

Transitioning to the present workplace:
When technology, Emotional Intelligence, satisfaction and motivation collide

A quantitative investigation of how attitudes towards technology (ATT) shape satisfaction and motivation in the workplace. Moreover, examining if an employee's Emotional Intelligence (EI) moderates the relationship.

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Abstract

There is a lot of debate surrounding technology and the global market. A lot of this discussion is set in futuristic narratives. Consequently, it is argued it is important not to overlook the present impacts of technology. This research investigates how attitudes towards technology (ATT) shape satisfaction and motivation in the workplace. Previous research highlights how Emotional Intelligence (EI), or the ability to understand and regulate one's emotions, support individuals navigating through sensitive situations. Thus, the research hypothesis there would be a relationship between ATT, EI, satisfaction and motivation in the workplace. Furthermore, it was hypothesised EI moderates the relationship between ATT, satisfaction and motivation. 100 participants took part in this study, completing questionnaires assessing their ATT, EI satisfaction and motivation in the workplace. The findings highlight correlations between: ATT & satisfaction, EI & motivation and satisfaction & motivation. However, it is important to note that while EI is not directly moderating the relationship between ATT, satisfaction and motivation, the relationship is not completely parallel. As the research found a connection between satisfaction and motivation in the workplace, thus when examining the whole research there is interdependence between ATT and EI. The findings highlight the importance of providing support for employees. Such as set up policies and initiatives to encourage both positive ATT and strengthen EI in the workplace.

Research Student Declaration Form

Submission of Thesis and Dissertation

National College of Ireland

Research Students Declaration Form

(Thesis/Author Declaration Form)

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Abbreviations

Attitudes Towards Technology
Emotional Intelligence
Pearson's product moment correlation
coefficient

ATT
EI
PMCC

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Section 1: Introduction

Technology continuously changes the world, and specifically the workplace. Globalisation and technology enable people to communicate effortlessly regardless of location, creating a tight-knit global economy. The current climate is adjusting to a world where machines are becoming intelligent. Hirsch (2017) discusses automation anxiety coupled with the uncertain future as technological innovations are impacting previously unthinkable industries. For example, the University of California developed a successful AI therapist, named Ellie. IBM's AI 'Watson', not only is the reigning Jeopardy champion but is also an accomplished accountant and is successful diagnosing cancer (Levit, 2019). In *Talking to Strangers*, Gladwell (2019) discusses how a software using algorithms to determine bail in courtrooms, is 25% more accurate than judges at determining flight risk and probability of reoffending. In *21 Lessons for the 21st Century*, Harari (2018) discusses how technology is transforming the labour market, highlighting a particular AI technology that is able to accurately diagnose patients in place of doctors. There are many narratives in the media surrounding technology in the workplace. It seems no industry is safe. Harari (2018) concludes his book by recommending meditation to the modern employee to remain grounded in this ever-changing and uncertain world.

'Automation anxiety' is not a new phenomenon, instead continuously reappearing in history and predating modern technology (Coupe, 2019; Autor, 2015). Technology and globalisation continue to shape the global market, reinforcing 'automation anxiety' in the modern workforce. Both presently and historically, there is much debate forecasting either positive or negative effects of technology. Most agree this new intelligent technology will change the global economy and workplace, but there is much debate to what the impacts will be. For example, the McKinsey Global Institute (Bughin, Hazan, Lund, Dahlstrom, Wiesinger and Subramaniam, 2018) study illustrates automation significantly changing desired skill-sets in the labour market, predicting a drop in physical, manual, and basic cognitive skills, and an increase in high cognitive, social and emotional skills, with the most significant increase (60%) in technological skills. Teng, Ma, Pahlevansharif and Turner (2019) argue current 'corporate' education systems create a global 'soft skills gap'. This research is both focused on organisations' feedback on recent graduates and future trends, concluding, overall, the workforce has a lack of EI. As EI has been linked to employees' adaptability, communication and relationship building (Aydogmus, 2019), it is suggested that EI is a crucial skill set for navigating the ever-changing workplace. Emotional Intelligence (EI) is an important tool to understand employee attitudes in the workplace. There is significant research investigating EI impact on the workplace.

Change is coming is the consistent mantra associated with technology. However, it is suggested change is here. Although there is immense value in planning for the future, the present should not be overlooked. The purpose of this research is to investigate how technology is impacting the present workforce. Moreover, how employees are dealing with change, specifically surrounding satisfaction and motivation. This study has uncovered a gap of research exploring the intersectionality of attitudes towards technology (ATT) and emotional intelligence (EI), specifically how they shape attitudes within the workplace. Cunningham (2016) argues the miss-match of needs and skills created by technology, has resulted in a high self-categorization of underemployment, thus, a lack of engagement and satisfaction in the workplace. It is hard to dispute the growing dependence on technology, especially in the workplace. Eighty-five percent of the participants in the study find technology necessary to perform their current job successfully. Much of the research surrounding technology in the workplace, often futuristic, highlights the anxiety and uncertainty attached to technology. This research wishes to examine current attitudes towards technology in the workplace: *How do attitudes towards technology (ATT) shape satisfaction and motivation in the workplace? Furthermore, does an employee's Emotional Intelligence (EI) moderate this relationship?*

This research focuses on two main aspects of technology in the workplace. Firstly automation, “defined as the performance of tasks or activities by machines, including robots and computers, rather than humans” (CIPD, 2020b, p. 5). Secondly, surveillance is described as ‘electronic performance monitoring’ or utilizing technology to monitor quantitative factors in the workplace, for example, time taken for breaks, number of emails sent, ect (Furnham and Swami, 2015, p. 1669). This research utilises online questionnaires to measure employees ATT, EI, satisfaction and motivation. Section Two is a review of the relevant academic research surrounding: ATT, EI, satisfaction and motivation in the workplace. Section three outlines the purpose of the research and the hypothesis proposed. Section four explains the methodology chosen for this research. Section five will review the findings and Section six will discuss the relevance of the findings. Section seven will discuss the conclusion and the recommendations moving forward.

Section 2: Literature Review

This section, drawing upon theoretical and empirical research, provides an overview of previous research surrounding technology, EI, satisfaction and motivation in the workplace. This section is the foundation of both this research and the hypotheses outlined in Section 3. Moreover, the theories and research discussed in this section connect with Section 4 which will discuss the methods used for this research.

Technology in the Workplace

Technology drives innovation and change in the global market, pressuring organisations to adapt to remain competitive. Estlund (2018) argues automation is driven by organisations' desire to cut costs and to escape responsibilities associated with the employment relationship. Often fear is associated with automation. One study depicts 86% of employees believe they must reinvent their skills due to technology (Deloitte, 2019). Furthermore, 40% believe their jobs are directly threatened by automation (Deloitte, 2017). In one study 57% of employees believe there will be considerable changes to their current role as a result of technology, with only 28% agreeing they have received adequate training and development to support with these changes (CIPD, 2020b). Moreover, only 32% of employees believe technology will improve the quality of their position (CIPD, 2020b). Coupe (2019) argues that although automation is linked to job insecurity, it is rarely the sole cause of the insecurity which more often than not is coupled with other issues. Autor (2015) concludes that automation anxiety is an overdramatized issue, automation has been turned into a 'bogeyman'. It is possible the fear around the future of technology, is utilised to overshadow present issues in the workplace. It is important to note. much research surrounding automation within the workplace is framed with a futuristic lens.

Within the futurist narrative, fear is a recurring theme, however, impacts vary in further findings and theories. Many argue technology will create a shift in skills needed. Autor (2015) argues there will be a significant decline in mid-level positions in the US and EU, coupled with an increase in low-wage manual intensive positions. One study shows 77% of organisations believe automation will not change their size (Bughin *et al.*, 2018). It should be noted, this report is examining the organisations' expectations for the next three years. As such, this report does not address the organisations' long term future plans. Alternatively, Levit (2019) argues the demand for unskilled labour will decrease and demand for highly skilled labour will increase. This will be due to an increase in more strategic

roles tasked with synthesising organisational goals with current technology. It is also argued that there will be an increase in demand for employees with ‘soft skills’ and a decrease in the importance of technical skills (Teng *et al.*, 2019). This is interesting, as it leaves a gap for the significance of employees understanding the technology they work with. In contrast, Spencer (2018) explores automation through Marx and Keynes framework, concluding within academia many are confident unemployment will rise as a result of technological advances. However, whether this decline will be positive or negative is currently being debated (Spencer, 2018). It is noted, Autor (2015) connected this argument to the present by highlighting that Ireland has seen a 14.9% decrease in middle-level positions. However, this is typically framed as a future problem. This continuously recurring narrative suggests a need to closely examine the real impact on the present labour market.

Some argue automation will lead to the phenomenon of underemployment (Teng *et al.*, 2019; Cunningham, 2016; Autor, 2015;). Cunningham (2016) believes low-level skilled positions will increase and that this deskilling of labour will fuel power imbalance between workers and organisations. To put it simply, automation reshaping markets will potentially create fewer opportunities for increasing degree-holding employees. Resulting in an increasing competition for these opportunities. It is important to note, underemployment is often self-determined thus relevant to attitudes in the workplace. Cunningham (2016) examines technology impact in the workplace through a Marxist lens, identifying technology as deskilling the landscape of labour, reducing the demand for educated labour thus ultimately rendering a powerless workforce. One study highlights a current miss-match of skill set, as 43% of employers indicate a lack of employable candidates (Teng *et al.*, 2019). Further evidence supports this, one study highlights in the UK, 90% of employment opportunities require basic digital skills, and 12.6 million people in the UK are unsuitable due to lack of required skills (Bughin *et al.*, 2018). It is important to explore what this means for the workforce.

The global market highlights the dependency on technology and the importance of adaptability. Spencer (2018, pp. 11) argues in line with Marxists views “the problem is not technology itself, but rather the harnessing of it under capitalism. The bias towards the use of technology for profit-making, specifically, means that workers cannot rely on technology to reduce the burden of work”. One study shows 93% of employees believe the main reason technology is implemented is to increase revenue (CIPD, 2020b). Some argue automation uncovers growing inequality and job loss, especially in recent history where the benefits of automation have been enjoyed by the few at the top (Estlund, 2018). With many different perspectives, the main themes to emerge are uncertainty, change and

power. Thus it is suggested it is important to explore how technology affects the current workforce. Trust, employee-well being, productivity and surveillance were the topics in international news, as a whistleblower came forward flagging high levels of stress were a direct result from the new monitoring software at Barclays, that was implemented to drive productivity (Greedy, 2020).

Although surveillance in the workplace is not new, technology is changing how it is executed. Furthermore, technology is shaping how employees are valued in the workplace. Adler-Bell and Miller (2018) argue surveillance is driven by an obsession with efficiency and is connected to ‘Taylorism’, a management theory based on the precise organisation of workflows with the application of scientific methods. Thus the theme of control arises when discussing surveillance in the workplace. One CIPD (2020b) study highlights 73% of employees believe bringing surveillance into the workplace indicates a distrust of employees, and will damage the relationship between employees and employers. This is supported by a study that illustrates a connection between employee awareness of surveillance, negative views towards surveillance and counterproductive work behaviours (Martin, 2016).

Furnham and Swami (2015) argue that although employee monitorization is by no means a new phenomenon, in the modern era there has been a shift from service observing, or qualitative observing, to technology observing, or quantitative observing. In the ‘data-driven’ market, the transition to assigning employees values through a technological lens highlights the changing relationship between the employer and employee. Wilson (2001) argues that although surveillance can command obedience employees, it also reduces employee motivation and commitment. Ball (2010, p. 100) concludes “workplace surveillance has consequences for employees, affecting employee well-being, work culture, productivity, creativity and motivation”. Thus it is important for organisations to understand how technology impacts employees.

D’Urso (2006) examines surveillance in the workplace using Foucault's theory of surveillance. In a modern panopticon, technology enables the constant presence of monitoring in the workplace, with the observer remaining anonymous to employees. Foucault's theory illustrates how crucial employee awareness of surveillance is (D’Urso, 2006), as it clearly establishes the power dynamic between the employer and employee. Additionally, employees lack control within monitoring systems, ultimately creating passive powerless employees. This is supported by other research, which argues in ‘data-driven’ organisations, surveillance is one-sided, as often employees are not privy to what extent

they are monitored and how the data that is collected is used (Mateescu and Nguyen, 2019; Adler-Bell and Miller, 2018). One CIPD (2020b) study indicates that only 30% of employees were included in discussions around new technologies. Moreover, when employees were included in these conversations, 70% felt positive about the new technologies, as opposed to only 20% when employees were excluded (CIPD, 2020b). The recurring themes merge in literature around surveillance in the workplace: control, power dynamic, trust and transition to data-evaluation of employees.

Emotional Intelligence

The ‘new global market’ describes the ultra competitiveness organisations face in the present economy. As a result, organisations have begun to prioritise both hard and soft skills (Dean and East, 2019). Emotional Intelligence (EI) in the workplace is an extensively researched topic and there are many different schools of thought surrounding EI and how to measure EI. EI describes the ability to understand, regulate and manage one's emotions, especially in relation to other's emotions (Nanda and Randhawa, 2019). Mukokoma (2020. p. 2) highlights three dominant themes in EI discourse: “emotional perception, regulation and utilization of self and others”. Goleman (1998, p. 24) states “our emotional intelligence determines our potential for learning the practical skills that are based on its five elements: self-awareness, motivation, self-regulation, empathy and adeptness in relationships”. In other words, EI assists individuals in navigating sensitive situations. *Table 1* elaborates on these five elements. It is suggested, in the increasingly cross-functional and global market, the ability to understand one's feelings and others feelings, is crucial.

Self-awareness	Knowing one's internal states, preferences, resources and intuitions (Goleman, 1998, p. 26)
Self-regulation	Managing one's internal states, impulses, and resources (Goleman, 1998, p. 26)
Motivation	Emotional tendencies that guide or facilitate reaching goals (Goleman, 1998, p. 26)
Empathy	Awareness of others' feelings, needs and concerns (Goleman, 1998, p. 27)
Social Skills	Adeptness at inducing desirable responses (Goleman, 1998, p. 27)

Table 1: Goleman's EI Framework (Goleman, 1998)

As globalisation and technology fuel the ever changing economy, the ability to manoeuvre complex situations both with internal and external stakeholders is indispensable. In their study, Rezvani, Barrett and Khosravi (2019) find a connection between EI and strong communication within teams, resulting in enhancing relationships, increasing trust and decreasing conflict in the workplace. These findings support the competency-perform theory, which states “that skills or personal attributes can lead to effective performance” (Rezvani *et. al.*, 2019, p. 131). It is suggested, EI is not only a tool for succeeding in the competitive global market but also a means of navigating the complexities in the workplace resulting from technology. EI is linked to both self-awareness and self-actualisation, thus self-regulation (Aydogmus, 2019). Self-awareness is the core aspect of EI, enabling employees to understand their strengths and weaknesses, highlighting potential areas to improve (Handin and Steinwedel, 2006). Self-awareness is not only a tool to identify where improvement is needed, but also instils continuous improvement which is critical in an ever changing economy. This is supported by Amico, Geraci and Tarantino (2020), who conclude EI is closely connected to well-being and EI training helps prevent negative experiences within the workplace.

Many organisations' competitive advantage depends on workers' creative, adaptable and problem-solving abilities (Autor, 2015). James, Carthy and McGuinness (2016) explore employers' perspectives regarding graduates, uncover a shift of importance from IQ to EI when targeting prospective candidates, and the connection between EI and career success. This is supported by Coupe (2019), who argues to ensure success in a technology-focused market, organisations and individuals should invest in interpersonal skills such as EI. Studies show there will be a significant increase in demand for social and emotional skills in the global labour market, an increase of 26% in the US and 22% in Europe (McKinsey Global Institute, 2018). These forecasts highlight an emerging conversation shifting to the importance of 'soft skills'. It is suggested that EI will become more commonly acknowledged and discussed in the workplace. It is argued that EI is critical to businesses, it is unique to humans, thus empowers employees.

Satisfaction & Motivation

In an extremely competitive global economy, in order for organisations to remain relevant, they need to ensure maximum productivity. For many organisations, the workforce is crucial for maintaining a competitive advantage. The CIPD explains that employee engagement, which focuses on mutually beneficial employment relationships, consists of motivation, organisational citizenship, organisational commitment, and job satisfaction (2019a). Job satisfaction illustrates how content individuals are

with their daily responsibilities, employment and employer (CIPD, 2019a). Suleman, Syed, Mahmood and Hussain (2020, p. 240) believe satisfaction “reflects the enthusiasm and gratification of an individual of his/her work”. Motivation describes employees’ endeavours to achieve goals, driven by self-enjoyment or reward (CIPD, 2019a). Intrinsic motivation describes engaged employees who strive to achieve goals purely for psychological accomplishment, without the incentive of external rewards (Tziner, Fein, Kim, Vasiliu, and Shkoler, 2020). This research chooses to focus on motivation and satisfaction in the workplace and recommends further research into all the aspects of employee engagement.

Employees' attitudes within the workplace are crucial to attaining organisational goals. Dissatisfaction in the workplace is known to be associated with negative effects, such as absenteeism, turnover and lack of commitment (Suleman *et al.*, 2020). This is supported by Pau and Sabri (2015) who link job satisfaction with retention. Studies demonstrate that employees’ level of job satisfaction is connected with strong performance (Suleman *et al.*, 2020). Thus, greatly impacts the ability to achieve organisational goals. Many studies highlight the link between motivation and productivity (Tsvangirai and Chinyamurindi, 2019). Magnano, Craparo and Paolillo (2016, p.12) highlight the interdependencies of satisfaction and motivation: “one way of stimulating people is to employ effective motivation, which makes workers more satisfied with and committed to their jobs”. Fero and Dokoupilova (2009) study, which utilises online questionnaires, uncovers for employees across all generations, a relationship between motivation and good working relationships. Moreover, high motivation is linked to low turnover rates (Fero and Dokoupilova, 2009). In an extremely competitive global market, it is argued that employees' motivation and satisfaction can define an organization's competitive advantages. Consequently it is important to investigate satisfaction and motivation in the workplace.

Satisfaction, Motivation & New Technologies

It is important to note there is varied research surrounding the effects of workplace surveillance on motivation and satisfaction. Studies show a connection between surveillance in the workplace and the lowering of job satisfaction (Das, 2019; Furnham and Swami, 2015). Furnham and Swami (2015) argue an overall attitude towards authority correlated to job satisfaction. It should be noted, this study is based on self-perception, thus not capturing real-life experiences of the participants, thus may contain personal bias. This is supported by Samaranyake and Gamage (2011) who illustrate a

relationship between job satisfaction and attitudes towards surveillance in the workplace. In this study, the lower the participants' job satisfaction, the more they agreed surveillance is an invasion of privacy (Samaranyake and Gamage, 2011). One study consisting of 364 completed questionnaires, found a positive relationship between workplace surveillance and motivation (Tsvangirai and Chinyamurindi, 2019). It is important to note, the participants in this research were all permanent employees within one organisation. Thus generalisations found in this study potentially do not accurately reflect the whole workforce as a population. However, Tsvangirai and Chinyamurindi (2019) concluded that employee involvement has a powerful impact on motivation, and when organisations involve workers in surveillance it can have a powerful effect. This is supported by the CIPD (2020b) study discussed previously. This literature highlights that technology is currently shaping the present workforce. In many cases, technology in the form of employee monitoring is creating negative satisfaction and motivation. Therefore this requires attention, especially from organisations. Moreover, further research is recommended on the emerging theme surrounding the delivery of technology and how it is received by employees.

There are many different types of technology in the workplace today, certain tools like gamification are directed at employees. Gamification tools are different as they directly engage employees, unlike other monitoring and surveillance tools that reactive flag or predict outcomes (Mateescu and Nguyen, 2019). In their study Liu, Huang and Zhang (2018) link smartphone-based gamification to the self-determination theory, as it utilises motivation by both self-interest and rewards, to achieve the organisational goals. While participation in the organisation's gamification program increases employee motivation there was no correlation found with job satisfaction (Liu *et al.*, 2018). It is important to note, this study is based in China and as such, it takes into account different cultural nuances that potentially contribute to the results. Mateescu and Nguyen (2019, p. 16) highlight "gamification of performance metrics and pervasive tracking can place harmful pressures on workers' and impact employees' sense of autonomy, leading to a punitive work environment". This is important to note, as it is suggested gamification was introduced as an employee-friendly version of technological monitoring in the workplace. Driving performance through gamification might be presented as fun and functional, however, it is suggested to have the same potentially harmful effect to employees as other surveillance channels.

Satisfaction, Motivation & EI

It is important to examine how EI shape perceptions in the workplace, specifically motivation and satisfaction. Suleman *et al.* (2020) research investigates the relationship between EI and job satisfaction, concluding the higher the employees EI the higher the satisfaction. This is supported by another study, which found EI links to increased satisfaction and performance in the workplace, in addition to improving employee relationships and well-being (Nanda and Randhawa, 2019). This is supported by D'Amico *et al.* (2020), who examine EI and job satisfaction within Italian school systems, a population prone to dissatisfaction and burnout. The study illustrates perceived EI is positively connected to job satisfaction and burnout rates. Alternatively, Tziner *et al.* (2020) study found a correlation between a low EI with high satisfaction in the workplace. The authors call this contradicting the previous research found. Concluding employees with lower EI are more likely to “innocently adopt a more naive or simple perspective of their job and, as such, more easily find work satisfaction” (Tziner *et al.*, 2020, p.14).

As EI is connected to understanding and regulating one's emotions, some studies highlight more than an associate between EI and satisfaction. EI Pau and Sabri (2015) investigate EI connection to job satisfaction within dentistry in hopes of improving retention. Finding a positive correlation between EI and job satisfaction, furthermore, the linear regression analysis found EI to be a predictor of job satisfaction (Pau and Sabri, 2015). It is noted that the population sample of this study is based in Malaysia, thus there are potentially underlying cultural nuances that impact the study. This research is supported by a study that found that EI and collaboration in the workplace were found to predict job satisfaction (Merida-Lopez, Extremera, Quintana-Orts, and Rey, 2019). The population of this study is based in Spain. There is a lot of literature that supports a relationship between EI and job satisfaction.

There is less research that focuses on the relationship between EI and motivation within the workplace (Phillips and Chen, 2018). This might be due to the overlapping concepts of EI and motivation. As motivation is often thought of as an aspect of EI, such as in Goleman's (1998) EI framework. Goleman (1998) goes on to define the mindset of exhilaration at work as ‘flow’ and a key aspect to motivation. Phillips and Chen (2018, p. 7) state “a positive outlook is the capacity to remain

motivated while confronting challenges, which stems from the capacity to manage ones emotions". This is supported by Mukokoma (2020) who finds a significant correlation between EI and motivation, and EI and job performance, concluding that both motivation and EI were important to job performance. Magnano et al. (2016) argue EI, specifically the ability to self-regulate emotions, is crucial to achieving organisational and personal goals. Their study shows employees' EI strongly predicts motivation, moreover, an employee's resilience indicates their EI (Magnano *et al.*, 2016). The independence of EI and motivation is an important note, particularly as a tool in navigating the uncertain and ever-changing environment created by the global economy.

Section 3: Purpose of Research

The purpose of this research is to investigate how technology is shaping the workplace. Organisations reacting to technological innovations is not a new phenomenon. However, some argue while previous innovations in the first and second industrial revolution greatly improved worker conditions, now employers are the main benefits of technology (Estlund, 2018). Thus, it is important to examine the impacts on the current workforce, specifically attitudes in the workplace. If the majority of organisations are growing more dependent on technology in the global economy, how do employees feel towards technology? What does this mean for employees attitudes at work, specifically their motivation and satisfaction? Moreover, does an employee's EI regulate their attitudes towards technologies?

The purpose of this research is to explore: how attitudes towards technology (ATT) shape satisfaction and motivation in the workplace. Furthermore, is an employees' EI a moderating factor? This is important to explore as it can provide crucial awareness to challenges faced in the workplace. Additionally, this investigation can provide insight into organisations' retention, recruitment and overall productivity. Furthermore, this research will potentially uncover patterns within the organisations that need to be addressed to ensure the organisation can successfully navigate and implement technological innovations in the future. This context might provide insight to drive policies to ensure positive employee experiences in the age of technology.

Research Question: How do attitudes towards technology (ATT) shape satisfaction and motivation in the workplace? Moreover, does an employee's Emotional Intelligence (EI) moderate this relationship?

Hypothesis

As illustrated in *Figure 1*, building on the literature presented, the following hypotheses have been determined for this research:

H1: There will be a relationship between ATT in the workplace and an employee's EI.

H2: There will be a relationship between ATT, satisfaction and motivation in the workplace.

H3: There will be a relationship between satisfaction, motivation and an employee's EI.

H4: There will be a relationship between motivation and satisfaction in the workplace.

H5: An employee's EI will moderate how ATT impacts satisfaction and motivation in the workplace.

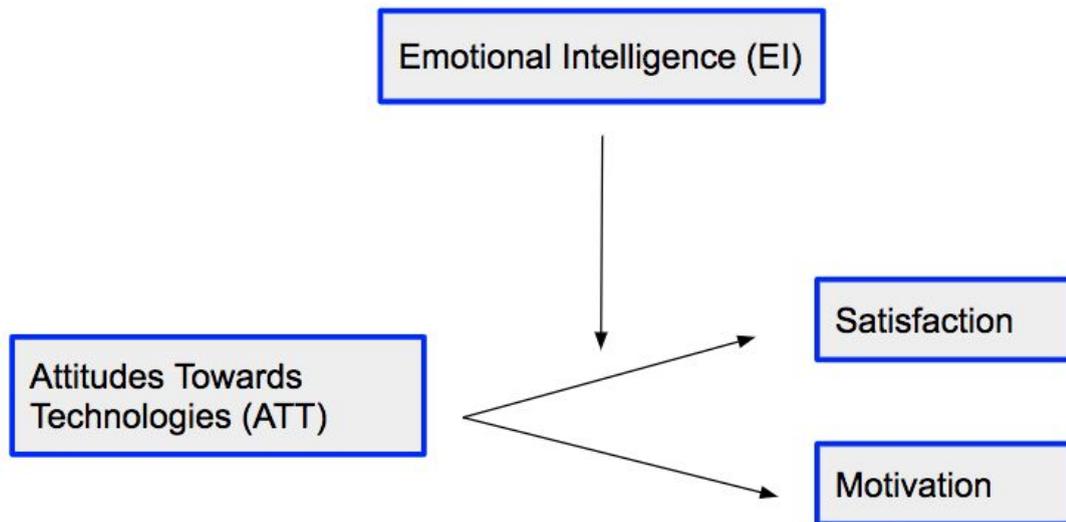


Figure 1. Proposed theoretical model of the relationship between ATT, EI and satisfaction and motivation in the workplace.

Section 4: Methodology

This section provides an in depth discussion on the methodology behind this research. This research utilizes a positivism deductive research philosophy. A quantitative approach was more suitable as this research was investigating several variables. In this research, the writer aspires to observe patterns in the workplace caused by technology. This is quantitative research, gathering data through a seventy-six question questionnaire. The goal of this research is to explore new technologies and EI in the workplace, specifically their impact on satisfaction and motivation.

Research Philosophies & Methodologies

Saunders, Lewis and Thornhill (2015, p. 124) explain “research philosophy refers to a system of beliefs and assumptions about developing knowledge”. Everyone has personal beliefs and assumptions, either consciously or subconsciously. Therefore, it is important to acknowledge assumptions to understand how they impact research. There are three main assumptions within research: ontology, epistemology and axiology. Ontology describes assumptions surrounding the nature of reality (Saunders *et al.* 2015). For example, opinions about humans living with free will or powerless to external forces. This research assumes that employees have agency, thus ATT and EI can improve or decrease based on experiences. Epistemology describes the assumption around understanding knowledge (Saunders *et al.* 2015). In other words, how an individual views knowledge: independently existing, developed through experiences or a social construct. This research focused on employees ATT and EI, with the assumption this attitude is developed through personal experiences. Saunders *et al.* (2015, p. 128) state “axiology refers to the role of values and ethics within the research process”. Deciding to examine how technology affects employees’ experience in the workplace is shaped by the researcher's experience. The purpose of investigating employees’ satisfaction and motivation at work, with the aim to improve experiences indicates the importance of this issue. It is important to discuss research philosophies and personal beliefs as they shape the research design. *Figure 2* illustrates the different aspects of research: philosophy, approach to theory development, methodological choice, strategy, time horizon, data collection and data analysis.

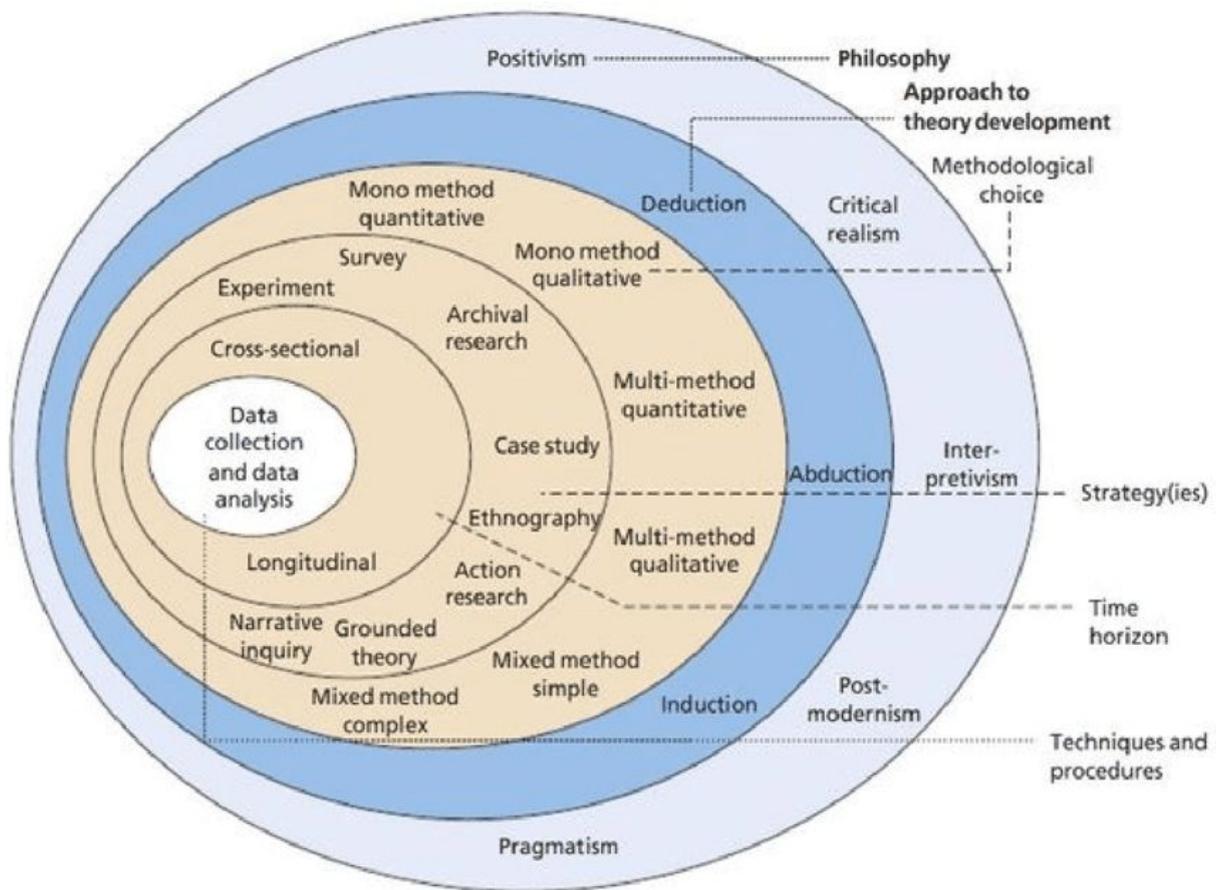


Figure 2. Research Onion (Saunders *et al.* 2015)

Philosophy & Approach to Theory Development

This study is utilizing a positivism research philosophy. Positivism produces generalisations from an objective reality (Saunders *et al.* 2015). Positivism is associated with a quantitative approach and maintaining an objective stance (Saunders *et al.* 2015). The purpose of this empirical investigation is to explore how new technologies shape the present workforce. This research intends to observe meaningful data looking for casual relationships between ATT, satisfaction and motivation to create generalisations. Additionally, with a purpose to uncover causal explanations, the research explores EI as a predicting variable. Quantitative approach was the best approach for this study, as this approach is more structured than a qualitative approach. As the aim here is to measure employee ATT, satisfaction, motivation and EI, there is little room for ambiguity. Other philosophies, such as interpretivism would not suit this research. As interpretivism is focused on multiple meanings and individual narratives (Saunders *et al.* 2015). The aim of the research is to understand any underlying

patterns, to create generalisations that can be used to increase employees' experience in the workplace.

This study of employee ATT, satisfaction, motivation and EI embodies a deductive approach. Quinlan et al. (2015, p. 78) describes deductive reasoning as “the logical process of deriving a conclusion about a specific instance based on a known general premise”. As outlined in Section 3, this study has proposed five hypotheses, drawn from the previous research discussed in Section 2. This deductive approach is suitable for the research to test their theories, as if the presuppose is true, so is the conclusion. Moreover, this research is both positivist and deductive, as it draws on previous theories and linkages between satisfaction & motivation, EI & satisfaction and ATT & satisfaction. Weaving these previous theories together, the research creates its own hypothesis surrounding ATT, satisfaction, motivation and EI in the workplace.

Methodological Choice, Strategy & Time Horizon

Quantitative research provides researchers tools to translate human experience and opinions into numerical data. This research is a mono-method quantitative study, meaning it uses only one form of quantitative data collecting method (Saunders *et al.* 2015). The methodology strategy utilized in this research is the survey, as it is effective for gathering data from a large population (Quinlan *et al.* 2015). This research will be conducted throughout a short time frame thus cross-sectional, taking a ‘snapshot’ of the present workforce, this ‘snapshot’ will be illustrated through feedback collected from the questionnaires (Saunders, Lewis and Thornhill, 2015). Survey methodology is ideal for this research, as it not only expands the participant pool geographically, it also widens the pool by availability (increasing access via the internet). For this research, the more perspectives gathered will increase the probability of being able to identify patterns.

Population and sample

With the aim of investigating the impacts of technologies in the workplace, the target population of this study is the present workforce. This research uses non-probability sampling techniques, which means it is not a mathematically supported representation of the entire population (Quinlan *et al.* 2015). Quinlan *et al.* (2015, p. 179) further states “the emphasis in a non-probability sampling is on the capacity of a relatively small number of cases to clearly and comprehensively illustrate the phenomenon under investigation”. This research is a cross-sectional, quantitative study employing

questionnaires with convenience, internet and snowballing sampling techniques. Saunders *et al.* (2015) argue that snowballing sampling has its advantages, such as can be useful when targeting a particular homogeneous group, low cost, and it is often both easier and quicker to access existing contacts. The goal of this study is to collect data from a range of ages and backgrounds. The questionnaire is delivered over email, text message, Facebook and Linked-In.

There were a total of 120 responses to the questionnaire, of these 82 participants were female and 38 participants were male. The participants ranged from 19 to 69 years old, with a median of 34.5 years old. Examining the work status of the participants, 85% identified as employed, 7% identified as self-employed, 3% identified themselves as part-time employees, 2% unemployed/ looking for work and the other 3% identified as interns or contingent workers. The participants came from a range of different industries: the highest number of individuals, 18% identified with 'Other industries', 12% work in college and adult education, 8% work in Technology services, government services and software industry. The rest were spread over various other industries. The breakdown of the location of the participants is as follows: 94 live in Ireland, four in Poland, one in the United Kingdom and one in Spain. Data was collected from 12 May 2020 to 15 June 2020. The tool used, Typeform, recorded 211 starts to the questionnaire, and 120 completed responses, a completion rate of 56.87% with an average time of twelve minutes and 50 seconds to complete. Of the 120 responses, 17 were completed on a desktop, and 103 completed on a mobile device.

Data-gathering methods

In order to capture as many perspectives as possible, this research does not focus on a particular age group. Gathering more prescriptives within the data is crucial, in order to see if there are any emerging trends or themes. Thus this research utilizes internet and mobile questionnaires, as these tools have the ability to reach a large sample size over large geography (Saunders *et al.*, 2015). In order to engage as many participants as possible without funding, this research utilizes a self-complete internet questionnaire, run on the software Typeform. The design of the questionnaire is a self-complete format, where individuals record their own responses at their own leisure. This was distributed by both mobile and web, as this study is observing the present impact of new technologies, sent by the internet in hopes of targeting people who use technologies.

This research aims to collect four groups of data from the participants to measure: ATT, Emotional Intelligence, satisfaction and motivation in the workplace. This questionnaire was made up of four

previously published questionnaires: Work Trends Survey (Van Horn and Starace, 2018), Workplace Surveillance Survey (Martin, Wellen, and Grimmer, 2016), Work Attitudes Measure (Emberland and Rundmo, 2010), Wong and Law Emotional Intelligence Scale (Wong and Law, 2002). Quinlan et al. (2015, p. 275) state “using criterion-related validity, also known as instrumental validity, the research uses some standard or criterion to measure the data-gathering instruments against. For example, the researcher could be validated by another (perhaps more established) researcher”. This research decided to utilise questionnaires that were previously published to not only ensure validity but also in an attempt to exclude the author's bias. Moreover, to ensure the participation would result in gathering as much accurate and honest data as possible.

Variable	Survey Used	Number of Questions	Measuring Scale	Total Value
Attitudes Towards Technology (ATT)	‘Work Trends Survey’ (Van Horn and Starace, 2018)	21	Mixed scales	Possible range: 22 to 96
	‘Workplace Surveillance Survey’ (Martin, <i>et al.</i> , 2016)	16	7-point Likert scale	22 = very positive ATT 96 = very negative ATT
Satisfaction	‘Work Attitudes Measure’ (Emberland and Rundmo, 2010)	11	5-point & 7-point Likert scale	Possible range: 17 to 109
	‘Workplace Surveillance Survey’ (Martin, <i>et al.</i> , 2016)	6	7-point Likert scale	17 = highest satisfaction 109 = lowest satisfaction
Motivation	‘Work Attitudes Measure’ (Emberland and Rundmo, 2010)	6	5-point Likert scale	Possible range: 8 to 44
	‘Workplace Surveillance Survey’ (Martin, <i>et al.</i> , 2016)	2	7-point Likert scale	8= highest motivation 44 =lowest motivation

Emotional Intelligence (EI)	Wong and Law Emotional Intelligence Scale (Wong and Law, 2002)	16	7-point Likert scale	Possible range: 0 to 112 0 =highest EI 112 = lowest EI
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Table 2: Questionnaire construct

Both ‘Work Trends Survey’ (Van Horn and Starace, 2018) and ‘Workplace Surveillance Survey’ (Martin, *et al.*, 2016) were included to measure employees’ ATT. It is important to include both, as they both focus on different aspects of technology in the workplace. ‘Work Trends Survey’ (Van Horn and Starace, 2018) covers automation, reliance on technology and the future of technology in the workplace. Twenty-two technology-focused questions were used in this research questionnaire. Five questions from the original questionnaire were omitted as they were deemed not relevant to this study, see *Table 3* for more detail. The ‘Workplace Surveillance Survey’ questionnaire has sixteen questions, measuring results with a 7-point Likert response scale. Where one equates to a negative, not at all or strongly disagrees, and seven equates to a positive, very much so or strongly agree. The research combines the answers of these two sections to determine the participants’ ATT. The possibility of the total sum ranges from 22 to 96, with 22 illustrating very positive feelings towards technology and 96 indicating negative feelings towards technology.

Question	Measure	Justification
Turning to another topic... Please check which device, if any, you have in your home:	1. Smartphone 2. Laptop or desktop computer 3. Tablet computer 4. Broadband Internet service - a very high-speed Internet capacity	This question was taken out as what technology devices they had in their home is not relevant to attitudes about technology in the workplace.
What are the most important technological skills you think you’ll need?	[Text box]	This information could potentially be interesting if this research was targeting a specific sector, however, as the target population is the present workforce. This data is not useful in measuring ATT.
If I look for another job, I plan to use the Internet to assist my job search efforts.	1. Agree a lot 2. Agree a little 3. Disagree a little 4. Disagree a lot	Not contributing to ATT, this is more gauging the dependence on technology.

Now, please think about the NEXT three to five years... How likely are you to be at the same place of work you are now?	1. Definitely will 2. Probably will 3. Probably will not 4. Definitely will not	Repetitive and future-focused.
Why don't you think you will still be there?	1. Won't be working anymore 2. This is a temporary job/normal moving on 3. My current job will be replaced by new technology 4. The job will require skills that I don't have 5. I plan to move to a better/different job 6. Other 9. Don't know	Repetitive and future-focused.

Table 3: Five questions omitted from questionnaire ‘Work Trends Survey’ (Van Horn and Starace, 2018)

‘Work Attitudes Measure’ (Emberland and Rundmo, 2010) is a seventeen item questionnaire used to gather the data for satisfaction and motivation. Eleven questions measure the participants' satisfaction towards their job and workplace. Six questions are measured on a 5-point scale and the other five questions are based on a 7-point scale. In addition, the research utilizes six questions from the ‘Workplace Surveillance Survey’ to measure employee satisfaction (number 28 to 32 and number 42 in the final questionnaire). In the seventeen questions measuring satisfaction in the workplace, the total sum rang from 17 to 109. With 17 reflecting the highest satisfaction in the workplace and 109 indicating the lowest satisfaction in the workplace.

There are six questions in ‘Work Attitudes Measure’ (Emberland and Rundmo, 2010) that measure an employees’ motivation, which are measured on a 5-point Likert scale. The research utilizes two questions from the ‘Workplace Surveillance Survey’ to measure employee motivation (number 41 and 43 in the final questionnaire). In the eight questions measuring employee motivation, the total sum ranges from eight to forty-four. With eight describing the highest motivation in the workplace and forty-four representing the lowest employee motivation.

The fourth questionnaire ‘Wong and Law Emotional Intelligence Scale’ (Wong and Law, 2002), captures the participants’ EI. Wong and Law (2002) developed this self-reporting scale, as they argued other means of measuring EI were not appropriate for research in the workplace. Thus, this

questionnaire was chosen for this research, as it is respected as a suitable means for measuring EI in the workplace. This is a sixteen item questionnaire, answers are rated on a 7-point Likert-type scale, where zero equates to strongly agree to and seven equates strongly disagree. In the sixteen questions measuring employees' EI, the total sum spans from zero to one hundred and twelve, with zero indicating the highest EI and one hundred and twelve illustrating the lowest EI.

Pilot Study

A pilot study is when a questionnaire is given to a small test group, who in turn provide feedback to the researcher. This is an important tool to gauge the validity of the design of the research project and to ensure the process of testing the data-gathering instrument (Quinlan *et al.* 2015). Therefore, a pilot study is crucial for refining the questionnaire to ensure a better quality of data (Quinlan *et al.* 2015). A pilot study was conducted, with five participants, including three females and two males, ranging from ages 30 to 55. The participants were asked how long it took to complete the questionnaire, if they had any issues and for any general feedback. Additionally, it was asked if the questions were clear and if they felt uncomfortable answering any of the questions. All individuals liked the layout of the questionnaire, finding the visuals straightforward and clear on both a phone and laptop. The participants took an average time of ten minutes and forty-five seconds to complete the questionnaire.

One individual commented on the length of the questionnaire, at seventy-six questions, it was a little long but doable. Two participants mentioned that some of the questions were a bit repetitive. Lastly, one participant flagged the scales within a question-set switched, which caused them to provide the wrong answer. The feedback regarding the length and the similar questions were duly noted. However, to keep the questionnaires as close to their original state as possible to ensure their validity they were not changed. Before the pilot was given there were five questions taken out of the 'Work Trends' questionnaire (see *Table 3*). The mentioned scales were inverted to ensure uniformity within the same section. This research acknowledges pilot studies are crucial to ensure both the validity and reliability of research. Quinlan *et al.* (2015, p. 274) states "using face validity, the researcher establishes that the data-gathering instrument seems a reasonable measure of the phenomenon under investigation". Moreover, reliability of the collection instrument can be improved by using pilot tests (Quinlan *et al.*, 2015).

Gathering Data

The research approach is positivism in nature, as it will look for generalisations surrounding the relationship between automation and EI within the workplace, gathering objective data from employees. The goal of this study is to collect broad and inclusive data, striving to gather data from a range of ages and backgrounds by convenience sampling and snowball sampling. The questionnaire was issued by email and text message. Participants who received the questionnaire, were asked to share. Moreover, it was posted for larger audiences on Facebook and Linked-In. Due to the notoriously low completion rate of internet questionnaires (Saunders, Lewis and Thornhill, 2015), the idea is to make the questionnaire as available as possible. One difficulty this research faces is the gathering of enough data, and securing enough participants. Furthermore, one of the limitations of this research is the amount of responses collected, as ideally a higher volume of responses would potentially enable stronger generalisations.

Data Analysis

The aim of this research is to examine if there is a significant relationship between the following variables: ATT, EI, satisfaction and motivation in the workplace. This study draws on inferential statistics, as the goal is to uncover if there are relationships between the different variables based on the data gathered (Quinlan *et al.* 2015). As illustrated in *Figure 1*, the data was collected and valued, resulting with a single numerical measurement representing the following: ATT, satisfaction, motivation, EI. The research will examine these metrics with a correlation test and moderation analysis.

A correlation test produces a single number to describe the extent of interdependence between the two variables, this relationship can highlight the association between the variable (Quinlan *et al.*, 2015). As all the variables are measured in the online questionnaire with numerical data, this research uses Pearson's product moment correlation coefficient (PMCC), to determine the strength of the relationships between the variables. The single number produced by PMCC, called a correlation coefficient, is between +1 and -1. This illustrates the strength of the relationship between the two variables (Saunders *et al.*, 2015). A positive correlation, represented by the value of +1, describing the two variables as absolutely related (Saunders *et al.*, 2015). In other words, if one variable increases the other variable also increases. At the opposite end is a negative correlation, represented by -1, this also indicates the variables are precisely interdependent, however, as the value of one decreases the

other variable increases (Saunders *et al.*, 2015). A value of 0 means the variables are completely independent (Saunders *et al.*, 2015). This research will use the PMCC test to evaluate the hypotheses outlined in Section 3. First, the correlation between employees' ATT and EI will be analyzed to test *Hypothesis 1*. To test *Hypothesis 2*, two correlations will be run between ATT, satisfaction and motivation. Finally, the correlation between satisfaction and motivation will be examined to test *Hypothesis 3*.

Next, this research will use moderation analysis. Moderation analysis examines the impact of a moderator variable on the relationship between the independent variable and the dependent variable (Memona, Cheahb, Ramayahc, Tingd, Chuahe and Chamf, 2019). In Section 3, *Figure 1* illustrates this conceptual framework of moderation analysis. Memona *et al.* (2019, p. v) states moderation analysis "can (1) strengthen a relationship, (2) weaken a relationship or (3) reverse or change a relationship". In order to investigate *Hypothesis 4* and *Hypothesis 5*, whether EI moderates the relationship between ATT, satisfaction and motivation in the workplace, data was collected to represent each variable. ATT was identified as the moderator because previous research, discussed in Section 2, highlights the impact automation and surveillance has in the workplace. Then the data will be analysed using the PROCESS macro for SPSS (Model 1) developed by Hayes (2013) to test for moderation using linear regression. In order to determine the significance of the moderation, 95% bias-corrected bootstrap confidence intervals are constructed from 1000 bootstrap samples (Hayes, 2013).

Ethical Issues

In line with the Hippocratic Oath, discussed by Quinlan *et al.* (2015), this research is designed under the principle of doing no harm. The root of this research project starts with the desire to help organisations identify areas where they can support employees, in the hopes of increasing positive experiences in the workplace. The data gathered in this research is completely anonymous, or free from identification (Quinlan *et al.* 2015), as no personal identifying information, including a person's name, birth date or contact information was collected. Furthermore, the data is confidential, as it is presented in an aggregated form and stored privately and password protected. The first two slides of the questionnaire, both inform participants of the goals of the research ensuring transparency and provide the individual with the opportunity to provide their consent to participate in the research (see Appendix 1). All participants who answered the questionnaire granted their consent to be included in

this research. Some research faces ethical issues such as privileged access, intrusion or vulnerable populations (Quinlan *et al.* 2015).

As this research is not focused on a specific organisation and does not ask participants to state what organisation they are affiliated with, no privileged access is required. As this is a self-completed questionnaire, these individuals are only participating because they actively volunteer. If they do not wish or feel comfortable answering the questionnaire there is no pressure of an active follow-up. Moreover, this questionnaire targets working individuals and does not target a vulnerable population.

Section 5: Data Findings & Discussion

Descriptive Statistics

As discussed above, this study gathered data measuring four variables. These were the dependent variable, attitudes towards technology, the independent variables, satisfaction and motivation in the workplace, and the moderating variable, EI. Of all the 100 participants, the average number that describes employees' attitude towards tech is 49.41 (Table 4). Figure 3(a) illustrates a steady incline, with the majority of participants neither identifying with a strongly positive nor negative feeling towards technology in the workplace. This is significant, as this research demonstrates the majority of ATT falling in the middle highlighting a neutral feeling, as Figure 3(a) indicates ATT are less polarising than previous studies argue. Although when comparing participants who measure strong feelings towards technology, either positive or negative, there is marginally more who identify negatively towards technology.

Of all the 100 participants the average number that describes satisfaction in the workplace is 46.24, this illustrates a moderate satisfaction level (Table 4). Although the results skew more towards positive satisfaction, Figure 3(b) indicates a quite varying and wide number of participants measuring in the middle, neither very high nor very low satisfaction. Figure 3(c) indicates an inconsistently wide range of motivations in the workplace but slightly skews towards lower motivation in the workplace. Of all the 100 participants, the average number that describes motivation in the workplace is 23.98 (Table 4). Of all the 100 participants, the average number that describes employees' EI is 33.67 (Table 4). Figure 3(d) highlights the data skews to the left indicating an overall higher EI, however, there is a moderate cluster of participants measuring a low EI.

	N	Minimum	Maximum	Mean	Std. Deviation
Age	100	19	69	39.20	12.929
Attitude Towards Tech	100	26	73	49.41	9.396
Satisfaction	100	17	93	46.24	16.155
Motivation	100	14	35	23.98	5.148
EI	100	0	81	33.67	15.745

Table 4. Descriptive Statistics N=100

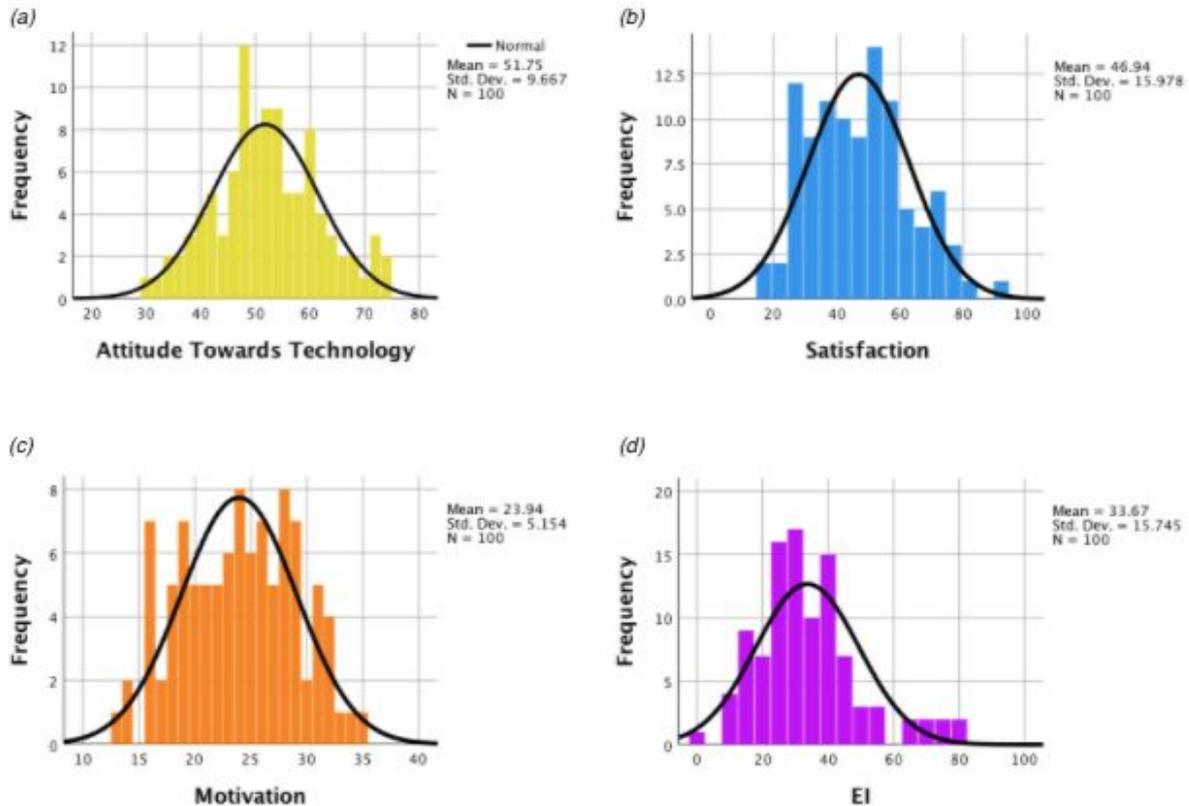


Figure 3. (a) ATT descriptive statistics (b) Satisfaction descriptive statistics (c) Motivation descriptive statistics (d) EI descriptive statistics

Correlations Analysis

SPSS computed the Pearson Correlation to measure the strength of the relationship between the variables. As seen in *Table 5*, the 2-tailed test is used, as this hypothesis goal is to test if there is any correlation, not specifically testing for a positive or negative relationship. The relationship between ATT and EI indicates a statistically significant, weak positive correlation ($r=.227$, $p=.023$). The relationship between ATT and satisfaction shows a statistically significant, moderate positive correlation ($r=.451$, $p < .001$). The relationship between ATT and motivation represents a statistically significant, weak positive correlation ($r = .230$, $p=.021$). The relationship between EI and satisfaction indicates a statistically significant, weak positive correlation ($r=.207$, $p=.039$). The relationship between EI and motivation highlights a statistically significant, moderate positive correlation ($r=.343$, $p < .001$). The relationship between satisfaction and motivation reveals a statistically significant, moderate positive correlation ($r=.484$, $p < .001$).

This research draws on Bonferroni adjustment for this multiple comparison approach. This method is used to counteract the chance of inaccuracy by multiple comparisons by adjusting the p-values, this is

calculated by dividing the p-value with the number of concurrent correlation within the test (McDonald, 2014). For this research, the p-value .05 is divided by 6, the number of correlations being tested, thus the adjusted p-value is .0083. With the adjusted p-value, the statistically significant correlations that survived are the relationships between ATT & satisfaction, EI & motivation and satisfaction & motivation. *Figure 4* illustrates these significant correlations. It is interesting to note, in *Figure 4(a)* there is a small cluster of participants who measure the lowest scales of satisfaction in the workplace, however, who fall in the middle in regards to ATT. Examining *Figure 4(b)* closer, it is important to note that individuals with a lower EI (within 60 to 80) appear to have a varied motivation (20 to 30) which is in the higher middle of the range. This cluster might be a pattern, and further research is suggested to see what is driving this.

These findings do not support *Hypothesis 1*, which speculates a relationship between ATT and EI in the workplace. To support this hypothesis the researcher would expect a statistically significant ($p < .0083$) correlation. In relation to *Hypothesis 2*, an element of this proposal was supported by the findings, specifically the association between employees' ATT and satisfaction. In regards to *Hypothesis 3*, an element of this proposal was supported by the findings, specifically the association between EI and motivation in the workplace. *Hypothesis 4*, which proposed a relationship between employees' satisfaction and motivation, was supported by these findings.

		ATT	S	M	EI
Attitude Towards Technology (ATT)	Pearson Correlation	1	.451**	.230*	.227*
	Sig. (2-tailed)		.000	.021	.023
Satisfaction (S)	Pearson Correlation	.451**	1	.484**	.207*
	Sig. (2-tailed)	.000		.000	.039
Motivation (M)	Pearson Correlation	.230*	.484**	1	.343**
	Sig. (2-tailed)	.021	.000		.000
EI	Pearson Correlation	.227*	.207*	.343**	1
	Sig. (2-tailed)	.023	.039	.000	

** . Correlation is significant at the 0.0083 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

Table 5. Correlations analysis of Attitudes towards technology, satisfaction, motivation and EI. (N=100)

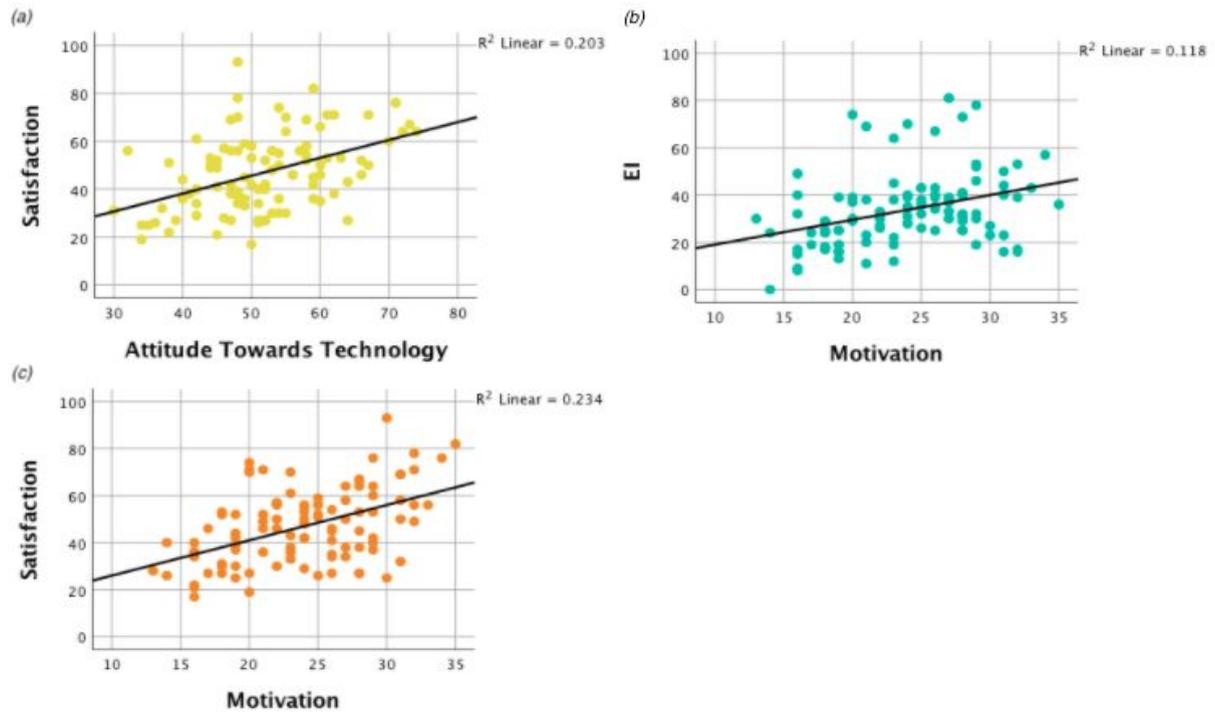


Figure 4. Correlations analysis of (a) satisfaction and attitudes towards technology, (b) EI and motivation (c) satisfaction and motivation (N=100)

Regression Analysis

To investigate EI's impact on how ATT shapes motivation in the workplace, this research used a simple moderation analysis which was performed using Hayes' PROCESS in SPSS. The predicting variable for the analysis is ATT and the moderating variable is EI. In this two-part study, the outcome variables are employee motivation and satisfaction. As seen in *Figure 5*, examining EI as a moderating factor of the relationship between employee satisfaction and ATT, there is a strong positive statistically significant correlation between ATT and satisfaction, ($b=.701, p < .001$). There is no correlation between satisfaction and EI ($b=.115, p=.225$). The interaction between EI and ATT, ($b = -.004, p=.696$) is not statistically significant. These results identify EI as a non-moderator of the relationship between satisfaction and ATT. As seen in *Figure 6*, examining EI as a moderating factor of the relationship between motivation and ATT, there is no significant correlation between ATT and motivation ($b=.085, p =.10$). These findings highlight a statistically significant lack of correlation between motivation and EI ($b=.101, p=.002$). The interaction between EI and ATT, did not uncover a correlation and is not statistically significant ($b = .0853, p=.858$). These results identify EI as a non-moderator of the relationship between motivation and ATT. Consequently, *Hypothesis 5* was not

supported by this research, as employee's EI was not found to moderate the relationship between ATT, satisfaction and motivation.

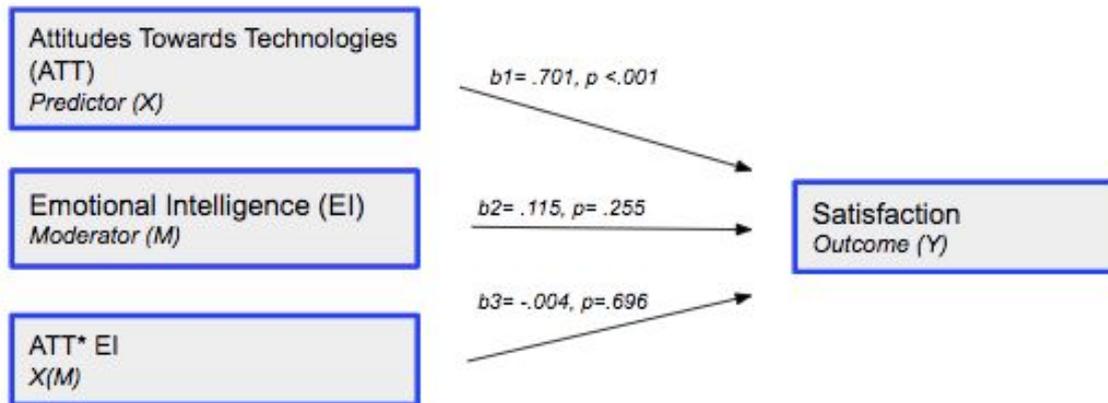


Figure 5. Moderation analysis examining if EI impacts new technologies related to satisfaction

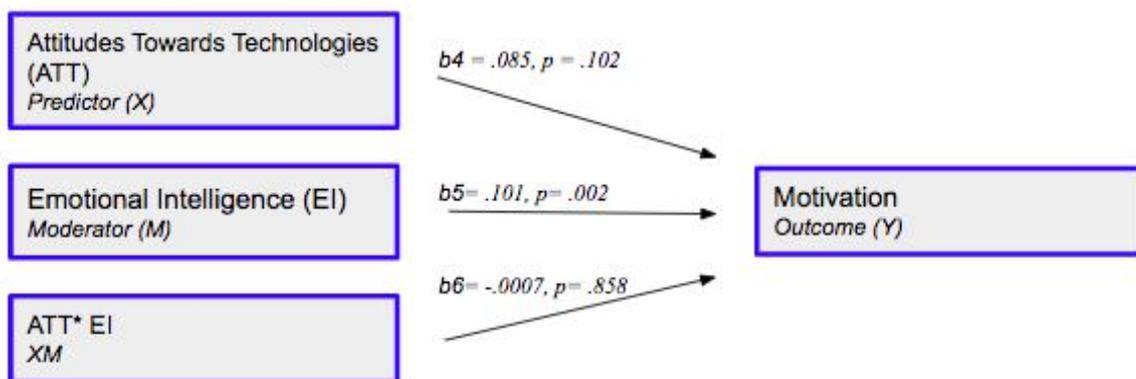


Figure 6. Moderation analysis examining if EI impacts new technologies related to motivation

Discussion

Attitudes Towards Technology & Satisfaction

This research found a positive relationship between employees' ATT and satisfaction. In other words, the correlation illustrates, when an employees' ATT is positive it is associated with a higher satisfaction in the workplace. Moreover, when an employee's satisfaction is low it is associated with a negative ATT. This is not surprising as there is still much uncertainty on the impact technology will have on labour demands, whether it is an increase in low-level skill positions (Cunningham, 2016; Autor, 2015), an increase in high-level skill positions (Levit, 2019) or an overall decrease in demand for skill (Spencer, 2018). It is important to note, workplaces are currently facing changes driven by technology, and the present should not be overlooked. Narratives that focus on the future impact of technology, potentially downplay the current attitudes towards technology. Additionally, in response to the competitive global market, organisations are increasing productivity without increasing headcount (Levit, 2019). Thus to ensure a competitive workforce, it is important to examine employees' attitudes towards technology and the implications of this.

The connection between ATT and satisfaction, support previous researchers' concerns that technology is both a catalyst and enforcing power imbalance between employers and employees. Many voices discuss how technology can strengthen the unequal power dynamic between the employer and the employee (Mateescu and Nguyen, 2019; Adler-Bell and Miller, 2018; Estlund, 2018; Spencer, 2018; D'Urso, 2006;). Both Spencer (2018) and Cunningham, (2016) examine the part technology plays in power relationships in the workplace with a Marxist lens. Both agree that technology is reducing the demand of employees, thus rendering them powerless. Cunningham (2016) believes deskilling the demand is taking away workers autonomy and bargaining voice. Resulting in a jaded workforce. Spencer (2018) agrees the decline in employment will solidify the unequal power dynamic. Concluding if employers have total control over technology, the aim will focus on profits and productivity will result in not only a lower quality of work but also a passive workforce.

These findings connect to underemployment, as it highlights if employees feel satisfied in their position, they have a more positive attitude towards technology. These arguments are a warning to employees and employers alike, technology should not be used as a source of control. Evidence indicates a passive or unengaged workforce will hinder an organisations 'competitive advantage' in the global market. It is suggested, it is crucial for organisations to be considerate of employees' attitudes, considering this as long term investment- instead of prioritising profit margins above all

else. As previous research shows employee satisfaction is crucial to productivity, and dissatisfaction can lead to employees actively disrupting the completion of organisational goals, for example through high-absentee rate and high turnover rate (Suleman *et al.*, 2020).

Although surveillance is not new to the workplace, technology dramatically amplifies its reaches. Many organisations now rely on data-driven software and algorithms to make business decisions (Adler-Bell and Miller, 2018). As a result, employees are simplified to a numerical value, composed of the data collected about their performance, where effort at work is often overlooked (Furnham and Swami, 2015). Although data can provide great business insights and identify trends, it seems to overlook the passion, resilience and flexibility of employees. These human attributes often are critical to an organisation's ability to distinguish themselves in the global market. Some might suggest, shifting to assign value to employees through data is not only dehumanising but also oversimplifying.

D'Urso (2006) uses Foucault's theory to examine surveillance in the modern workplace, drawing many similarities to the panopticon. This is relevant as it highlights the ability to instil conformity but in most cases, employees' are unaware of the surveillance or the extent of the surveillance. Previous research highlights a relation between surveillance and job satisfaction (Das, 2019; Furnham and Swami, 2015; Samaranyake and Gamage, 2011). When examining gamification in the workplace, unlike in Foucault's theory of surveillance (D'Urso, 2006), employees are aware of the monitoring, however, it is designed by the employer and participation is often mandatory. Thus it is argued employees are constructed as passive and powerless. The positive association with ATT and satisfaction found in this research adds to the current academic research. As it highlights an area, ATT, that contributes to employee satisfaction that has not been extensively explored. Furthermore, as technology is increasingly present and impacts the labour market, this will become more relevant.

EI & Motivation

These findings show interdependence between EI and motivation in the workplace. In other words, an employees' high EI is associated with a high motivation in the workplace. These findings are in accordance with the previous research discussed. Moreover, support the widely acknowledged importance of EI in the current professional climate (D'Amico *et al.*, 2020; Mukokoma, 2020; Phillips and Chen, 2018; Goleman, 1998). Specifically, EI has been linked to stronger teams, increasing trust (Rezvani *et al.*, 2019), increasing employee well-being (D'Amico *et al.*, 2020), stronger job performance (Mukokoma, 2020) and increasing feedback and productivity (Handin and Steinwedel,

2006). Thus ultimately supporting the ‘competency-perform theory’, which connected employees’ personal qualities to effective performance (Rezvani *et al.*, 2019). This research is important as it highlights the importance of emotion in the workplace and justifies providing EI focused training and development for employees. In the ultra-competitive global market, employees or human resources are crucial to many organisations' competitive advantage.

The previously discussed research highlights the overlap and connection between EI and motivation. Both are connected to employees’ character and impact the workplace. Motivation is linked to low turnover (Fero and Dokoupilova, 2009), productivity (Tsvangirai and Chinyamurindi, 2019) satisfaction and organisational commitment (Magnano *et al.*, 2016). It is argued employee’s self-awareness, self-regulation, and social skills are the foundation to employee motivation (Phillips and Chen, 2018; (Magnano *et al.*, 2016). In other words, an employee’s ability to understand, manage and redirect their emotions enables them to remain motivated during challenging situations. The findings contribute to current academic research as both supports previous research and contributes an additional perspective to an area that has not been extensively explored. The findings were surprising since the research did not uncover a relationship between satisfaction and EI. There is ample literature that supports this connection (D’Amico *et al.*, 2020; Suleman *et al.*, 2020; Marida-Lopez *et al.*, 2019; Pau and Sabri, 2015,). Tziner *et al.* (2020) did uncover a discrepancy, as their study shows a correlation between low EI and high satisfaction, however, the authors did state their surprise with these results.

Moderation, Satisfaction & Motivation

This research did not find EI as a moderating factor between ATT, satisfaction and motivation in the workplace. As outlined above there is a connection between employees’ ATT and motivation, and EI and satisfaction. However, the findings show the relationships are parallel. These findings are unexpected, as previous literature supports EI as a tool crucial for overcoming challenges in the workplace (D’Amico *et al.*, 2020). Thus, it was hypothesised that the ability to understand and regulate one’s emotions, would indicate an employee’s ability to deal with the challenges and changes created by technology. Cunningham (2016) examines automation through a Marxist lens, arguing automation eliminates the demand of labour, highlighting the power imbalance between employees and employers. Thus, leaving the working class irrelevant, powerless and unsatisfied. Underemployment can be both measured subjectively and objectively (Cunningham, 2016), thus it is shaped by self-awareness. Moreover, previous literature has shown EI predicting job satisfaction (Marida-Lopez *et al.*, 2019; Pau and Sabri, 2015) and motivation (Magnano *et al.*, 2016). However,

this research did find a strong correlation between satisfaction and motivation in the workplace, which is critical as it highlights an overall interdependence in this study.

These findings uncover a relationship between satisfaction and motivation in the workplace. In other words, an employee's positive satisfaction is associated with positive motivation. This was not surprising as this aligns with previous research discussed (Craparo and Paolillo, 2016). As although the impacts of ATT and EI have been found to be parallel, they are connected by the relationship between satisfaction and motivation. Thus, organisations need to prioritise both supporting employees with their ATT and EI. In other words, if an organisation only focuses on improving employees' EI, with the aim of increasing motivation, but does not address negative ATT, associated with low satisfaction. It will be challenging to increase the employees' motivation, without addressing the negative ATT. Thus, it is suggested to emphasize both ATT and EI, to increase employees' satisfaction and motivation, ultimately improving their competitive advantage in the global market.

Limitations

As this research was conducted during the global COVID-19 pandemic, this could be considered a potential limitation. It is important to note, as the current climate has impacted the global labour market and unemployment is increasing. One study shows the EU unemployment rate at 7.80% in June 2020, compared to 6.6% in June 2019 (OECD, 2020). In the United States unemployment rate is 14.7% in April 2020, from to 3.5% February 2020 (OECD, 2020). Moreover, the number in job advertisements have dropped 45% in Ireland, 52% in the UK (OECD, 2020). The OECD argues the global GDP will drop as a result to COVID-19, predicting a 18% drop in Ireland and 19% drop in the UK. Sanchez-Sellero *et al.* (2016) study shows permanent employees' job satisfaction increases during a time when unemployment increases. This is speculation, however, we are unable to measure if this has impacted the findings.

Another limitation of this research is employee's ATT, EI, job motivation and satisfaction are measured by self-reporting. Self-reporting may not always be accurate (D'Amico *et al.*, 2020; Magnano *et al.* 2016). Some suggest that individuals may feel differently once they have had time to reflect on the questions. Additionally, in regards to EI, there are some aspects that quantitative research might not accurately capture. Thus it is suggested, further research on this topic be completed using qualitative methods to add to the research (Furnham and Swami, 2015). Additionally, the use of a convenience sampling method is a limitation of this research. Thus it is suggested to proceed with

caution when drawing generations beyond the current research, instead further research is recommended using probability sampling, such as simple random sampling, to explore this topic further.

Section 6: Conclusion

Conclusion

Technology is changing the global economy, labour market and the workplace. Many organisations are under immense pressure to stay relevant in an ultra-competitive global market. Consequently, organisations often look to maximize their competitive advantage by utilising both their current workforce and technology innovations. There is a lot of speculation on the effects technology will have on the global economy, specifically what this will mean for the labour market. During this investigation, it was noted a predominant amount of previous research surrounding technology and the workplace was framed in with a futuristic lens. Thus, this research wanted to focus on the present workplace implications, specifically to employee's satisfaction and motivation. Satisfaction and motivation were chosen as these are largely connected to productivity and ability to successfully achieve organisational goals. It is suggested that EI is imperative, to both close the 'soft skill gap' created by the glorification of technology and to provide employees the tools to adapt in a constantly changing environment. An additional objective was to understand to what extent employees' EI influences their ATT, motivation and satisfaction in the workplace.

This research examines how automation shapes the present workforce. Moreover, to advance the understanding of how the ability to regulate one's emotions can improve employee's attitudes at work, especially in the face of demanding and ever changing work environments. In the beginning stages of this research, there was focus on automation in the workplace. However, it was believed that this was not inclusive or an accurate representation of workers' experience of technology in the workplace. Thus the technology was expanded to include both automation and surveillance of employees, which captures different channels of technology in the workplace. This research utilized a quantitative approach. Online surveys were utilized to provide numerical data measuring attitudes towards technology (ATT), EI, satisfaction and motivation. The findings uncovered correlations between ATT & satisfaction, EI & motivation and motivation and satisfaction.

This research identified a gap within current literature when investigating the intersectionality of ATT and EI impacts in the workplace. Additionally, although there is moderate research surrounding EI and motivation, it is suggested this is a gap within research. The findings highlight the importance of the present impact of technology in the workplace, by linking ATT to satisfaction in the workplace. The findings were surprising as it contradicts previous literature, as the findings showed a lack of significant correlation between EI and satisfaction. Another way this study adds to current academic

research is it contributes to an under researched area, as the findings illustrated the association between EI and motivation. EI is not found to be a moderating factor in the relationship between ATT, satisfaction and motivation. However, it is important to note that while EI is not directly moderating the relationship between ATT, satisfaction and motivation, the relationship is not completely parallel. As the research found a connection between satisfaction and motivation in the workplace, thus when examining the whole research there is interdependence between ATT and EI. In other words, the association between satisfaction and motivation highlight the importance of both ATT and EI in the workplace. It is important organisations set up policies and initiatives to encourage both positive ATT and strengthen EI in the workplace.

Further research is recommended, specifically investigating if age, location, gender and employee level highlight patterns within the findings. It is important to further investigate this topic through the lens of these variables, as they could uncover potential trends. This additional insight can potentially strengthen organisation understanding of the present impacts of technology. This further research can potentially advance an objective of this research, which is to uncover opportunities to increase employees' experience.

Recommendations

In reflection of the findings, there are a few recommendations with the aim of increasing ATT and EI, thus increasing satisfaction, motivation and overall employee experience. Recommendations suggested for targeting ATT are: transparency, Mentor program, Workplace & Technology taskforce, and investing in Technology. Refer to *Table 6* for an in depth account of the recommendations. Focusing on building and instilling a transparent culture is crucial. A recurring theme within technology in the workplace is the power and trust dynamic between the employer and employees. It is suggested to ensure employees understand what information is being monitored and what data is being collected. Furthermore, ensuring employees have access to this aggregate data. This will share the power between employees and employers. Furthermore, give employee agency. This can be an opportunity for employees to self-learn and improve from the data. Additionally, a mentor program can assist in creating a company culture that stresses continuous development, providing employees the opportunity to grow. This will highlight to employees their well-being is also a priority for organizations. This will also help ensure employees are keeping up with new technologies. In the workplace, most employees believe new technologies are introduced with the purpose of increasing production and profit. As organisations are often the audience new technologies are created for, it is suggested for organisations to prioritise investing in employee positive technology. Finally, it is

suggested to assemble a Workplace & Technology taskforce, led by employees. This task force should have a voice in deciding new technologies introduced in the workplace. Additionally, they should organise ‘town hall’ type meetings where all employees can pose questions and discuss technology in the workplace.

Recommendations suggested for targeting EI are: professional EI courses, individual EI assessments and encouraging a feedback culture. It is recommended to introduce an EI self-assessment for employees to confidentially take. This will highlight employees’ strengths and weaknesses, encouraging examining work relations through an EI lens. Additionally, as EI intelligence is a complex topic, it is suggested all employees attend a professional course on EI. It is important to note, leaders and managers should enroll in a leadership focused program, as this will help them to implement policies from the top down. Finally, it is suggested to design and instill a ‘feedback culture’. Feedback is crucial in this fast-paced environment, and a feedback culture ensures everyone is continuously improving.

Action	Impact	Approx. Cost & Timeline	Level
Workplace & Technology Taskforce	<ul style="list-style-type: none"> - Lead technology focused monthly forums discussing technology in workplace, employee-wellbeing and productivity, involving all employees -Encourage employees to think of technology with different preceptive -Involve employees in discussions regarding new technology - Empowering employees to act as ‘internal advocates’ 	<ul style="list-style-type: none"> - An hour each week for employees in the panel - An hour once a month for all employees * *Lost hours formula 	Leadership, Managers and Employees
Transparency: Provide all members of organization with visibility to aggregate data	<ul style="list-style-type: none"> -This could create solidarity, empower, trust. -Additionally, it could be used as feedback for teams. -Opportunity for employees to recognise highlight patterns and identify areas to improve. 	<ul style="list-style-type: none"> - Approx. 4 hours for managers every two weeks -Aggregate data (if not already) - Present to employees - Lead discussion around findings * *Lost hours formula 	Manager
Invest in Technology	<ul style="list-style-type: none"> - Utilise technology to promote employee well-being and safety of employees 	<ul style="list-style-type: none"> -8% of organizations revenue. Depending on the organsion, most will have a percentage dedicated to spending on technology. It is suggested to slightly increase this and be more conscious of how it is spent. 	Leadership

Mentorship Program	-employees are paired with mentors to help develop their skills -focus on career development and promoting within	-One hour each month for mentor and employee * *Lost hours formula - Potential to save hiring costs for recruitment	Leadership, Managers and Employees
Leading with Emotional Intelligence	* Interactive workshop to encourage EI, with a Leadership/ manager lens *This specific course is run by Ibec management training - 1 day	385 EUR members / 425 EUR non members - 1 day professional training course * *Lost hours formula	Leadership and Managers
Developing and Using Emotional Intelligence	-EI interactive training course targeting employees -This specific course is run by Beckinridge Training & Development	-565 EUR / per person - 2 days professional training course * *Lost hours formula	Employees
Encourage a 'Feedback culture'	-Goleman (1998) believes that feedback is the key to change, moreover, involving employees to giving feedback, encourage reflection on ones and colleagues strengths and weakness -Supports constructive conversation -360 feedback, get everyone involved in providing feedback	-30 mins a day (through the day) dedicated to feedback: receiving, providing and reflecting * *Lost hours formula	Leadership, Managers and Employees
Encourage Individual Assessment	-A confidential self-assessment for employees -Encourages employees to start thinking about EI -Assist employees in understanding their strengths and weakness	* Self- assessment, 1 hour per employee * Free online assessments available * *Lost hours formula	Leadership, Managers and Employees

Table 6: Recommendations

**Lost hours formula is $\text{Cost/day} = (\text{salary} \div \text{number of working days}) + \text{overheads}$ (CIPD, 2020a)

Reflection:

This has been a very challenging, yet rewarding undertaking. I underestimated the commitment and dedication that is needed to complete a masters program. I extremely enjoyed and am proud of the journey I took to complete this masters. Additionally, I have learned immensely, about Human Resources, my current organisation and myself. This journey encouraged me to strengthen my critical lens. The more my critical analysis skills were used in this research, the more they became present in both my work life and personal life. Previously I focused on working hard, equating effort to results. After this journey, I see the importance of working smarter, not necessarily harder. Another lesson

learned, was every part of the process counts. This research journey is broken up into different parts, but the work completed in the beginning, set the foundation of the whole research. Thus, all parts of the process require the same quality, dedication and attention to detail. Acknowledging this during the process, made me realise how very prevalent this is through a career.

Undertaking this journey during COVID-19 global pandemic did present some challenges. First, there were increasing demands and stresses at my full-time employment. Thus, a lot of overtime was needed and it was difficult to turn off from work. Additionally, as this research was independently driven, it was hard at times to remain focused, motivated and diligent during such uncertain times.

In regards to the research, there were a lot of challenges, which is why this experience has been so rewarding and impactful. On reflection, another limitation of this research was the time limit. ATT, EI, job satisfaction and motivation are all complex topics in their own right. Additional time would have provided me with the opportunity to further develop and explore the main themes in the academic literature. If I were to do this again, I would create a detailed timeline and action plan in January, opposed to late March when I originally created my action plan. I think my time could have been utilised more effectively during the months of January, February and March. Moreover, the research design element was the most challenging part I faced. I initially thought interviews would be the best strategy for this research, however, as my research question developed it became clear this was not the more effective means of investigation. Reflecting, I would have allotted more time in the beginning of this process to explore different types of research, to be a bit more prepared when my strategy did change.

Section 7: References

Adler-Bell, S. and Miller, M. (2018) 'The Datafication of Employment', *The Century Foundation*, <https://tcf.org/content/report/datafication-employment-surveillance-capitalism-shaping-workers-future-s-without-knowledge/>. [Accessed 8 July 2020].

Autor, D. H. (2015) 'Why are there still so many jobs? The history and future of workplace automation', *Journal of Economic Perspectives*, 29 (3), pp. 3-30.

Aydogmus, C. (2019) 'Millennial knowledge workers: the roles of protean career attitudes and psychological empowerment on the relationship between emotional intelligence and subjective career success', *Career Development International*, 24 (4), pp. 297-314.

Ball, K. (2010) 'Workplace surveillance: an overview', *Labor History*, 51 (1), pp. 87-106.

Bughin, J., Hazan, E., Lund, S., Dahlstrom, P., Wiesinger, A. and Subramaniam, A. (2018) *Skill shift automation and the future of the workforce*, McKinsey Global Institute, pp. 1-75. Available at: <https://www.mckinsey.com/~media/McKinsey/Featured%20Insights/Future%20of%20Organizations/Skill%20shift%20Automation%20and%20the%20future%20of%20the%20workforce/MGI-Skill-Shift-Automation-and-future-of-the-workforce-May-2018.ashx> [Accessed 5 September 2019].

CIPD (2020a) *Costing and benchmarking learning and development*. London: Chartered Institute of Personnel and Development, (pp. 1-8).

CIPD (2020b) *Workplace technology: the employee experience*. London: Chartered Institute of Personnel and Development. (pp. 1-28).

CIPD (2019a) *Employee engagement and motivation* [online] Dublin: Chartered Institute of Personnel and Development. Available at: file:///Users/kristinsmith/Downloads/factsheet_20200816T175433.pdf [Accessed 30 June 2019].

CIPD (2019b) *The psychological contract: CIPD Fact Sheet*. [online] Dublin: Chartered Institute of Personnel and Development. Available at: <https://www.cipd.ie/knowledge/hr-fundamentals/communication/psychological-factsheet#> [Accessed 25 June 2019].

Coupe, T. (2019) 'Automation, job characteristics and job insecurity', *International Journal of Manpower*, 40 (7), pp. 1288- 1304.

Cunningham, J. (2016) 'Credential disconnection: a marxist analysis of college graduate underemployment', *Critical Studies in Education*, 57 (2), pp. 224-237.

Dean, S. A. and East, J. I. (2019) 'Soft skills needed for the 21st-century workforce', *International Journal of Applied Management and Technology*, 18 (1), pp. 17-32.

D'Amico, A., Geraci, A. and Tarantino, C., (2020) "The relationship between perceived emotional intelligence, work engagement, job satisfaction, and burnout in Italian school teachers: an exploratory study", *Psychological Topics*, 29(1), pp. 63–84.

D'Urso, S. C. (2006) 'Who's watching us at work? Toward a structural-perceptual model of electronic monitoring and surveillance in organizations', *Communication Theory*, 16 (3), pp. 281-303.

Das, D. (2019) 'Towards a theoretical framework for organizational surveillance', *IUP Journal of Organizational Behavior*, 18(4), pp. 7–24.

Deloitte (2017) *The 2017 Deloitte Millennial Survey* [online] Deloitte Consulting LLP. Available at: <https://www2.deloitte.com/content/dam/Deloitte/global/Documents/About-Deloitte/gx-deloitte-millennial-survey-2017-executive-summary.pdf> [Accessed 24 Jun. 2019].

Deloitte (2019) *Deloitte Insights: 2019 Deloitte Global Human Capital Trends*. [online] Deloitte Consulting LLP. Available at: https://www2.deloitte.com/content/dam/insights/us/articles/5136_HC-Trends-2019/DI_HC-Trends-2019.pdf [Accessed 24 Jun. 2019].

Emberland, J. S., and Rundmo, T. (2010) 'Implications of job insecurity perceptions and job insecurity responses for psychological well-being, turnover intentions and reported risk behavior', *Safety Science*, 48(4), pp. 452-459.

Estlund, C. (2018) 'What should we do after work? automation and employment law', *The Yale Law Journal*, 128 (254), pp. 254 - 326.

Fero, M. and Dokoupilová, L. (2019) 'Factors of Work Motivation and Coexistence of Generations at the Workplace', *Research Papers Faculty of Materials Science & Technology Slovak University of Technology*, 27, pp. 15-24.

Furnham, A. and Swami V. (2015) 'An investigation of attitudes surveillance at work and its correlates', *Psychology*, 6 (13), pp. 1668-1675.

Gladwell, M. (2019) *Talking To Strangers*. New York: Little, Brown and Company.

Goleman, D. (1998) *Emotional intelligence*. Haydock: Bloomsbury Publishing Plc.

Greedy, E. (2020) 'Barclays installs spyware on employees' computers', *HR Magazine*, 21 February 2020. Available at: <https://www.hrmagazine.co.uk/article-details/barclays-installs-spyware-on-employees-computers>. [Accessed: 2 August 2020].

Handin, K. and Steinwedel, J. S. (2006) 'Developing global leaders: executive coaching targets cross-cultural competencies', *Global Business and Organizational Excellence*, 26 (1), pp. 18–28.

Harari, Y. (2018) *21 Lessons For The 21st Century*. New York: Spiegel & Grau.

- Hayes, A.F. (2013) *Mediation, moderation, and conditional process analysis: A regression-based approach*. New York: Guilford.
- Hirsch, P.B. (2017) 'The robot in the window seat', *Journal of Business Strategy*, 38 (4), pp. 47-51.
- Jameson, A., Carthy, A., McGuinness, C. and McSweeney, F. (2016) 'Emotional intelligence and graduates- employers' perspectives', *Procedia - Social and Behavioral Sciences*, 288, pp. 515-522.
- Levit, A. (2019) *Humanity works: Merging technologies and people for the workforce of the future*, London: Kogan Page Limited.
- Liu, M., Huang, Y. and Zhang, D. (2018) 'Gamification's impact on manufacturing: Enhancing job motivation, satisfaction and operational performance with smartphone-based gamified job design', *Human Factors and Ergonomics in Manufacturing*, 28, pp. 38-51.
- Magnano, P., Craparo, G., and Paolillo, A. (2016) Magnano, Craparo and Paolillo, *International Journal of Psychological Research*, 9(1), pp. 9-20.
- Mateescu, A. and Nguyen, A. (2019) 'Explainer: Workplace Monitoring & Surveillance', *Data & Society Research Institute*. Available at: https://datasociety.net/wp-content/uploads/2019/09/DandS_WorkplaceMonitoringandSurveillance.pdf [Accessed 25 June 2020].
- Martin, A. J., Wellen, J. M., and Grimmer, M. R. (2016) 'An eye on your work: How empowerment affects the relationship between electronic surveillance and counterproductive work behaviours', *The International Journal of Human Resource Management*, 27(21), pp. 2635-2651.
- McDonald, J.H. (2014) *Handbook of Biological Statistics* (3rd ed.) Maryland: Sparky House Publishing, pp. 254-260.
- Memon, A. M., Cheah, J.H., Ramayah, T., Ting, H., Chuah, F. and Cham, T. H. (2019) 'Moderation Analysis: Issues and Guidelines', *Journal of Applied Structural Equation Modeling*, 3(1), pp. i-xi.
- Merida-Lopez, S., Extremera, N., Quintana-Orts, C. and Rey, L. (2019) 'In pursuit of job satisfaction and happiness: Testing the interactive contribution of emotion-regulation ability and workplace social support', *Scandinavian Journal of Psychology*, 60, pp. 59–66.
- Mukokoma, M. M. N. (2020) 'Emotional Intelligence and intrinsic motivation in job performance', *International Journal of Management Studies and Social Science Research* 2(4), pp. 1-12.
- Nanda, M. and Randhawa, G. (2019) 'Emotional intelligence, well-being, and employee behavior', *Journal of Management Research*, 19 (3), pp. 157-172.

OECD (2020) 'OECD Employment Outlook 2020: Worker Security and the COVID-19 Crisis', Paris: OECD Publishing. Available at: <https://doi.org/10.1787/1686c758-en>.

Pau, A. and Sabri, B. A. (2015) 'Relationship Between Emotional Intelligence and Job Satisfaction in Newly Qualified Malaysian Dentists', *Asia-Pacific Journal of Public Health*, 27(2), pp.1733-1741.

Phillips, P. F. and Chen, H. (2018) 'Emotional intelligence and the role of motivation within the context of career guidance counselling for those experiencing unemployment', *Irish Journal of Applied Social Studies*, 18(1), pp. 1-14.

Quinlan, C., Babin, B., Carr, J., Griffin, M. and Zikmund, W.G. (2015) *Business research methods*, Andover: Cengage.

Rezvani, A., Barrett, R., and Khosravi, P. (2019) 'Investigating the relationship among team emotional intelligence, trust, conflict and team performance', *Team Performance Management An International Journal*, 25 (1/2), pp. 120-137.

Samaranayake, V., and Gamage, C. (2011) 'Employee perception towards electronic monitoring at workplace and its impact on job satisfaction of software professionals in Sri Lanka', *Telematics and Informatics*, 29, pp. 233-244.

Sanchez-Sellero, M. C., Sanchez-Sellero, P., Cruz-Gonzalez, M. M. and Sanchez-Sellero, F. J., (2016) 'Stability and satisfaction at work during the Spanish economic crisis', *Prague Economic Papers*, pp. 1-18.

Saunders, M., Lewis, P., and Thornhill, A. (2015) *Research methods for business students*. 7th edn. Harlow: Pearson Education Limited.

Spencer, D. A. (2018) 'Fear and hope in an age of mass automation: debating the future of work', *New Technology, Work and Employment*, 33 (1), pp. 1-12.

Suleman, Q., Syed, M. A., Mahmood, Z. and Hussain, I., (2020) 'Correlating emotional intelligence with job satisfaction: Evidence from a cross-sectional study among secondary school heads in Khyber Pakhtunkhwa, Pakistan', *Frontiers in Psychology*, 11, pp. 1-14.

Teng, W., Ma, C., Pahlevansharif, S. and Turner, J. J., (2019) 'Graduate readiness for the employment market of the 4th industrial revolution: the development of soft employability skills', *Education + Training*, 61 (5), pp. 590-604.

Tsvangirai, F. P. and Chinyamurindi, W. T. (2019) 'The moderating effect of employee motivation on workplace surveillance and employee engagement amongst employees at the Zimbabwe revenue authority', *SA Journal of Human Resource Management*, 17, pp. 1-8.

Tziner, A., Fein, E. C., Kim, S.-K., Vasiliu, C., and Shkoler, O. (2020) 'Combining associations between emotional intelligence, work motivation, and organizational justice with counterproductive

work behavior: A profile analysis via multidimensional scaling (PAMS) approach', *Frontiers in Psychology*, 11(851), pp. 1-18.

Van Horn, C., and Starace, J. (2018) 'What Me Worry? Most Americans not concerned about the impacts of technology on jobs', *Work Trends*, John J. Heldrich Center for Workforce Development. John J. Heldrich Center for Workforce Development.

Wilson, Alan M. (2001) 'Mystery shopping: using deception to measure service performance', *Psychology and Marketing*, 18(7), pp. 721-34.

Wong, C.-S., & Law, K. S. (2002) 'The effects of leader and follower emotional intelligence on performance and attitude: An exploratory study', *The Leadership Quarterly*, 13(3), pp. 243-274.

Appendix

Appendix 1: Questionnaire Consent Form

Hi, my name is Kristin Smith. I am a student at the National College of Ireland, working towards a Masters degree in Human Resource Management.

I am hoping you are able to share your experiences in this questionnaire. There is ample research regarding new technologies, the majority of which focuses on how this will impact the future.

The aim of this research is to examine how new technologies are impacting the present workplace, specifically employees' motivation and satisfaction. Moreover, to see if emotional aptitude predicts particular results. If there is a correlation this can highlight areas employers can provide additional support.

Please complete the following questionnaire based on your current or most recent employment experience. Your time is greatly appreciated.

If you have any questions about the research study, please contact me at kristinssmith35@gmail.com or my supervisor Matthew Hudson at Matthew.Hudson@ncirl.ie

Your participation in this research study is voluntary. You may choose not to participate. If you decide to participate in this research survey, you may withdraw at any time. If you decide not to participate in this study or if you withdraw from participating at any time, you will not be penalized.

The procedure involves filling an online survey that will take approximately 10 to 15 minutes. Your responses will be confidential and we do not collect identifying information such as your name, email address or IP address.

The data collected here is both confidential and anonymous. All data is stored in a password protected electronic format. To help protect your confidentiality, the surveys will not contain information that will personally identify you. The results of this study will be used for scholarly purposes only and will be presented in an aggregated manner.

Please confirm you would like to participate:

Appendix 2: Questionnaire Questions

Question	Answer Format
How old are you?	[Fill in the blank]
What gender do you identify with?	<ul style="list-style-type: none"> a. Female b. Male c. Non-binary/third gender d. I prefer not to answer e. Other
What's your work status?	<ul style="list-style-type: none"> a. Employed b. Self-employed/Freelance c. Contingent Worker d. Intern e. Part-time f. Unemployed- Looking for work g. Unemployed – Not looking for work h. Homemaker i. Student j. Military/Forces k. Retired l. Not able to work m. Other
Which of the following categories best describes the industry you primarily work in (regardless of your actual position)	Multiple choice from 27 industries including other
And in which country do you live in?	Multiple choice from 202 countries
How important is your ability to use technology for you to do your job well?	<ul style="list-style-type: none"> a. Critical - I couldn't do my job without it b. Very important c. Not very important d. Do not use technology at my job
New technologies have changed my job for the better.	<ul style="list-style-type: none"> a. Agree a lot b. Agree a little c. Disagree a little d. Disagree a lot
New technologies are good for the economy.	<ul style="list-style-type: none"> a. Agree a lot b. Agree a little c. Disagree a little d. Disagree a lot
The jobs created by these new technologies are good jobs.	<ul style="list-style-type: none"> a. Agree a lot b. Agree a little c. Disagree a little d. Disagree a lot

I have the necessary technological skills to perform my current job.	<ul style="list-style-type: none"> a. Agree a lot b. Agree a little c. Disagree a little d. Disagree a lot
I will need more technological skills to achieve my career goals.	<ul style="list-style-type: none"> a. Agree a lot b. Agree a little c. Disagree a little d. Disagree a lot
My employer does a good job of providing me with training opportunities in technology.	<ul style="list-style-type: none"> a. Agree a lot b. Agree a little c. Disagree a little d. Disagree a lot
In my current job, I use the computer or email as my primary means of communicating with others during the workday.	<ul style="list-style-type: none"> a. Agree a lot b. Agree a little c. Disagree a little d. Disagree a lot
New technologies eliminate more jobs than they create.	<ul style="list-style-type: none"> a. Agree a lot b. Agree a little c. Disagree a little d. Disagree a lot
Please choose which statement you agree with more:	<ul style="list-style-type: none"> -It has been hard to keep up with how fast technology changes at work -Keeping up with the pace of changing technology at work hasn't been a problem for me
I find keeping up with technology in my job:	<ul style="list-style-type: none"> a. Very easy b. Somewhat easy c. Somewhat difficult d. Very difficult
Changes in technology have made my job	<ul style="list-style-type: none"> a. More interesting to do b. Less interesting to do c. No different in how interesting it is
The place where I work has:	<ul style="list-style-type: none"> -Been losing employees because of advances in technology -Been gaining employees because of advances in technology -Not gained or lost employees because of advances in technology
Do you expect to be working at a new job in the next two years, or not?	<ul style="list-style-type: none"> a. Yes b. No
Thinking about the next three to five years... How important will your ability to use technology be for you to do your job well?	<ul style="list-style-type: none"> a. Critical (won't be able to do my job without it) b. Very important

	<ul style="list-style-type: none"> c. Not very important d. Will not use technology at my job
How quickly do you think technology will change in your job in the next three to five years?	<ul style="list-style-type: none"> a. Very quickly b. Quickly c. Slowly d. Will not change
Choose which statement you agree with more:	<ul style="list-style-type: none"> -It will be hard to keep up with how fast technology changes at work -Keeping up with the pace of changing technology at work will not be a problem for me
How worried are you that you won't be able to keep up with how fast technology changes in your job in the next three to five years?	<ul style="list-style-type: none"> a. Very worried b. Somewhat worried c. Not too worried d. Not at all worried
In the next three to five years, do you think the place where you work will:	<ul style="list-style-type: none"> -Gain employees because of advances in technology -Lose employees because of advances in technology -Not be affected by technology when it comes to gaining or losing workers
How worried are you that the job you have now will be replaced by technology in the next three to five years?	<ul style="list-style-type: none"> a. Very worried b. Somewhat worried c. Not too worried d. Not at all worried
How likely is it that your employer could use technology to replace the job you are doing in the next three to five years?	<ul style="list-style-type: none"> a. Very likely b. Somewhat likely c. Not too likely d. Not at all likely
The work I do is very important to me.	7-point Likert scale
My job activities are personally meaningful to me.	7-point Likert scale
The work I do is meaningful to me.	7-point Likert scale
I have a great deal of control over what happens in my organisation.	7-point Likert scale
I have significant influence over what happens in my organisation.	7-point Likert scale
<i>The following questions are to gauge the perceived level of surveillance in the workplace. At work I am under surveillance:</i>	
Directly by people in authority (manager; supervisor).	7-point Likert scale
Indirectly by video monitoring (e.g. closed circuit cameras).	7-point Likert scale
Monitoring of emails and internet use.	7-point Likert scale

Through use of centralised information the organisation has about me.	7-point Likert scale
Surveillance in the workplace is an invasion of employees' privacy.	7-point Likert scale
Organisations keep employees under surveillance because they don't trust their employees.	7-point Likert scale
Managers use surveillance in the workplace to control employees.	7-point Likert scale
I don't like the feeling that I am being monitored by surveillance in my workplace.	7-point Likert scale
I try to find ways to hinder or undermine my manager.	7-point Likert scale
I often find fault with what the organisation is doing.	7-point Likert scale
I tend to slack off towards the end of the day.	7-point Likert scale
<i>The following questions are designed to measure work attitudes. Please answer the following questions based on your feelings of your current or most recent employment.</i>	
Job content	5-point Likert scale
Degree of responsibility	5-point Likert scale
Degree of variation in the job	5-point Likert scale
Opportunities to use professional qualifications	5-point Likert scale
Extent of freedom at work	5-point Likert scale
Recognition for good performance	7-point Likert scale
I am happy to tell others about my good job and good working conditions	7-point Likert scale
I talk positively about my job to people I see off-hours	7-point Likert scale
My own values and priorities are identical to the values and priorities at my workplace	7-point Likert scale
I like the personnel policy where I am working now	7-point Likert scale
I really care about changes at my own work place	7-point Likert scale
Do you feel stimulated by your work tasks?	5-point Likert scale
Do you feel motivated by your job?	5-point Likert scale
Do you experience your job as challenging?	5-point Likert scale
Do you look forward to go back to work after summer vacations?	5-point Likert scale

Would you like if your children chose the same job as you?	5-point Likert scale
Would you like to spend more time at work?	5-point Likert scale
<i>The following questions are designed to measure emotional perception:</i>	7-point Likert scale
I have a good sense of why I have certain feelings most of the time.	7-point Likert scale
I have a good understanding of my own emotions.	7-point Likert scale
I really understand what I feel.	7-point Likert scale
I always know whether or not I am happy.	7-point Likert scale
I always know my friends' emotions from their behavior.	7-point Likert scale
I am a good observer of others' emotions.	7-point Likert scale
I am sensitive to the feelings and emotions of others.	7-point Likert scale
I have a good understanding of the emotions of people around me.	7-point Likert scale
I always set goals for myself and then try my best to achieve them.	7-point Likert scale
I always tell myself I am a competent person.	7-point Likert scale
I am a self-motivated person.	7-point Likert scale
I would always encourage myself to try my best.	7-point Likert scale
I am able to control my temper and handle difficulties rationally.	7-point Likert scale
I am quite capable of controlling my own emotions.	7-point Likert scale
I can always calm down quickly when I am very angry.	7-point Likert scale
I have good control of my own emotions.	7-point Likert scale