat bots to make recruitment easier. This led to a follow up question to ask why this was.

Interviewee six was vague about the changed to recruitment as a result of covid, but gave more specific answers when asked for examples.

The last interviewee simply (and resolutely) stated “no” when asked about chat bots and other technology taking on some HR roles, so this had to be followed up with another question to for more details. This interviewee also twice implied that he wouldn’t get a job if he was screened by AI; “You end up where guys like me won’t get a job” and “If I applied for my job now, I probably wouldn’t get it”. This also required a follow-up question to ascertain why he thought this.

The question 'Is recruitment at the DVLA now going to be global? (if so, how is this going to work?)' was removed from later interviews because all the first responses claimed that it would not be global. Furthermore, as the question before that asked about hires being able to work for the DVLA without going to the site was answered 'no' by everyone, it made the global question irrelevant and inefficacious.

4.3 Analysis of results

The literature review highlighted that the role of HR is changing, and the implication of this could be that HR professionals need to spend more time on more complex aspects of their work than routine recruitment tasks. The interview respondents were not asked directly about changes to the HR role in general terms, but were asked about the changes made as a result of Covid-19. Everybody in senior management and HR agreed that not only had Covid not slowed down recruitment in the DVLA, but the opposite was true, mainly due to opportunities to work from home:

> "Covid has the opposite impact and increased the need for recruitment as the availability to homework has opened career avenues that may have been more restrictive before Covid" (Interviewee 1).

> "We've had more applicants when it was fully in lockdown than any other time. I think there were a lot of people out of jobs, and the DVLA were recruiting staff to work remotely so a lot of people were trying to get in with us" (Interviewee 6).

These opinions were echoed by interviewee 2 who stated that; "we've been recruiting more since covid because more people were looking for remote positions", interviewee 5: "we've done more hiring than normal during the covid pandemic" and interviewee 7: "We've been picking up extra staff to work from home during lockdown and people are coming in droves to work for us after losing jobs because of covid". Interviewee 3 was in the unique position of being hired during the

pandemic, so she had first-hand experience of the process from a candidate's point of view. Her own reason for applying for the job at the DVLA was directly linked to Covid:

> "…luckily for me they [DVLA] have been recruiting more, which is why my post was created during Covid. It came at a perfect time because I had been working in my first HR job for another company before covid, but they let a lot of people go during the pandemic…"

The Estates Manager with recruiting responsibilities for their department was the only respondent who said that the Covid-19 pandemic had slowed down recruitment, but he was speaking for his department only:

> "[Covid] has [slowed down recruitment] for us because, my department deals with staff who have to be here on the estate. We didn't recruit any extra staff during the covid pandemic…"
> (Interviewee 4).

When asked specifically about the changes in recruitment since Covid, almost all of the respondents mentioned a switch to online interviews. Two went even further by mentioning that face-to-face interviews were completely removed at that time. Two also mentioned the situational judgement tests (SJT) that are used to assess decision making and judgement in a certain scenario or situation, and only one mentioned practical tests. The use of these tests is a measurement process to help gather and express information about a candidate's suitability for the job by assigning scores that represent certain attributes and the extent to which a candidate has these attributes (Heneman & Judge, 2006). Such measurements have always taken place at interviews, but it is interesting to note how the DVLA have changed to SJTs to measure candidates, making it more of an electronic process than previously.

As mentioned above, interviewee 3 had a unique perspective as she was hired for her HR role at the DVLA during the pandemic:

> "I wasn't actually working in HR(DVLA) before covid, so I can't comment on how they hired staff before. My interview for this job was online, so I know that that's how they were doing it then, and that's still being done a lot now".

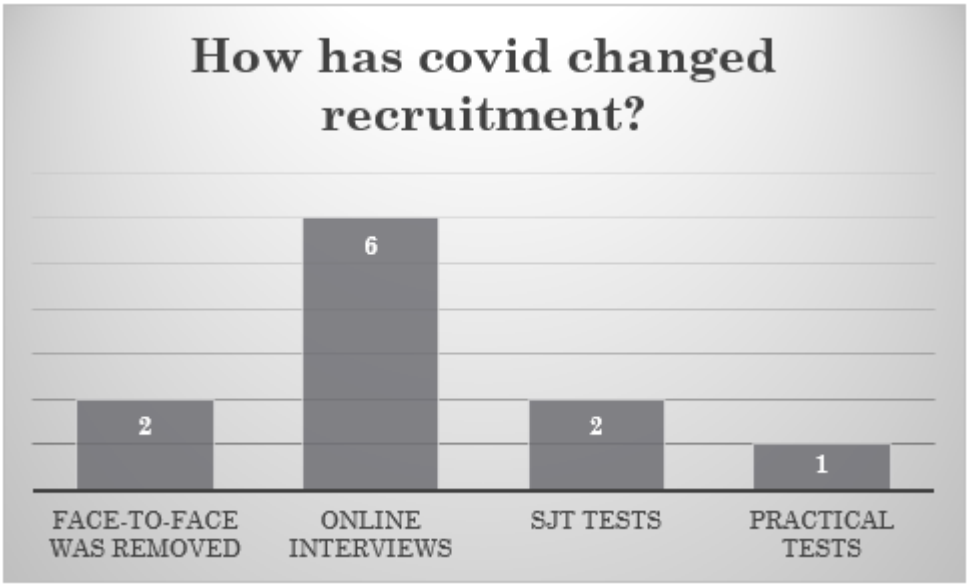

Figure 4: How has Covid changed recruitment in the DVLA?

Although the respondents were not asked about general changes in HR roles, some of the respondents hinted at the complexity of their role. For example; "There's so much that we do nowadays that technology can take some of that off us…" (Interviewee 3).

The next part of the literature review discussed the need for HR to understand and respect diversity. A survey conducted by the Human Resources Professional Association concluded that "even when employers strive to be inclusive, they may

subconsciously lean toward candidates who are most like them, or what they call 'unconscious bias'" (Ahmed, 2018, p. 973). There is potential for AI to eliminate such human bias to bring in more diversity to the organisation, but there is also a risk that it could reduce the chances of suitable candidates being asked to interview because they might not have the qualifications, whereas humans could bypass this and choose to interview them based on their experience. The diversity question was only asked to the managers. The director of the DVLA deflected the question away from AI to the technology that is being used, which is situational judgement tests (SJT) that "use a scoring regime which will ignore any diversity impacts" and mentioned that all department in the Civil Service operate a Guaranteed Interview Scheme (GIS) for applicants with disabilities. He followed this up in a later question with the following:

> "We are still under representative of local demographics in Swansea but nationally with the addition of Birmingham we are now much more reflective of society overall. We'll always be able to do more though" (Interviewee 1).

The estates manger stated that:

> "Yes, I think AI can take diversity and inclusive representation into account when selecting potential hires if it has been programmed to look for certain information and select them based on that as long as they are suitable for the job in other ways. Experience I mean" (Interviewee 4).

The lack of other responses in this area makes it inconclusive as to the DVLA's ability to ensure that AI could be programmed to ensure fairness regarding diversity and inclusion.

Interestingly, when researching secondary information about AI and diversity in recruitment, there were mixed results. Some of the positive reactions to AI for

recruitment include AI's ability to "bring more diversity, specifically across race, gender and age, to the attention of more employers" (Parker Walsh, 2022). This is echoed by Ash Varma (2020) who stated that "there are a number of hopes that AI will allow for a much 'fairer' diverse and inclusive view of a candidate's potential by trying to eliminate some of the core unconscious biases that can sometimes arise" (cited in Forbes, 2020), although there is recognition that there is still much to be studied in this area. However, there are several counter arguments to this from research with neurodiverse job hunters such as those with dyslexia, autism, dyspraxia and attention deficit hyperactivity disorder (ADHD). The United Kingdom has seen a 33% rise in employment tribunals relating to neurodivergence in 2020 as applicants felt they were unsupported or dismissed for reasons connected to their disability (HR News editorial team, 2022). This is a worrying figure if human bias is translated into AI. Nancy Doyle started a campaign for making AI recruitment more ethical in this regard. She asks; "is it unlawful, or should it be – to reject a job candidate with ADHD who is unable to sit still, because the AI video interviewer interprets this as fidgeting and potential lack of interest?" (Doyle cited in Disability Ethical? AI, 2022). Furthermore, she pushes back at claims that AI can avoid discrimination based on race, gender or age, but omits disability considerations arguing that "artificial intelligence that doesn't understand reasonable accommodations is not intelligent" (Doyle cited in Disability Ethical? AI, 2022). While this is true, it could also be argued that applicants with ADHD who make it as far as the video interview stage could ask for a human interview as part of a reasonable adjustment. This, of course, suggests that AI interviews are not appropriate for all applicants, but it does not address potential issues with screening and sorting applications only.

The literature review discussed the need for HR to manage agility and flexible working. When asked about working remotely for the DVLA in the future, most

respondents agreed that it would not be possible to work remotely without ever coming into the offices. Of those who said that it could be possible, two mentioned the need to at least come in for equipment, and another said that it would depend on the job. The director claimed that the normal expectations for people working remotely would be to spend 40% of their time on site, unless in a business continuity arrangement that would require full homeworking.

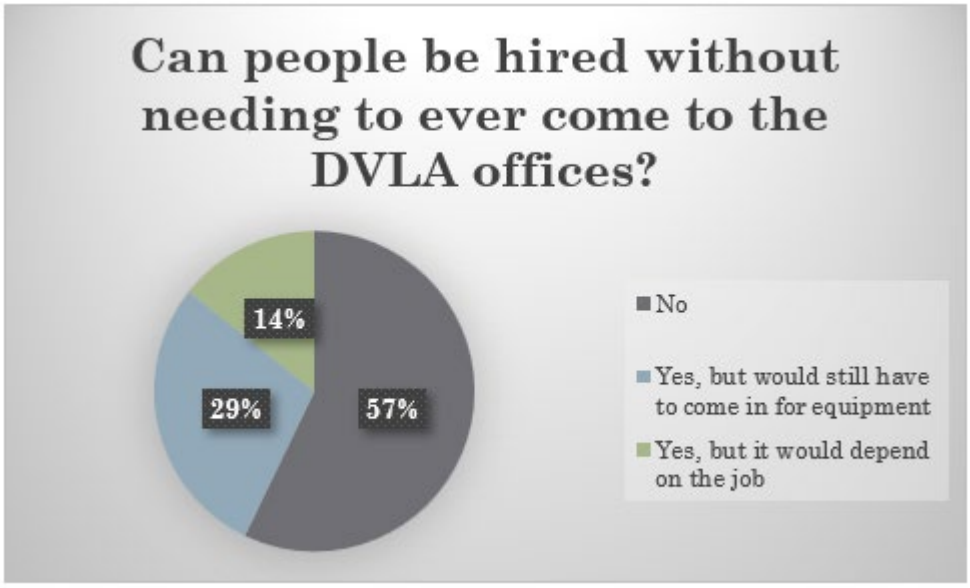

Figure 5: Is remote working possible without ever needing to come to the DVLA site?

The final issue for the changing roles in IT highlighted in the literature review was technology skills. Most of the respondents indicated that they were comfortable in using technology, such as SJTs for assessing applicants' decision-making processes, using video conferencing such as Teams and Zoom, communicating via email, and social media marketing. Some respondents also mentioned using automated processes such as automatic calendar appointments and monitoring chat bots. Secondary research confirms that most companies think technology is important, with 74% of HR executives[2] confirming that "new technology is 'important' or 'very

[2]Deloitte survey completed by nearly 10,000 respondents in 119 countries.

important' in their organization" according to one study (Deloitte, 2020). However, in the same study it was revealed that just 6% felt their company uses "the best-in-class processes or technology". This suggests that there is scope for most companies to update the technology they use. Furthermore, of the HR professionals surveyed within that study, 65% thought that HR technology is 'inadequate' or 'fair' at achieving its overall objectives (Deloitte, 2020). This could explain a reluctance to embrace AI technology in HR as historically, HR technology has been received negatively across the globe despite companies investing billions in it.

Section two of the literature review focused on current technology in the DVLA and if the DVLA could handle AI for recruitment. The director was asked about the ability of the DVLA's IT department to manage new recruitment technology. The response was that he assumed they would be based on the programmes they currently manage, but this response was not enough to determine if the IT department could manage and maintain AI. Unfortunately, no members of the IT department were willing to take part in this study, so further information could not be gained.

The final part of the literature review looked into artificial intelligence for recruitment, which was the focus of the interview questions. The interview with the director of the DVLA gave some important insights from the perspective of senior management. Although this is a study into the possibility and feasibility of streamlining the recruitment process with the help of AI technology, the argument put forward by the director is that AI is not being used and will not be used in the DVLA in the foreseeable future. In the interview, it was stated that; "We don't use AI generally in recruitment. Currently all sifting is completed by managers" and in response to another question about bringing in AI in the future; "No current plans to do this as we still like the managers involvement in the process". However, the

interview revealed that streamlining of recruitment in the DVLA has already happened with other methods that are more cost effective, convenient, and reliable:

> "We have been using recruitment consultancies to support senior or niche roles where the marketplace is more specialist… We will be running smaller, more frequent schemes in the future rather than bulk schemes with large merit lists to call off. We'll recruit smaller numbers when we need them".

These methods are delivering positive results as illustrated by the massive recruitment drive (with no Artificial Intelligence) during and after the Covid-19 pandemic. Indeed, according to the director, covid had "increased the need for recruitment as the availability to homework has opened career avenues that may have been more restrictive before covid" (Interviewee 1).

When asked about the cost of the DVLA's current recruitment strategy compared to the cost of getting and maintaining AI, the response was; "The only direct cost I see is marketing which we have tended to do on social media. This is around £4k per scheme" (Interviewee 1).

Of the seven respondents, only two responded positively to using AI to take on some of the HR tasks:

> "Yes, there is scope for that. I think answering basic questions could definitely be done by chat bots. I'm sure AI could definitely filter out some of the unsuitable candidates if it had the right information, so we only have to sift through the potential candidates. It would be good to have automated emails sent out to successful applicants, and have AI store responses so that appointments are automatically made on the calendar" (Interviewee 2).

> That's the future isn't it. In my old job we were doing a lot with chat bots. It saved a lot of time. We still had to jump in if someone asked for a person, or if the chat bot got stumbled, but when it was just routine questions, the bot took it… I don't have a problem with it [AI]. There's so much that we do nowadays that technology can take some of that off us (Interviewee 3).

These were both female HR professionals aged 26-45. Of the five respondents who were not keen on embedding AI to take on some HR tasks, four were male aged 46+ and one was female aged 26-45.

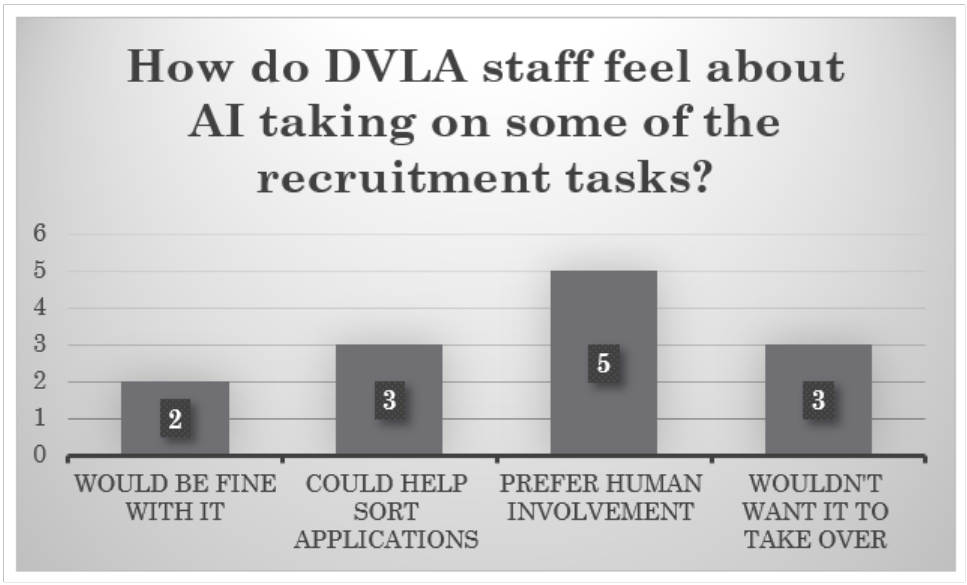

Figure 6: Thoughts on AI taking on HR tasks

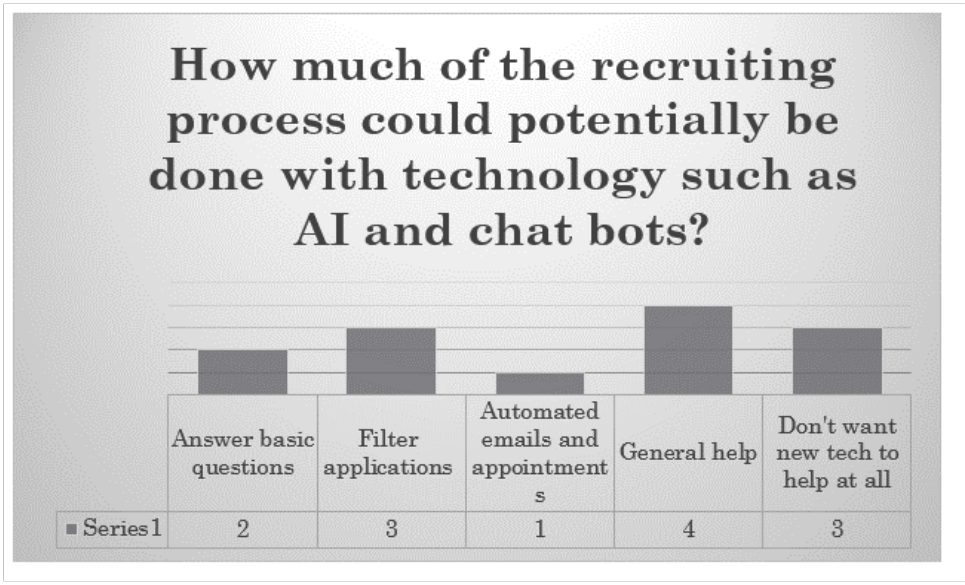

Figure 7: what HR tasks could AI do?

When asked what AI could do to help, there were some vague responses such as; "I think that kind of technology can help" (Interviewee 5). The more specific answers were that AI could help with sorting or filtering applications, with three respondents mentioning this. Interviewee 4 said that "it could be helpful to sort out the suitable applicants", and "It might have its uses in processing applications" (interviewee 6). Interviewee 2 also mentioned sorting applications, but still wanted to be involved with sifting through suitable applicants, with AI only being used to reject unsuitable ones. The secondary research supported the idea that AI is useful for sorting applications, especially with the ability to verify the information of job application forms and Curriculum Vitae (CVs). According to Cook (2016), numerous studies have shown an alarming amount of people make false or inaccurate claims when applying for jobs, especially when talking about previous experiences and salary, and reasons for leaving previous employer. The Internet and other sources of electronic media are unable to circumvent these problems, but artificial intelligence could be used to check the employment and educational history of applicants quickly and efficiently. As stated by Kan, "AI can search their CV, history and social media to verify employment and experience" (cited in Forbes, 2020). Applicants with discrepancies

between their documented history and their applications can be flagged for HR professionals to check up on. As well as making sure suitable candidates are shortlisted, this could also stop undercover reporters gaining entry to government agencies with false information. However, there are legal issues to consider when using software to search for information about people, to ensure that no non-job-related data is searched (Heneman & Judge, 2006).

Two of the respondents mentioned that AI such as chat bots could answer some basic questions to candidates: “I think answering basic questions could definitely be done by chat bots” (interviewee 2). Although interviewee 2 was positive about chat bots, she did not want to have any responsibility for programming responses, because; “I wouldn’t want to be blamed for overlooking something or for it going wrong”. This would suggest that she has more confidence in her ability to answer questions in real time, than to think of suitable responses to potential questions. Only one respondent considered automated emails and calendar appointments for candidates.

The secondary research highlighted far more advantages of AI in recruitment than indicated in the results of the interviews. For instance, Mahmood (2017) wrote an article pointing out how AI can save time through automated screening, attract top talent through improving candidate experience, and decrease turnover through quality hires that are a good organisational fit. This is supported by Westover (2020) who stated that “AI can also help to identify candidates with strong person-job fit and person-organization fit during the recruitment, screening and selection process” (cited in Human Capital Innovations, 2020). Further to this, Rojewska (2020) wrote an article about how AI can work faster and produce better results than relying on humans alone, in areas such as analysing and shortlisting CVs, collating information to consolidate data, scan social media platforms to construct detailed candidate

profiles, and interact with applicants through chatbots. As well as the ability to deal with the selecting tasks, Rojewska also goes on to point out how AI can be useful at the interview stage by analysing body language and micro facial expression, and vocal tone(Rojewska, 2020). Another potential benefit to using AI is the time it takes to fill a newly vacant role. According to Ahmed (2018), "AI candidate sourcing algorithms can reduce time to hire from 34 days to 9 days" (p.976). These are all valid points to show the positives of using AI in HR that were not addressed within the interviews.

The literature review also discussed the need to balance AI with human intervention. The interviews support the idea that human intervention is needed to balance AI technology with the skills, training and instincts of HR professional. Indeed, the most frequently cited reason for not wanting AI was because they preferred the human interaction. Interviewee 1 stated that "we still like the managers involvement in the process". Interviewee 2 was supportive of AI, but stated; "I would be fine with it as long as it's done properly, programmed by somebody else, and we still have heavy involvement". Interviewee 5 was concerned about people with mental health difficulties being overlooked by AI, and felt that human intervention would be needed at each stage to ensure this didn't happen:

> "I think that kind of technology can help, but we need to be involved at each step anyway, so I think it would be a waste… technology can help companies like ours but we wouldn't know the true person through a robotic screening process. Like, people who suffer with mental health or have a disability might be screened out, and we wouldn't be able to see their true potential… artificial intelligence wouldn't be able to see the true potential in certain applicants, so there needs to be HR staff stepping in at each stage of recruitment and screening. Artificial intelligence wouldn't be able to make the decisions we are trained to make".

Interviewee 6 showed a similar point of view by stating “I don’t think you could ever beat the human interaction and instinct”, and interviewee 7 mentioned that with AI, “You’ll lose the human element”. Although there was an emphasis on the human instinct for recruitment within many of the responses, research shows that this does not always work out. According to Ahmed (2018) recruiters often hire on a ‘gut feeling’, sometimes making decisions within the first minute of meeting a candidate. This is often based on “look, handshake, attire, or speech” (p.974). Even when tests and simulations are used to assess candidates, managers still report getting 30-40% of their hires wrong (Ahmed, 2018). This could suggest that although human interaction and instinct is preferred, it might not be the most appropriate method of selecting and hiring. That said, other secondary research findings supported the primary research findings. For instance, Koh (2020) stated that “some job matches are still best found through relationships”; and Sanderson (2020) argued; “unlike technology, human recruiters are able to have a conversation with candidates… AI isn’t going to be able to provide true insight into a company, or answer the difficult questions a talented candidate might have”.

Three respondents indicated a concern about technology taking over. Interviewee 2 who was positive about AI, stated that “I wouldn’t want technology to overtake”. Interviewee 4 said that AI could be helpful in sorting through applications “as long as it only helps instead of taking over”. Interviewee 7 was concerned that “if it [AI] comes into play, it could do away with HR eventually”. The secondary research also supports the idea that technology could take over some areas of recruitment. Koh (2020) states that “With AI becoming more sophisticated and being able to present more candidates to organizations with a specific search for a job match, headhunters would be put out of a job”. In contrast, interviewee 3 who was enthusiastic about AI and had used it in previous work, said that there was no fear of technology replacing human staff:

> "…the staff do more than what the machines can do… We do so much that if people think using technology is going to replace us, it's an insult to us…".

The purpose of using AI in the DVLA would be to streamline the recruitment process. However, Elsey points out that AI often requires applicants to perform tasks such as quizzes, making videos, completing games and taking timed tests simply to apply for a job. This is to help gather data for artificial intelligence to synthesis before going onto the next stage of recruitment where they would be interviewed by an interview panel. While potentially making the process simpler for the HR professionals, this kind of recruitment makes it more complex for the candidate. Cara Heilmann from Ready ResetGo echoes this by stating that Sadly, most AI products out there tend to alienate candidates rather than engage them (cited in Forbes, 2020).

The literature review brought up criticisms of new technology and AI. Although there were some positive reactions to the idea of AI, the majority of those interviewed were negative about it.

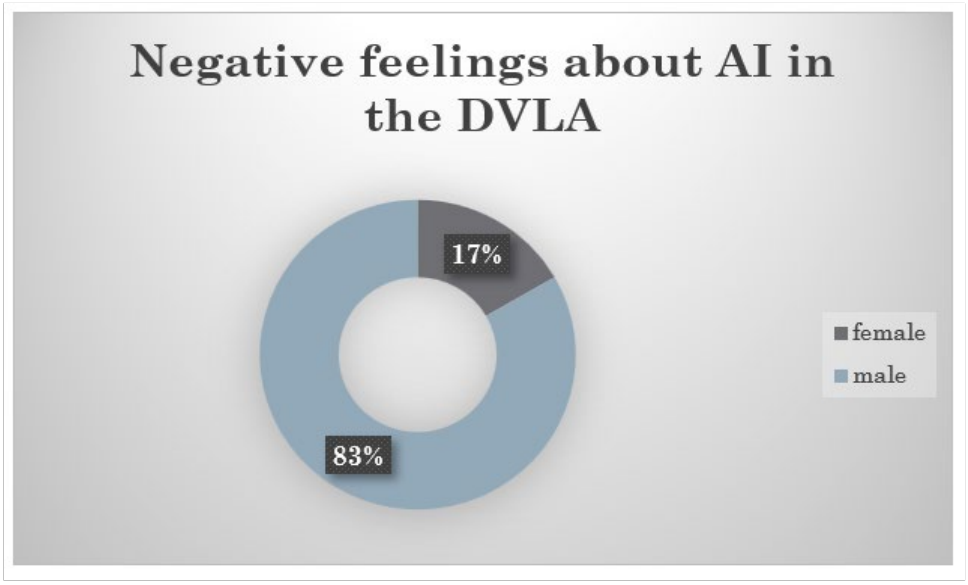

Figure 8: Negative feeling of AI by gender

Of the respondents who were negative about AI, 83% were male and 17% were female. Another way to look at it would be that 100% of the males interviewed were against AI in the DVLA, whereas only 33% (one out of three) of the females interviewed were against it. This would suggest that females are generally more positive about it than males, which goes against the literature cited in the methodology chapter. However, a larger sample would be needed to determine if this is actually the case. The same percentages apply for age range which would also suggest that people over 46 are less trusting of new AI, which is supported by the literature on the topic, but again this would require a larger sample for conclusive results. Interestingly, interviewee 6 was a 46+ male who was opposed to AI taking on HR tasks, but he mentioned that he loves new technology at home:

> "I'm the first to get new gadgets and new tech at home. I wouldn't be without my [Amazon] Alexa at home, and Siri on my phone [iPhone], but I'm not eager to get it into the workplace".

This would suggest that he does not conform to the resistance of technology sometimes associated with his age group but has different reasons for not wanting it in the workplace.

4.4 Conclusion

Several of the interviewees, including those with senior management positions, indicated that managers as a human resource in recruitment are more efficient and effective than reliance on artificial intelligence, which may be too expensive, unreliable, and not entirely appropriate for the business needs of the DVLA. Recruiters must engage with new tools as they emerge and look ahead to predict the impact of such technological developments on their organisation. The managers at the DVLA have done this with AI and decided not to use it. Managers know best what works and what does not. Artificial intelligence with all its glory and associated benefits is not suited for the DVLA at this time, hence not being used. Furthermore, recruitment has

improved tremendously and will continue to get better with other, more practical, and efficient methods that do not include artificial intelligence. There was not enough information to be able to conclude if the DVLA's IT department would be able to manage and maintain AI for recruitment.

The interviews revealed that there had been a shift toward online interviews during the covid pandemic and that there was agreement that the DVLA had changed the recruitment process. There was also general agreement that the DVLA recruited more staff during the pandemic. This highlights the need for effective recruitment processes. The general feeling towards AI taking on some HR tasks was a negative one. Some were able to point out where it could be useful but were quick to also point out why they would not want it or why human intervention is preferred.

A larger sample would be needed for further numerical data and patterns, such as the impact of age and gender on attitudes towards AI, but that was not the primary purpose of the study. The study did reveal how DVLA staff feel about AI, which was the main focus of the study.

Chapter 5: Conclusions and Recommendations

5.1 Summary

The purpose of this study was to find out if emerging technologies such as artificial intelligence would be appropriate for streamlining the recruitment process in the DVLA. Many organisations around the world have already embraced such technology, while others are still following the traditional methods of advertising in newspapers, manually sifting through application forms and giving the shortlisted candidates face-to-face structured interviews. The DVLA have always been ahead of the curve when it comes to new technologies for their research department, but in their HR department, there is scope for change, especially after the Covid-19 pandemic forced a change in how HR hired new recruits.

Although the technology used for recruitment during the Covid-19 pandemic had proved useful, it posed some problems that would have been avoided with the normal Human Resources (HR) recruitment process which involves physical interaction with applicants. For instance, the vetting and physical observation have been ignored or missed through remote, online recruiting. This meant that some hires were not appropriate as they were not seen by the HR staff with their expertise in recruitment.

The literature review highlighted the changes within HR departments generally, which served to illustrate the need for looking into alternative methods for the DVLA in conducting some of the recruitment process. The literature review also pointed at the DVLA's current use of technology, to show how it is a technological company and could

theoretically handle new technology for recruitment. However, this was not conclusively confirmed in the primary research. The literature review detailed some options for recruitment technology. The purpose of the literature review was to underpin the main theoretical discourse relating to this study, to provide context and a basis for the interviews that were undertaken to complete primary research for this study.

The secondary research showed more ways that AI could help with recruitment than those mentioned in the interviews. Upon reflection, this could be because open-ended questions relied on what respondents could think of at the time. A questionnaire or survey that asked respondents to tick all tasks in which they believed AI could help, from a predetermined list of options, might have produced different results. That said, the fact that some respondents did not think of some of the benefits mentioned in the secondary research is indicative of what DVLA staff prioritise in their roles and what they understand about AI.

Although most interviewees were able to point out some tasks where AI might help in recruitment tasks, the feeling towards AI actually doing this was negative. This was echoed by the director of the DVLA who stated that they had no intention of using AI, but were using other recruitment strategies to replace the pre-covid ones, and update the methods they were using during the Covid-19 pandemic.

Furthermore, the director of the DVLA indicated that agility can be achieved without the use of AI to streamline recruitment by removing the need to use the central recruitment service to allow a more agile local approach tailored around local needs.

The main questions to be answered within this study were:

1. Can the DVLA manage new technology for recruitment, and is there a need for such technology?

2. Do the HR staff want technology to take on some of the recruitment tasks to free them up for more complex tasks?

The research hints at the DVLA having the capability to manage new technology for recruitment, but due to lack of IT staff willing to participate in the interviews, this was inconclusive. More importantly, the DVLA showed that there was not a need for such technology. One reason for this was the DVLA are working on new recruitment strategies, and the other is that the majority of HR staff interviewed were not keen on AI taking on any recruitment tasks. This also answers the second question regarding HR wanting technology to take on recruitment tasks. The general feeling towards this idea was negative.

To sum up, taking into account the needs of the DVLA staff and the cost of AI, along with the recent improvements made to recruitment since coming out of Covid-19 lockdown, there is no immediate need to streamline the recruitment process with AI at this time. That said, there is still scope in the future for AI to take on some of the smaller tasks such as answering basic questions and screening application forms, with the other recruitment tasks still being performed by HR professionals.

5.2 Recommendations

Recommendation 1: Allow choices.

Although there is no immediate plan for the DVLA to bring in AI technology to the recruitment department, if this is something that happens in the future, it is recommended that flexible options are factored in when designing automated application forms, so that candidates can choose if AI is appropriate or not. This can

help reduce discrimination against people that AI might not be able to understand (because of broken English, heavy accents, or movements relating to a disability or health condition). Human intervention should still be present at every stage of recruitment if AI does take on some roles.

Recommendation 2: Only use AI for chat bots and screening.

If the DVLA were to bring in AI into the fold for some of the recruitment tasks, it should only be used for answering basic questions for candidates in the form of chat bots, making automatic calendar appointments for applicants, and/or for filtering, screening and sorting application forms. HR should still process the application forms identified by AI as suitable, and human staff should still take care of all the interviews and inducting new recruits.

Recommendation 3: Look at the costs.

It is recommended that the cost of AI is weighed up against human cost before rejecting it based on cost alone. Human cost is high because people take days off sick, holidays, go out for breaks, have cigarette breaks, come in late, leave early, come in with hangovers etc. Furthermore, HR staff are not required to work 24 hours a day, meaning they are not on call for queries from potential candidates after office hours. AI machines can continue running when people are not working and can take on some of the strain during staff shortages.

Recommendation 4: Maintain options for those without access to computers.

Electronic recruitment is unarguably being more frequently used, and more so since Covid-19. While there are arguments for electronic recruitment due to its accessibility and opportunities for various methods such as simulations, videos and online tests, there are several drawbacks. Recruitment through electronic means can create barriers for those without access to computers. It is assumed that everyone has access to a computer or at least a smart phone, but this assumption can damaging, especially

for creating barriers to those who are economically disadvantaged. Furthermore, not everyone with computer access is computer literate enough to go through some of the electronic recruitment processes. A lack of computer literacy should not be a hinderance for getting a job interview unless it is for a role that requires computing skills. A recommendation is to supplement any online recruitment activities with alternative options. For example, while the DVLA use their online careers portal to advertise job vacancies, they should not stop advertising in other formats such as newspapers. The applicant should also have an option to fill out a paper application form, unless the job requires strong computer skills.

Recommendation 5: Change Management Theory.

The literature review touched on the challenge of HR staff being reluctant to use new technology, especially if they are happy to do the work themselves and are resistant to taking on new and different HR roles while AI takes care of part of the recruitment process. It is recommended that the DVLA apply change management theory to help guide staff into a more technological future and a change to the work they do on a daily basis.

5.2 Areas for further research

This research focused on AI for recruitment, but the DVLA should do further research to investigate the potential for bringing AI into other areas. As seen in the undercover investigation by a reporter who had gained entry to the DVLA as an employee, DVLA customers had to wait months to get their driving licenses due to a backlog caused by Covid-19. This wait was exacerbated for drivers with a disability or medical conditions, because they must wait for the DVLA to assess them before they can issue a license. One customer wrote to her local paper claiming that

“I’m all for them checking with the specialists, but they need to do it in a timely way and not discriminate against people who have a condition. I can understand a few days longer for processing, but to wait seven months to send a form that needs to be filled in – that’s just ridiculous.” Jennifer Kirchacz cited in (Harper, 2022). An online version of the form would have saved time for the customer as they wouldn’t have to wait for the DVLA to send the form, and AI could scan the applications, allowing the staff to prioritise those who need an assessment while the other eligible applicants could get a license sent automatically providing their forms are complete and show no anomalies that would need to be checked.

This research only looked at the feasibility of using AI from a HR perspective. For a fuller picture it would be useful to complement this research with a study on people who have applied for jobs and interacted with chat bots as part of the process, to ask how they felt about it, as well as people who have had AI interviews.

5.3 Research implication

The findings of this research are important for the DVLA and HR departments in other organisations for the following reasons. Firstly, the findings show that the DVLA should not be looking toward AI or other recruitment technology that they are not currently using at this time. However, should the DVLA decide to look into this option in the future, this research has shown what options are available and which approaches would best suit the DVLA. For instance, it has been established in this study that human intervention is crucial for recruitment at the DVLA, so the best approach for the DVLA would be to use AI only in screening applications and answering basic queries, not for conducting interviews. Secondly, the research undertaken has provided options for other companies to potentially draw from.

5.4 Research contribution

This research has created the groundwork for AI options for the DVLA if they consider it in the future. Furthermore, it has provided an analysis of AI that other companies might benefit from. Although the research revealed that AI is not the best solution for the DVLA at this time, the research might have uncovered options that are suitable for another company.

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Appendices

Appendix 1: Ethics approval

[removed for confidentiality]

Appendix 2: Framework for interviews

Framework for DVLA Director

- How have Covid issues affected how the DVLA recruits and hires new staff members?
- Has Covid slowed down recruitment?
- Can somebody be recruited and start working from home without ever coming to Swansea?
- Is recruitment at the DVLA now going to be global? (if so, how is this going to work?)
- Would IT staff be able to manage new recruitment technology?
- Do you think AI take diversity and inclusive representation into account when selected potential hires?

- Demographic information: could you confirm your gender and age bracket:
    - Under 25, 26-45, 46+
    - Male, female, non-binary

Framework for recruitment manager

- How have Covid issues affected how the DVLA recruits and hires new staff members?
- Has Covid slowed down recruitment?

- Can somebody be recruited and start working from home without ever coming to Swansea?
- Is recruitment at the DVLA now going to be global? (if so, how is this going to work?)
- How much of what HR do could potentially be done with technology such as AI - chat bots etc.?
- Do you think this type of technology could help HR staff and help candidates?
- How do you feel about artificial intelligence/chat bots taking on some of the recruitment tasks?
- Do you think AI take diversity and inclusive representation into account when selected potential hires?

- Demographic information: could you confirm your gender and age bracket:
    - Under 25, 26-45, 46+
    - Male, female, non-binary

<u>Framework for estates manager (with recruiting responsibilities)</u>

- How have Covid issues affected how the DVLA recruits and hires new staff members?
- Has Covid slowed down recruitment?
- Can somebody be recruited and start working from home without ever coming to Swansea?
- Is recruitment at the DVLA now going to be global? (if so, how is this going to work?)
- Do you think AI take diversity and inclusive representation into account when selected potential hires?

- Demographic information: could you confirm your gender and age bracket:
    - Under 25, 26-45, 46+
    - Male, female, non-binary

Framework for other HR staff

- How have Covid issues affected how the DVLA recruits and hires new staff members?
- Has Covid slowed down recruitment?
- Can somebody be recruited and start working from home without ever coming to Swansea?
- Is recruitment at the DVLA now going to be global? (if so, how is this going to work?)
- How much of what HR do could potentially be done with technology such as AI - chat bots etc.?
- Do you think this type of technology could help HR staff and help candidates?
- How do you feel about artificial intelligence/chat bots taking on some of your roles?

- Demographic information: could you confirm your gender and age bracket:
    - Under 25, 26-45, 46+
    - Male, female, non-binary

Appendix 3: Interview Transcripts

[removed for confidentiality]