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Impact of Technology on Employee Performance. Case study: Freska Oy, Finland.

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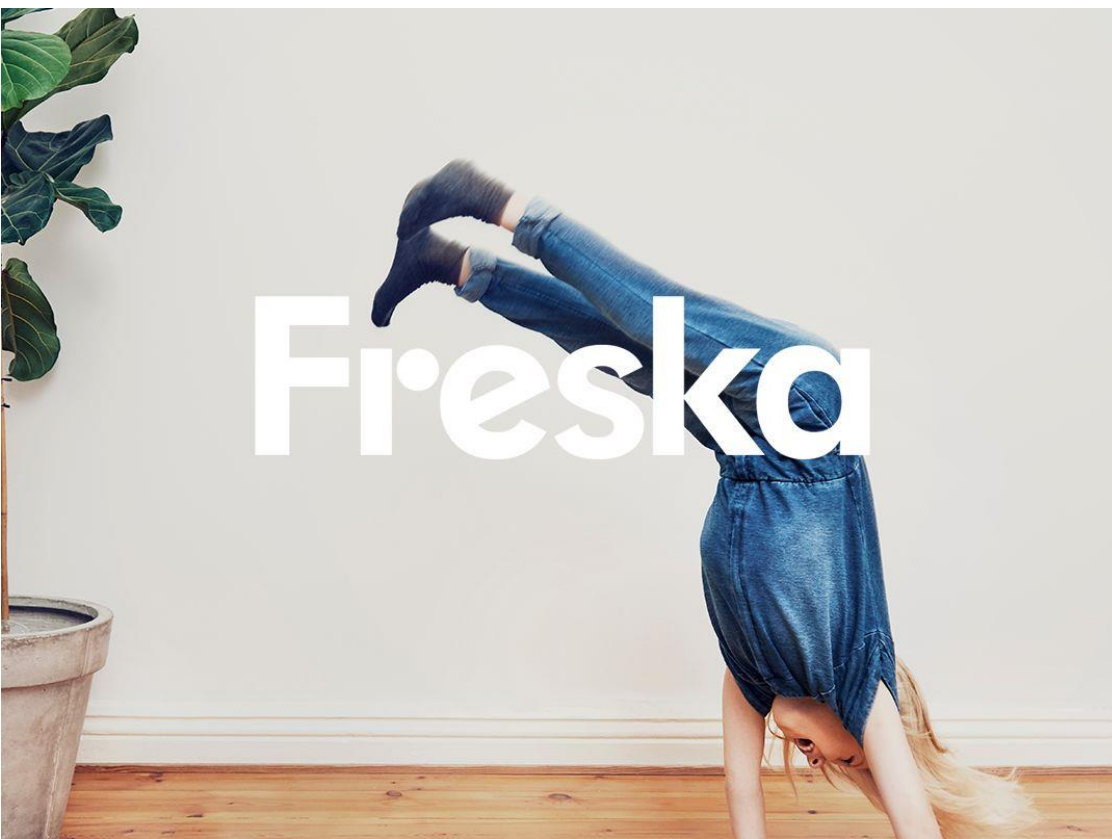
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Abstract:

The purpose of this thesis was to make research about the impact of technology on employee performance with the case study of Freska, Finland Oy. There were three main goals for the research: to investigate the role of technology within Freska employees' performance, what are the needs and expectations of the employees towards technology, and the recommendations to Freska on possible improvement.

The study method was qualitative data collection. 12 participants with different backgrounds were interviewed. The profile of the participants and the findings of the interviews were included in the ressearch. The data analysis was based on the literature review. Eventually, the research questions were answered and the research problem was solved.

The findings from the interviews were in line with the theories of this research. It was found that technology is crucial to the employee performance. Although some employees may find it hard to adapt, the technological environment due to, e.g. age, capacity, personal preference. The majority of the employees can benefit and gain more knowledge from the use of technology, thus deliver better performance.

Important note:

The commissioning company Freska has employee cleaners, as well as freelance cleaners. However, in this research, the term employee refers to both freelance cleaners and employee cleaners.

DECLERATION

I, the undersigned, hereby declare that this dissertation entitled, "The impact of technology on employee performance, case study: Freska Oy Finland" is my own work, and that all the sources I have used or quoted have been indicated or acknowledged by means of completed references. Furthermore, it represents my own opinions and not necessarily those of the Kajaani University of Applied Sceiences.

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Yangxuan Zhou   30.03.2020

Foreword

"How happy is the blameless vestal's lot.

The world forgetting, by the world forgot.

Eternal sunshine of the spotless mind.

Each prayer accepted, and each wish resigned."

Alexander Pope

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1   Introduction

Nowadays organizations are experiencing multiple challenges. In order to stay competitive in the market and maximize profits, these organizations must work to create sustainable advantage. "A firm that manages to build quality into its employees is already halfway towards the goal of making quality products'', as Imai (1986) says. Business owners need workers who can do their job because the output of their employees is vital to their company's overall success. Therefore, the employees are the key aspect of organization's success and profitability (Jacob, et al. 2000).

According to Armstrong (2013), each employee's performance generally affects not only the individual employee but also the team, department, management and company. Thus, excellent staff and excellent suppliers produce excellent products through outstanding procedures. As researcher Richey (2000) has noted, training helps employees to understand, improve and make beneficial improvements in their working attitudes (Garvin et al., 2008). Innovation in Information Technology (IT) has significantly altered the business processes between an organization and its workers. E-training (Kendler, 2000) and e-benefits (Mitchell 2000) were supported by IT.

Therefore, it is important to evaluate the impact of technology on employee performance, and for these companies to learn about how technology impacts their business. With the outcome of this study, the commissioning company (Freska) can keep developing the strengths and overcome the weaknesses.

1.1   Contextual background

The organization's ways of operating can be fundamentally altered by new phenomena such as globalization, information distribution, new legal policies and extensive possibilities as a result of technological progress and other factors (Grazyna, 2013). Competitors, advanced technology, employee productivity and rapid growth, new leadership and management are the main challenges for any company (Madsen, et al. 2005).

There is one aspect in common for all successful companies regardless of their business. Motivated workers with high productivity (Yatin, 2016). In the service sector, the direct contact

between employees and customers constitutes the most important factor. Therefore, the employees should be considered to be the most valuable resource (Alefari, et al. 2018).

According to Markos & Sridevi (2010) , engaged employees have a significant impact on the organizational performance, because of their passion to the company. Research has shown that employee engagement has positive ties to the organizational performance, such as: employee satisfaction, efficiency, competitiveness, profitability.

Organizations have recognized that training has significance on employee performance and productivity. It constitutes a tool to manage the risks associated with new products, markets and technologies (Dermol & Čater, 2013). As a result, the number of investments in training will continue to grow, which contributes to a larger share of the workforce (Blandy et al., 2000) and an increased number of training hours per average worker (Heathfield, 2009).

Considering the importance of training, it is expected that different approaches exist in order to find an effective method of training (Dermol & Čater, 2013). Research has proven that management's dedication to the well-being of its workers and providing more opportunities to grow are the major drivers of employee engagement (Markos & Sridevi, 2010). As a result, managers must consider the crucial advantages of staff performance and develop clear, reliable methods for employee evaluation.

Most contemporary organizations have delivered greater levels of job performance by focusing on their performance management (Jamie, et al. 2011). A successful management allows a company to recognize and improve the productivity of its employees. Both the companies and their staff profit from the performance management program. This generates individual input and helps to gather organizational data for the preparation and assessment of human resources (Kumar, 2015).

Furthermore, the procedures of an organization must be structured to meet not only the organization's technical requirements, but also the needs of its employees. Continuously upgrading the procedures will improve efficiency and thus profitability (Dahlgaard, et al., 1998).

People and information both are essential for business operation and have a significant impact on company performance, which ensures that both have to be well handled in order for the company to succeed (Martinsons, 1994; Teo, et al. 2007). Information Technology tools for human resources which improve management, productivity and performance, can help the organization as a whole to be outstanding and competitive.

Technology gives access for the employers to train their employees in an alternative and creative way. Furthermore, technology has made it possible for almost every local community to deliver training and communication faster (Benson & Dundis, 2003).

It has historically been established that information and communication technologies (ICTs) such as the Internet, mobile communications and new media will make a substantial contribution to enforcing the organization's personal guidelines. Engineering advancement can have a significant impact on an organization's human resource management (HRM). The corporation encourages its own internal processes, core competences, specific markets and organizational structure in general to be strengthened ("Impact of Information Technology on Human Resource Management", 2017).

Although ICT and computer use have never substituted for human decision making, their ability to assist managers and employees in taking the right decisions by using accurate information and accelerating tasks cannot be disregarded. Most organizations have understood the importance of IT and its effect on the speed and accuracy of activities and growing customer satisfaction, support systems, the decision-making of managers and in particular, the productivity of the organization. This recognition has driven several organizations to move swiftly towards IT implementation (Yardley, 2005; Rezaei, et al, 2014).

Nowadays, we are well aware of the importance of information as a strategic and tactical resource within an organization and as a major added value resource. In the business environment, information has always been regarded as a competitive advantage. Nonetheless, it is crucial that tangible changes which could increase the potential value of the information occur if this valuable tool can be used by the company through the implementation of new technology (Rezaei, et al, 2014).

When technological complexity continues to change, administrators are facing more obstacles as businesses need more employees with advanced technical and professional skills. Yet such specialists cannot be handled with traditional authoritarian management styles. They expect independence, satisfaction at work and status in operations. This is why nowadays management has been shifted to employees (Markos & Sridevi, 2010).

With the benefits of technology, companies now use modern operating strategies to manage their employees (Markos & Sridevi, 2010). Such modern, creative training methods, however, require new technology, including computers, new software, website navigation. Moreover,

workers may sense increased stress, particularly when changes in technology are fast (Benson & Dundis, 2003).

Given the above, organizations need effective and precise technology tools to build up successful performance management. It helps them align their staff, resources and systems to achieve their strategic goals through the business operations. Furthermore, it is essential for business managers to learn the key factors which affect the business environment.

1.2   Organizational background

Freska is a high-quality home cleaning service company, founded in 2015. Freska operates in Finland, Sweden and Norway. Since its establishment, Freska has grown rapidly. The company's turnover for 2018 was over ten million euros, of which six million came from Finland (Finder.fi, 2018). The staff of Freska is made up of 600 cleaners from over 40 different countries and 70 office workers (Freska, 2018).

The domestic online market on demand for home cleaning services has been very challenging and many companies located in Scandinavia and Europe have failed. Nevertheless, Freska has taken swift lead on the Finnish and Norwegian markets with an obsessive focus on service quality and efficiency of operation, together with strong values that form a coherent organizational culture (spintopventures.com, 2017).

Freska's business operation is highly relied on technology. For customers, there are a website and an application (app) where they can manage cleanings and receive customer service, such as leaving specific requirements about the cleaning, giving feedback to the cleaners. All these services give customers complete flexibility in deciding on their booking.

For cleaners, Freska has designed a web app called 'Superheroes', which is the one-stop shop solution that enables the Freska cleaners to provide their services to the customers and supports them with the best knowledge available to reach the highest rating possible. Specifically, the 'Superheroes' web app allows Freska cleaners to view and confirm their bookings details, read the latest news regarding anything Freska and brush up their knowledge with relevant support content. Defining availability and fetching invoice information also belong to the feature set for some of the cleaners in Finland (Freska, 2020).

Freska values and does everything as much as possible to support and satisfy not only the customers, but also the cleaners. The company is driven by a sense of community and strong digitalism, which is reflected in a unique ordering and management system serving customers, as well as providing marketing and metrics tools. The technology makes it possible for the cleaning work to be paid very good rewards at an hourly price while being competitive for the customer.

The most important mission of Freska is bringing happiness to the customers and employees. With this intention, Freska has received average customer satisfaction score 4.7 out of 5. The company's goal is to be the best company in the world (Freska, 2019).

However, the competition in the industry is growing steadily and leadership positions in the market are becoming more challenging to maintain. According to Randolph & Horman (2006), evidence has shown that recurrent management problems are linked to workplace management and contribute to substantial economic losses.

Accordingly, 'Superheroes' is the main technological tool Freska has been using. Therefore, this research seeks to explore in more detail about 'Superheroes' and its impact on the performance management system of the company.

1.3   Problem statement

According to (Nikandrou et al., 2008), companies need a more dynamic and skilled workforce to become competitive and to remain profitable in such a rapidly changing world. The need for a well-trained workforce therefore becomes a primary objective.

Training is considered as a vital part of delivering a good job for many years. Employees ' productivity and skills can be enhanced with suitable and structured training strategies (Kai Ming Au, Altman & Roussel, 2008). Thus, the management of an organization is essential to achieve organizational objectives and to stay in a competitive position.

However, management is not as easy as it sounds. As described, Freska's workers are mostly foreigners. Freska has cleaners from more than 40 countries, with varying backgrounds of age, culture and education. Moreover, most of the cleaners do not speak Finnish. It makes management even more complicated.

Nowadays companies need more motivated and skilled staff, whereas the employees expect to be treated better as well. Although it is impossible to satisfy every employee's needs, it is important for Freska to know whether their management tool works well for the employees or not.

According to Imran, et al. (2014), technology enhances the employees' productivity when it is utilized for the organization's good and it is used with ethical values. At the same time, innovative technology equipment helps HRM to test and measure the production or efficiency of the employees.

As a result, with an effective management tool, the satisfaction and engagement of the employees can be increased, therefore, the workers will deliver better quality. Technology is beneficial to both employees and the company whilst it is used effectively and adequately.

1.4   Research questions

This study examines the impact of technology on business; whether the technology is positive for the employees' performance or not. Additionally, it investigates the commissioning company's management, to discover if the company's management method is effective to the employees, and whether it meets the employees' needs or not.

The research questions are as follows:

1. What is the cleaner's general opinion about 'Superheroes'?

2. What is the impact of 'Superheroes' on the cleaner's performance at Freska?

3. What do the cleaners expect and need from 'Superheroes' regarding performance?

4. What can be done to make the 'Superheroes' the best service to improve the cleaners' performance?

1.5   Aims and objectives

In general, the aim of this study was to discover the impact of technology on employee performance, with the case study of Freska oy. To make the contents more comprehensive, the author studied three main areas.

First, because the main technological tool of Freska is 'Superheroes', this study aims at finding out how does 'Superheroes' operate: what are its weaknesses and strengths, what has 'Superheroes' brought to Freska cleaners, and how has it influenced the cleaners.

Secondly, the aim of the study is to make the commissioning company and other companies in similar industries aware of the essentiality of focusing on the employee's wellbeing in order to enhance the organizational performance.

Last but not least, this study aims at providing the company with recommendations on how the app can be improved to meet their employees' needs, thus to enhance their performance. Furthermore, the guidelines may also be applied to other companies with the similar operating system, so this report can be valuable to other companies in the same sector as well.

1.6   Possible social significance

The study has significance to the commissioning company, and for other companies in the same industry, since it proposes ways of improving the overall performance of the company. The study explores the areas of employee performance and engagement, employee management, information and communication technology. In the data collection chapter, the author has utilized the face to face interviews with Freska cleaners from different background, which provides reliable knowledge to other researchers in the future.

2   Literature review

In this chapter, the author will discover in depth how training and employee engagement affect the employee performance, as well as the relationship between technology and training and employee engagement. The literature review will be examined in accordance with the perspectives of certain scholars and researchers whose findings provide an important guideline and backgrounds for this study.

2.1   Theoretical framework

The following framework is made by the author; it is aimed for helping the readers to understand the structure of the applied theories. It shows how the research is developed and how each key word is related to each other.
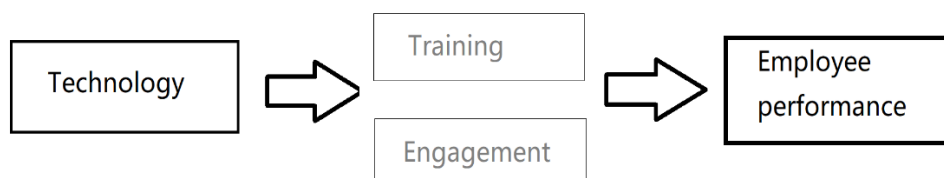

Figure 1: Theoretical framework

Source: author

2.2   Technology

The full context of 'technology' is to apply developmental and scientific understanding systemically in solving problems (Anglin, 1991). As Milligan (2006, p.1) notes, the use of ICT has increased quickly over recent years at the workplace. The Internet can be a valuable resource when used in an appropriate way for any enterprise, large or small, local, national or global (Cohut, 2005). For the past two decades, the Internet has enhanced the full range of opportunities for organizations to carry out their work and to structure their business operation (Lindstrom, et al. 1997).

According to Brynjolfsson et al. (2002), the strong connections between organizational activities, and IT interventions, and the various forms of organizational practice have been found, which demonstrate the positive impact of IT, organizational activities and the influence of these two indicators on efficiency.

As noted by Foster (1986), many researches have proven that there is a positive relationship between technology and performance. The web communication networks of the organization allow their staffs to obtain and exchange more innovative and different manufacturing information with the other staffs, at the same time to learn to accomplish several tasks therefore improve employee productivity. With the use of the technology, it stores and shares information freely, employees do not need to spend a lot of time looking for data, documents or information. Furthermore, technology minimize the amount of risks and errors human makes (Aral, et al. 2012 & Bock, et al. 2005).

On the other hand, technology facilitates business managers' work. It enables operational skills to be developed, through enhanced efficiency, better talent management and operational excellence. At the same time, web-based technologies allow business managers to communicate with external suppliers and consumers in real time with reliable and timely information, thus the companies can manage their profit efficiently (Devara, et al. 2007 & Sanders, 2007 & Benitez & Ray, 2012). Moreover, web-based technologies allow the organization to incorporate innovation practices in the planning and working environment, thus to retain operational talent and provide reliable information on the achievement of goals, performance evaluation and work plans to grow and maintain practical skills (Benitez, et al. 2015). With the advantage of technology, companies have moved their focus to e-business platforms to minimize their operating costs, improve productivity and quality, and respond quickly to customers' demands and business partners' needs (Jardim-Goncalves et al. 2012; Raymond et al. 2005).

2.2.1 Technology and training

Recent technological advancements allow great quantities of information to be generated and stored. Most companies use machines to assist managers in data management, processing and analysis. Business managers have been trained to benefit fully from technology (Gist, et al. 1989). Advanced technologies are generally considered to be crucial to enhance competences. Companies that use new technology and at the same time investing in computer literacy and technical skills (e.g. design and control with computer assistance)) should be expected to achieve higher productivity gains than those which do not (Boothby, et al. 2010).

Internet-based technology offers various prospects to gain new skills and knowledge. For instance, it gives far faster accesses for other companies or research institutions to the latest scientific and technological innovations (Jerman-Blazic, 1996). Technology gives access to plan, implement and deliver e-Training services and tools in different environments, while benefiting from new learning patterns to allow employees to learn on time and place without restriction and adapt learning to the needs and/or development strategy of their business (Khemaja & Khalfallah, 2019).

With the theory of Canadian Manufacturing Advanced Technology Survey (ACTS), which was associated with the Annual Manufacturers Survey (1998), researchers Boothby, et al. (2010) have found that enterprises that adopt advanced technology while providing strategic training on average are more productive than other technology adopters, whose productivity in turn is higher than those that do not use advanced technology. Considering that strategic technical training is described as those trainings which technology is regarded as the most important tool, the results indicate that the majority of firms offering strategic training are following the right business approaches to achieve better performance with the use of technologies.

Technology may offer innovative training channels with personal feedbacks that some studies suggest could improve the efficiency and increase the interaction from employees. Over the years, technological advances have developed multiple efficient and cost-effective training methods. Technology is now even used in many schools and organizations as a resource for teaching and learning (e-learning) (Khan et al., 2017). Becker et al. (2012) pointed out that with the help of technology, training can be more productive than the conventional forms. Such efficiencies include providing a large number of employees more quickly and cost-effectively than conventional approaches training throughout geographical areas in shorter periods.

According to Tannenbaum (1990); White & Christy (1987), taking advantage of technology to train employees has been identified as a vital component of individual and organizational success. As noted by Driscoll (1999), technology-based training has been growing dramatically through the years, it has brought companies tactical and strategic advantages. For instance, managers do not need to pay extra travel costs to train their employees, thus employees can learn without the limitation of time and location. Furthermore, the capacity to prepare worldwide workforce is one of the competitive advantages of technology-based training, it assists businesses in engaging in global markets to compete and cope with faster product development.

2.2.2   Technology and employee engagement

The initiation of technological advances has changed the way workers perform. Technological progress has increased employee performance, reduced workload, as well as the time to complete tasks (Imran, et al, 2014).

In 2006, the Chartered Institute of Personnel and Development (CIPD) conducted a survey of 2000 workers in the United Kingdom finding that communication is the major element which impacts workplace engagement. The report identifies itself as the most important driving force in employee's engagement to provide their views and opinions. According to a survey commissioned by the McKinsey Global Institute (2016), more than two thirds of respondents claimed that using technology within the workplace can enhance internal communication.

In addition, internal social networks can contribute to the development of internal communities and links to improve collaboration, sharing of knowledge, organizational learning and innovation, as well as optimize information channels and accelerate internal processes which are crucial for boosting employee engagement and organizational performance. (Haddud, et al. 2016; Leonardi, Huysman & Steinfield, 2013; Men & Bowen, 2017; Men, et al. 2020, Sievert and Scholz, 2017).

The prevalence of worldwide technological devices gives access for everyone to do their job at anywhere and anytime. Video conferencing and internal social networks enable the employees to communicate and cooperate on a large scale. Big data (and its analysis) helps us to gain insight into how we function, why we run and what we can do to achieve success. Eventually, it leads higher engagement and performance (Morgan, 2017).

According to Morgan (2017), most of the employees who have a good relationship with the company and colleagues leave their job because of the technology. Poor technology tools make employees' job harder to complete, information can go missing, too many steps are needed in order to perform simple tasks, devices can stop working and interfaces can be old and outdated, which can lead to workers being angry at the company's incapacity to improve the technology in the workspace. Thus, technology does have a significant impact on organizations. If the tools collapse, human relations can also be affected in a negative way.

2.3 Employee performance and training

'Training is an activity which encourages individual learning' as Armstrong (2009) puts it. Another researcher Gordon (1992) defines training as general and designed transformation in behavior by practicing and learning, which enables participants to achieve the levels of understanding, skills, capabilities and competencies required to effectively deliver their job.

Interesting observations concerning the relationship between training and employee performance have been found by past researches. Training has a positive influence on employees' performance. It appeared to produce better outcome for both workers and companies through the growth of employees' capability, talents, services, and competencies (Appiah 2010; Harrison 2000; Guest 1997).

There are a number of factors in today's society that influence organizational growth and development. Based on existed researches on organizational performance, employee training is essential for enhancing both efficiency and productivity. In addition, this ensures that companies are in better places to succeed and remain at the top (Nassazi, 2013). Training is a long-term systematic process without interruption. By means of training and development, companies can enhance their employee skills and performance. Research shows that investment in workers is shown to increase the level of success of the company in decision making, collaboration and problem solving. (Singh & Mohanty, 2012).

Devins, et al. (2012) found that trained staff are often delivering the best job in teams because everyone understands the goals and can work together efficiently. Trained employees are also more confident in their ability to plan and determine. Furthermore, it is most plausible that

employees who are regularly trained accept change and develop new ideas. Employees who are qualified to learn new skills make good candidates for promotions as well because they are able to learn, preserve and use knowledge. Reliable, qualified staff can also be empowered to train other staff, thereby reducing the pressure on the management team.

Through the years, many researchers including Vyas (2010 have shown that training can boost employee efficiency, motivation and willing to work. Furthermore, it increases the employee welfare and the ability to find better jobs while improving company performance, profitability and productivity, and reducing costs, absenteeism and the number of accidents at work. Wright & Geroy (2001) add that effective training programs improve the skills of workers. This not only increases employees' overall performance to carry out their current work efficiently, it also strengthens employees' knowledge skills and roles required for their future work and thereby leads towards superior performance.

On the other hand, the benefits from employee training have slowly led some companies to understand that success depends on their employees ' abilities and skills, which means they need to invest considerably and on a continuous basis in training and development (Beardwell et al. 2004).

2.4   Employee performance and engagement

Over the past 10 years, the employee engagement is an ever-growing phenomenon. As a resource for a company strategic partner, organizations today value committed workers. The concept of employee engagement has now become even more significant as a number of drivers have been found which affect the performance and well-being of employees at work (Bedarkar & Pandita, 2014). In the Global Work Force Report (2003), the author Perrin described engagement as "competence and commitment of workers to contribute to the organizational performance, primarily through the provision of sustainable flexibility." As noted by the report, there are many conditions which can influence engagement. For instance, emotional and rational factors, as well as fundamental work experience.

Employee engagement is a vast structure, affecting almost any aspect of HRM, the engagement of employees is a stronger indicator for good corporate results. The reason why companies should invest in employee engagement is because the engagement of workers is strongly connected with

the organizational performance (Markos & Sridevi, 2010). The commitment of workers is crucial for leaders and managers in organizations around the world as it is recognized as a key aspect for assessing the level of an organization's productivity, advancement and competitiveness (Alefari et al., 2018). Whilst their work does not explicitly use the word "employee engagement", they understand the need for involvement and their association with organizational performance (Katz & Kahn, 1966).

Giving priority on employee engagement in the phase of performance management may facilitate improvements in performance further than the limits of a conventional emphasis on performance. The conventional performance evaluation approach is suitable for stable roles in which work processes are easily monitored and analyzed, as suggested by Banks & May (1999). On the contrary, the jobs in today are far more dynamic (Singh, 2008). The concept of a job today and what good performance means are more diverse (Fletcher & Perry, 2001).

Motivation is a form of employee engagement which impacts the performance of workers; it is commonly described as the element that exceeds employees' duties. The employee engagement has been related to the working environment, leadership, teamwork, career development, promotions, corporate policies and the well-being of employees (Anitha, 2014). As Bedarkar & Pandita (2014) have noted, every company is aware of how important it is to encourage and inspire its people to perform, and it has become more evident over time. However, what is often less well known is that the employees want to become involved in jobs where they believe they make a positive contribution to something greater than themselves; they are valued by their employer, and their needs will be considered.

3 Methodology

Methodology is the methods or techniques used for the identification, selection, processing and analysis of a research ('Methodology', 2020). In this chapter, the author specifically outlines the methods which are used in the study for reaching the research goals.

3.1 Research method

In order to gather and generalize results, two types of analysis are used: quantitative and qualitative research. Both techniques are closely related but vary according to the research goal or intent. In this thesis, qualitative research is chosen for collecting data.

Qualitative research	Quantitative Research
The aim is a complete, detailed description.	The aim is to classify features, count them, and construct statistical models in an attempt to explain what is observed.
Researcher may only know roughly in advance what he/she is looking for.	Researcher knows clearly in advance what he/she is looking for.
Recommended during earlier phases of research projects.	Recommended during latter phases of research projects.
The design emerges as the study unfolds.	All aspects of the study are carefully designed before data is collected.
Researcher is the data gathering instrument.	Researcher uses tools, such as questionnaires or equipment to collect numerical data.
Data is in the form of words, pictures or objects.	Data is in the form of numbers and statistics.
Subjective – individuals interpretation of events is important ,e.g., uses participant observation, in-depth interviews etc.	Objective: seeks precise measurement & analysis of target concepts, e.g., uses surveys, questionnaires etc.
Qualitative data is more 'rich', time consuming, and less able to be generalized.	Quantitative data is more efficient, able to test hypotheses, but may miss contextual detail.
Researcher tends to become subjectively immersed in the subject matter.	Researcher tends to remain objectively separated from the subject matter.

Table 1: Features of Qualitative & Quantitative Research

Adapted from: Miles & Huberman (1994, p. 40). Qualitative Data Analysis.

A quantitative form of study quantifies behaviors, beliefs and behavior and typically generalizes the findings of a large population survey. The quantitative data collection approaches provide mass quantities of statistical data. Such approaches are usually applied by conducting a formal survey or questionnaire that relies on an objective response. In the statistical frameworks which include tables, charts and graphs, the results of the survey or questionnaire are collected and displayed (O'Gorman & MacIntosh, 2015).

On the other hand, as noted by Langkos (2014), qualitative research is characterized mainly by its suitability for small samples, because its results are not measurable or quantifiable (see table 1). It offers a comprehensive description and analysis of research subjects without limiting the scope of investigations and the essence of the responses of the participants, as its fundamental advantage, which also constitutes its essential difference from quantitative research. (Collis & Hussey,2003). Nonetheless, the validity of qualitative research is largely dependent on the researcher's competence and knowledge. Since they come mostly from the individual evaluations and perceptions of the researcher, the findings cannot be considered as precise. While smaller samples are more desirable for this specific topic, it is also risky that if the findings of qualitative research are considered as representing the views of an entire community (Bell, 2005).

As discussed with the commissioning company, the focus of the practical part is to discover what do the employees expect to have in the 'Superheroes'. Therefore, the data method will be qualitative data. The material of this study will be gathered in two aspects, by collecting existed researches and a detailed analysis of the employees from the company.

The qualitative data will be collected by having interviews with each individual. According to Eskola & Suoranta (1998), when a research has straightforward subject matter, but it seems challenging to formulate questions correctly, a theme interview is the easiest way to collect data. Furthermore, the free conversation helps the interviewees to have clearer thoughts on the subject. The ways to hold the interviews could be face to face conversation, or online video call.

3.2   Research strategy

The research is conducted with the basis of existed studies. There are various items of historical scholarly research concerning the role of technology, not particularly for employee performance

but also for other factors in supporting and maintaining the business operation. Thus, this thesis is the form of a new study but based on an established topic of science.

In general, research approach can be divided into three types: deductive research approach, inductive research approach, and abductive research approach. Deductive approach investigates the truth of conclusions (or hypotheses) in hand, whereas inductive approach allows new insights and generalizations to arise. Abductive analysis, however, begins with 'surprise details' or 'puzzles' which illustrate the research process. The main difference between deductive and inductive research approach is the validity of the hypotheses. (Bryman & Bell, 2015)

	Deduction	Induction	Abduction
Logic	In a deductive inference, when the premises are true, the conclusion must also be true	In an inductive inference, known premises are used to generate untested conclusions	In an abductive inference, known premises are used to generate testable conclusions
Generalizability	Generalising from the general to the specific	Generalising from the specific to the general	Generalising from the interactions between the specific and the general
Use of data	Data collection is used to evaluate propositions or hypotheses related to an existing theory	Data collection is used to explore a phenomenon, identify themes and patterns and create a conceptual framework	Data collection is used to explore a phenomenon, identify themes and patterns, locate these in a conceptual framework and test this through subsequent data collection and so forth

Figure 2: Differences between deductive, inductive and abductive research approaches

Adapted by Research Approach. Research-Methodology.

For the purpose of this study, the research approach was deductive. By using a deductive method, this study applies a variety of theories at the outset of the analysis in the experiments. Thus, specific methods of analysis are selected and used to prove the hypothesis correct or wrong.
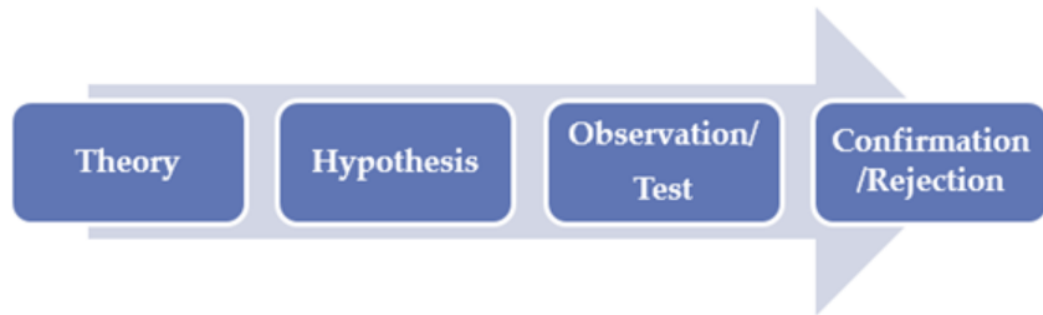
Figure 3: Deductive process in research approach

Adapted by Research Approach. Research-Methodology.

3.3 Sampling techniques

Sampling is a method of choosing a specialized group of people which would constitute the whole population for the research, thus, the data collected from the investigation will reflect the result of the whole population. Normally a sample is chosen because an investigator cannot collect data from the entire population because of certain restrictions (Myers 2013). Under the consideration of the research topic, the process of purposive sampling was used. Accordingly, the sample participants are selected based on their knowledge, their connections and their experience in support of a research topic (Freedman et al., 2007).

If the whole target group is not properly shown in a sample, the valuation will be prejudicial. It implies that the calculation will be shifted from the true value in one way. Employees may see and perceive the same benefit system differently, employee demographics are highly diversified, with different needs resulting from wage disparities, gender differences and other characteristics (Pruter, 2000). Therefore, the interviews will be held with cleaners from Freska with different groups. Namely:

- Employed cleaner who has been given working hours by Freska and freelance cleaner who choose their working hours by themselves

- Long-term cleaner and short-term cleaner

- Different gender

- Different age group

- Different cultural background

With Freska's help, it is not challenging to find the right interviewees. However, it can be a struggle to discover how to analyze the results. The best way to advance the study could be to read previous research related to the same topic.

3.4   Data collection

There are a number of data collection methods for qualitative research, including interpretations, verbal or graphical analysis, and interviews. This study includes both primary and secondary sources.

Primary data is obtained from first-hand sources by a researcher utilizing techniques such as surveys, interviews or observations. It is obtained explicitly from primary sources in the sense of the research project. In this study, in-depth interviews have been used to collect primary data. The purpose is to recognize participant's attitudes, thoughts and perceptions on a specific topic.

In-depth interviews include confidential and unstructured conversations. The main advantage of personal interview is that it includes intimate and direct interview communication, as well as reducing response rates, whereas the interviewees must have acquired the expertise needed to successfully carry out the interview (Fisher,2005, Wilson, 2003). In addition, unstructured interviews allow for variability in the process of the interview and thus provide space for drawing conclusions that were not originally intended for a research topic. Nevertheless, there is a possibility that the interview will depart from the study goals and objectives stated above (Gill & Johnson, 2002).

The secondary sources are references which have already been gathered and analyzed for another reason and which can be used in other researches by academics (Krishnaswami & Satyaprasad, 2010). In order to collect reliable information, secondary data have been obtained from study material, journals and relevant records for this research.

3.5   Reliability and ethical considerations

As noted by Watling (2007), reliability and validity are known as critical factors that should be weighed as researchers examine an issue, interpret conclusions or access the consistency of the analysis. Reliability implies the degree to which the results of the study under the same circumstances are constant and reliable.

To ensure the reliability of the research, the resources must be selective, and the author must be objective in order to increase the reliability of analysis. In addition, the efficiency of the research process often improves in depth when the researcher would define as precisely as possible the condition, the tests, the resources and potential distractions (Hirsjärvi and Co., 1997). Moreover, it is important to understand that each individual is different. The researcher must certify that the interviewees perceive questions and answers in the same way (Eskola & Suoranta, 1998).

According to Eskola & Suoranta (1998), the involvement of the researcher will most certainly have some effect on the actions and responses of the investigated individuals to engage in the interview, which should be remarked during the research process. As a form of data collection, it is reasonable for the researcher to record a theme interview. Of ethical reasons, permission from the interviewees has to be obtained by a clear agreement. The researcher must guarantee that the interviewees understand the situation before signing the contract, and they have the right to refuse to answer questions when they have a need to. The investigator will keep the data in a safe place for less than 6 months after the interview, and the findings will be deleted securely.

4   Analysis of the findings

In this chapter, the author explains in depth of the results. More specifically, the profile of the participants is presented, as well as the general opinion of 'Superheroes'; the impact of 'Super-heroes' on employee performance. The qualitative data was collected by individual interviews; the permission was obtained from each participant. With the responses of 12 participants from the commissioning company, the research questions are answered.

4.1   Profile of the participants

Table 2 demonstrates the age range of the participants. As shown in the table, the participants are chosen from different age groups, with 20 to 30 years old, 30 to 40 years old, and above 40 years old.

Age group	Number of respondents	Percentage (%)
20-30	4	33.3
30-40	5	41.7
40+	3	25
Total number of respondents	12	100

Table 2: Age range of the participants.

Source: Author

Table 3 presents the length of work experience the participants have with Freska. According to the table, 4 of the participants have been working with Freska for only 1 month to 6 months; 4 of the participants have been working with Feska for 6 months to 1 year; and 4 of the participants are long-term employees who have been working with Freska for more than 1 year.

Working period (month/months)	Number of respondents	Percentage (%)
1-6	4	33.3
6-12	4	33.3
12+	4	33.3
Total number of respondents	12	100

Table 3: Working period range of the participants.

Source: Author

As illustrated in the tables, the author has chosen a sample size of 12 participants. According to Guest, Bunce, and Johnson (2006), about 12 individuals in culturally diverse communities often create abundant results, and it occurs frequently in the previous studies. Less than 20 partici-pants assist in the creation and maintenance of a close relationship between a researcher and interviewee, therefore enhancing the "open" and "personal" information exchange. This can help to reduce some of the stereotypes and challenges to integrity in qualitative research. As a result, the ideal sample size is from 12 to 20 participants for many qualitative research studies (Crouch & McKenzie, 2006).

Moreover, it is important to note that:

· The participants are from 11 different countries.

· 6 of the participants were female, and 6 of the participants were male.

· 3 of the participants were employed cleaner who are given the working hours by Freska, and 9 of the participants were freelance cleaner who choose the working hour by themselves.

· 4 of the participants already had the experience in cleaning before working for Freska, and 8 of the participants did not have experience in cleaning before working for Freska.

4.2   Findings of the interview

In this section, the author will present the findings from the interviews in different categories which are closely connected with the research questions that were raised in chapter 1.4. The participants are identified as 'participant 1, 2, 3, 4…, and 12', based on the order of their participation.

4.2.1   The general opinion of 'Superheroes'

To find out what is the cleaner's general opinion about 'Superheroes', two questions were asked. To begin with, what is your impression of 'superheroes' overall? Most of the participants responded that 'Superheroes' is easy to use, and it is helpful for their work. Given an example, as participant 4 answered: *"It's very user friendly, it has a sharp design. I really like the app because it basically gives you all the information, you don't need to wrong about making mistakes for the schedules. I have worked in other companies where we need to use certain app for our job, but it doesn't work as good as Superheroes."*

As participant 7 also noted: *"I think the name is nice, Freska call the cleaners 'superheroes', and they make an app with this name, that makes me feel like they really value us. I was really impressed by the information they have on the app, they did a great job! There's a lot of details about what you need to do, and all the cleaners can get the information. I think it would be great if other companies can do the same, because all the most difficult questions are answered there, so it'll be really helpful for the workers."*

The second question was: "can you describe how is it for finding your way around 'superheroes'?" Nearly all the participants agree that the 'Superheroes' is easy to navigate, and they can find most of the information that they need. Some participants found it difficult when they started using at the beginning because it is a new tool, but they received sufficient support from Freska team. Moreover, it is common that the app has systematic errors, but the design team will fix the problems.

However, participant 2 had a different opinion about the 'Superheroes'. As the participant stated: *"In the beginning of using the 'Superheroes' was frustrating, but now it's a bit better. I don't like it because it's new for me and I feel uncomfortable. Overall, I think this app is slow, it always has*

delays, and it takes such a long time for them to fix the problem. For me, I had more negative experience than positive."

4.2.2 The impact of 'Superheroes' on employee performance

The impact of 'Superheroes' on employee performance is one of the most important research questions, since it is closely connected with the main research objective. For this purpose, there were two questions asked in the interview, starting with how does "superheroes" help the cleaners to do their work? It was frequently mentioned that the timetable gives a clear instruction on the customer's booking details, the cleaners can easily find all the required information. As participant 5 said: *"The app is really good because it saves a lot of time for me, I don't need to go to the office to talk with the office worker. Some companies don't use this kind of technology for the employees, I have friends that works in the same industry, but their boss still use papers to print their schedule. When the customer cancels or changes the booking, the cleaner wouldn't be able to know immediately, it creates a big inconvenience."* As participant 7 also said: *"Generally, I use it to check and confirm the bookings. I think the app creates a bridge for the cleaners and customers to communicate, because it has the instructions from the customers. It really helps me to know which are the important things the customer would like me to focus on, so that I don't waste my time on the details that are not so important to the customer. If the customer didn't put any comment, then I will just do a general cleaning. This is especially useful when I go to a new customer who is not at home, there is no chance for me to communicate with him or her, but at least I have the instructions, it helps me to feel less stressful."*

Furthermore, the cleaners can decide their schedule. Considering that a lot of the cleaners are part-time workers, the app provides flexibility for them. As participant 5 mentioned: *"I like the app because I can decide my availability freely, and Freska will only send me work according to my schedule. Because I have another job, it would be such a chaos if I can't plan my schedule.* Participant 3 also said: *"The best benefit of the app is that it gives me the opportunity to plan my day without having to discuss with someone, if I feel well, I can put more availability hours. If I don't feel well after one cleaning, I can delete the available hour as long as I don't have other bookings at the moment."*

Some participants also noted that the updated functions such as the 'News' section is good, because it informs them about the changes and everything that is related to the work. It is especially

useful when there are changes in the public transportation. *"The key section is also helpful, when I keep a lot of customers' keys, it's so easy to get confused and lost, but the key section in the app shows which key belongs to which customer. If I need to get a new key, where should I get. If I need to return the key, when is the due date. Everything is there! It's just amazing!"* as participant 1 and 8 both said.

However, 65 percent of the participants are having negative experience with the rating system in the 'Superheroes'. They think that the ratings from the customer have an undesirable impact on their performance, because the negative comments from the customer make them feel bad, furthermore, their salary depends on the average score which they receive from the ratings. As participant 2 strongly expressed: *"I don't check the customer's rating anymore, it's frustrating to read and it's useless, because the customer gives their comment based on their mood."* Participant 9 suggested: *"If Freska keeps the ratings only for themselves would be better. But I think the rating is not necessary at all, because it makes you feel like a number, which is not true! It affects my mood completely!"* As many participants also said: *"One thing I don't appreciate about the app is the rating system, it is really stressful. Sometimes I receive bad ratings from some customers, I did everything I could, but the customers can be very demanding. It feels so frustrating! I completely understand that Freska needs to make sure all the cleaners are trying to do a good job, but for me, this rating system gave me more bad experience than good."* On the other hand, two participants expressed that the rating system is good because they can understand the customer's needs better by reading the feedbacks, therefore they can deliver a better job next time. In a way, it is a motivation for them to improve their skills. Moreover, they can also send their comments to Freska after they confirm the booking, so they will always have a chance to explain when unexpected situation happens.

The second question was: what do you think about the 'support' section in 'superheroes'? Considering when Freska was found, the cleaners did not have any app as technical tool. Most of the participants who have been working in Freska for more than two years mentioned that they do not find the support section so valuable, because they are already very familiar about how the company operates, so nowadays they do not need the support section. However, they think that it would be great if they had the app as well as the 'support' section when they started working. About 60 percent of the participants shared that they have positive experience with the training videos in the 'support' section, because they did not have any knowledge about cleaning before joining Freska, they learned through the training videos. As participant 10 said: *"When I started working in Freska, the training videos helped me a lot, besides there are a lot of solutions to*

different situations. It's so good that Freska designed something like this, I could learn all these things by myself. In this way, I don't need to wait for the office workers to reply me, nor having to go to the office."

4.2.3 The needs of the cleaners about the 'Superheroes'

For the purpose of finding out what do the cleaners need and value most about the 'Superheroes', two questions were established in the interview. First of all, the participants were asked to describe a situation in which 'Superheroes' is most useful. Undoubtedly, the most important feature for the cleaners is the timetable. According to the participants, the timetable shows their schedule for the week, as well as the weekly hours in total, so they have a clear idea of how their week will be. Furthermore, the timetable tells them about what they need to prepare for the cleaning. For instance, whether they need to bring cleaning products to clean, or the customer will provide it.

It was frequently mentioned that the instruction on how to make invoice is one of the most useful information. Considering that most of the cleaners are in the freelance employment with Freska, they will need to make invoice by themselves. As participant 7 said: *"the instruction on making the invoice is very clear for me, at first, I thought it was going to be very complicated, but the tips taught me everything. Nowadays I don't even need it, but when I forget about something, I can always go back there."*

Surprisingly, few participants mentioned that they do not find themselves in needing the 'Superheroes', because the most essential tool for them is the 'WhatsApp'. As participant 6 said: *"It's easy to use, but I only use it for checking the basics. If I just started working in Freska, I would have used more, but I started working without the app, so I don't rely on the it. I don't know if the app really helps me, I only use it to view and confirm the booking, because I have to. But I prefer to use WhatsApp because it's already something I'm using every day. I don't need to open another application for work, and the office workers can help me anytime."* Participant 1 said: *"I think Superheroes is just the foundation of the platform, but the thing that helped me the most is WhatsApp because we can keep in contact. It feels different when you are talking to a real person, than you are looking on an app. The app has limited information, but human can have unlimited knowledge."* Participant 11 also mentioned*: "I don't usually use 'Superheroes' because I have already worked in Freska for almost a half year, I know how everything works. But if I have any question, I can get*

answers from the office workers on WhatsApp, I prefer this way because it takes me less time, and they answer very fast as well."

Another discovery is that 50 percent of the participants responded that the contact number of the customers should be showing on the 'Superheroes', when they were asked if there is any information you expected to find but didn't. As participant 7 expressed: *"I need to have the customer's phone number, because sometimes I feel a bit confused about whether I should do certain work or not. It may take some time for the office workers to answer when they have a lot of messages to reply, in that case, I might be late for work which is really stressful. Also, I'm always a bit hesitate to contact the office workers because they told us that they have a lot of messages to answer, so we should always consider this situation."* Participant 3 also said: *"What I think is missing in the app is the customer's contact because sometimes the customer puts wrong location and no office worker answers to me, I had to wait for a long time outside. Imagine that in the winter, it's very tough."*

4.2.4 Suggestion to the 'Superheroes'

During in the interview, numerous suggestions were received from the participants. There were four questions presented, which are: Can you describe any negative app experiences that you have had? Can you explain to me how this app could do more for you? From 0 to 10, how much would you rate 'superheroes'? and What is the reason for your score?

Most of the participants find the 'superheroes' as a satisfying tool, the only negative experiences were because of the systematic problem, such as: slow browsing; delays of confirming the booking and receiving customer's rating; login troubles; miscalculation of the weekly hours and break between two cleanings. However, the participants find these problem understandable. Most importantly, they appreciate that Freska design team has a quick response and update the 'Superheroes' occasionally.

For improving the 'Superheroes', there are three aspects that the participants consider most, which are: communication, simplicity, and convenience. For instance, as participant 7 said: *"I think it would be nice if the app can build a community for us, where we can communicate, share ideas, cleaning tips. Especially for us foreigners, it's nice if we can make some friends in the work."* Moreover, participant 8 suggested: *"I think it would be good to give feedbacks straight to the design team, so that they know what to modify and work on. If they can just add a section in the*

app to give feedback, it can save us time to contact the office workers, so that everyone has more time to do their own work as well."

About 50 percent of the participants shared the idea of having 'Superheroes' as a mobile app instead of web app, because it saves time and it is easier to navigate. Participant 8 also mentioned that there is too much information in the 'support' section, it needs to be presented in a more structured way. Interestingly, participant 11 expressed: *"I expect the 'superheroes' can somehow add automatic calendar in my phone, because I prefer to see the schedule and plan my day. In the beginning I was trying to put all the schedule in my own calendar, but some customers may cancel the booking, and I don't know if I will have new bookings at that time. So, it's hard to make your own calendar because you don't really know if the schedule is stable."*

Furthermore, participant 1 mentioned some ideas which were different from most of the participants. *"It would be good to have a function where the customer can see the cleaner's profile before the cleaning, because it helps to build trust between the cleaners and customers. Also, it would be interesting to show the statistics of the work areas that is currently having available gigs in each work area in current time, for other cleaners that would like to get more gigs. Another thing that could be very useful is to show already how long it would take between gigs from one address to another so that I don't waste time searching so much on other apps such as Google Maps. So that I already know how much time I have., "* As participant 1 said.

In average, the participants gave a score of 7.8 (out of 10) to the 'Superheroes'. As participant 7 commented: *"Overall, the app is a good idea! It is simple and easy to use, and I can find most of the information that I need. I do really appreciate the work that Freska team does for us, they are always updating the system, it is nice to see that how much they value our opinion."*

4.3   Discussion

Since the results from the interviews have been presented, it is important to discuss the answers to the research questions which were raised in chapter 1.4, as well as the connections between the findings and the research questions and the theories. On the matter of the cleaner's general opinion about 'Superheroes', the results have shown that most of the participants have a positive opinion on it. Because the app provides them with a clear schedule, and they can find most of the information they need, the app is considered as a useful tool for their work. However, it is reasonable that some of the participants does not find the app as others do. First of all, Freska

started the company without designing any technical tool, the cleaners who have been working with Freska since the beginning have learned all the skills by themselves. In another word, these cleaners do not need to gain as much skills as the new cleaners. Secondly, the elder participants may have less fondness towards technology than the others. According to Heller et al. (2002), people's abilities changes as their age increases, the transition entails a reduction in cognitive, physical, and sensory capacities that may each reduce at different levels in comparison towards others.

Regarding to the impact of 'Superheroes' on the cleaner's performance at Freska, it is notable that the 'Superheroes' is indispensable for the cleaner's work. One of the most essential benefits is that 'Superheroes' provides convenience for the cleaners. For instance, 'Superheroes' made it possible for the cleaners to have a flexible schedule. Furthermore, the information about keeping the customer's keys, as well as the news about changes in Freska made the data become digital. This way the cleaners can work with more ease, without having to spend time in organizing the schedule. At the same time, it saves time and energy. Since the 'Superheroes' makes the cleaner's work and life easier, thus they can be more engaged in their job, and provide better service for the customers. These findings are in line with the theories of this research in which the technology improves employee engagement; employee engagement improves performance; therefore, technology has a positive impact on the employee performance.

However, the debatable part of 'Superheroes' is the rating system. Although a small number of participants mentioned that the feedbacks from the customers help them to understand the customers' needs, the rule in which average rating decides their salary makes them more motivated. The majority of the participants find the rating system unhelpful, because the negative comments frustrate them, and they feel discouraged about their performance.

On the other hand, the support section plays an important role in the cleaner's work. According to the findings, the main benefit is the training videos. It is especially essential for the new cleaners, as they are not familiar with their job, and they need to be trained. 'Superheroes' made it possible for the new cleaners to learn the cleaning skills without the limitation of time and location. Even though the experienced cleaners do not find the support information useful at this moment, they shared the idea that they would have benefited from it in the beginning of their career. Therefore, these findings support the theories of the connections between technology, training, and employee performance.

As Landers & Callan (2012) noted, the practice of modern technological tools may contribute to worse outcomes if the user is not comfortable and satisfied. Thereby, it was considerable to discover what do the cleaners expect and need from 'Superheroes' regarding performance, and their suggestion to improve the 'Superheroes'. As a result, the most serviceable parts of 'Superheroes' are the details of the bookings and invoice, because the former allows the cleaners to work, and the latter helps the cleaners to receive their salary.

In addition, the cleaners value better communication with not only the customers, but also with their colleagues. Consequently, the participants suggested to have the customer's contact in the 'Superheroes', and to show their profile to the customer before they go to clean. Furthermore, they expect to have a community where they can communicate with other cleaners, as well as a function to give direct feedback to the 'Superheroes' design team. Apart from these, the cleaners would like to have a tool which is simple and easy to understand, convenient, and quick to browse. For this reason, the participants gave the following suggestions: make the 'Superheroes' as a mobile app because it is easier to open; automatically set schedule in their calendar because it is easier to plan the day; organize the 'support' section in a more structured way because there is too much information at the moment; show the route and travel time for next cleaning to save their time. At last, it is important to have enough work for the cleaners. It could be improved by showing the statistics of the available bookings on the 'Superheroes', so that available cleaners can receive those bookings by themselves.

Despite of the advantages of the 'Superheroes', WhatsApp is seen as a useful technological tool as well. In particular, some cleaners do not want to spend a lot of time searching on the 'Superheroes', WhatsApp became their first choice because they can get answers from the office workers through WhatsApp. It is favored because they can talk to someone in their work, and they can get more information than searching in 'Superheroes'. In addition, WhatsApp creates a bridge for communication, between the cleaners and customers through the office workers. It is especially useful when unexpected situation happens. Generally speaking, these two tools are complementary, and both are of interest.

In summary, the research questions are responded by the findings of the interviews, and the results support the theories in which technology improves training and employee engagement, while they are key factors to enhance employee performance. Therefore, technology has a significant impact on employee performance.

5   Conclusions and recommendations

5.1   Conclusion

The main objective of this study was to explore the impact of technology on employee performance, with the case study of Freska Oy Finland. At the same time, the author studied deeper the company's management and discovered that the web app called 'Superheroes' is the main technological tool that the company has been utilizing. Thus, the research was aimed at analyzing the impact of the 'Superheroes' on the cleaner's performance. Furthermore, it was intended to make the company aware of the importance of the technology and the employee's needs and giving suggestions to improve the 'Superheroes'. The author started the research by introducing the contextual background of the research problem, as well as the background of the commissioning company. Based on the various references from previous studies, the research questions were developed.

Considering the condition of the company, the author decided to discover the impact of the technology on employee performance by adding training and employee engagement as the bridge. Therefore, the literature review was formed. The previous research has shown that technology can improve the training by allowing the employees to learn without the limitation of time and location, and maximize the results; and increase employee engagement by providing the employees convenience and benefits at work, and opportunities to give feedback. At the same time, well trained and highly engaged employees can perform better at work. As a result, there is a positive relationship between technology and employee performance.

The research approach of this study was deductive method, which means the hypotheses are driven by the theories, as well as the data analysis. Considering the objective of this research and the commission company's needs, the data method was qualitative, and the data was collected through individual interviews. Particularly, doing qualitative data analysis can provide deep and detailed answers. The aim of this study was to receive feedbacks and suggestions from the participants. To attain the maximum effects from the interviews, the sample participants were selected based on their knowledge, background and experience. Eventually, a sample group of 12 participants was chosen, the participants had different background, age, experience of work, and contract type. As a result, the sample group was comprehensive since different views were received during the interviews.

According to the findings, the participants are satisfied with the 'Superheroes'. Apart from giving all the needed information about the bookings, the participants found the app very useful on many aspects of their work. To begin with, they can decide their own schedule, which helps them to plan the rest of their day. Secondly, the app helps to manage the customers' keys; the cleaner does not need to memorize which key belongs to whom. Thirdly, the app gives information about the changes in Freska; the cleaners can receive the news digitally. Most importantly, they can have access to gain more knowledge about the work through the 'support' section without any limitation. It is evident that technology has helped the employees to be better trained and more engaged, therefore it enhances the employee's performance.

Particularly, the cleaners consider convenience and communication as the most important factors for building a good technological tool. They expect to find all the needed information on the app, at the same time; it should be easy for everyone to navigate. Various suggestions were received from the participants which can be found in chapter 4.3.

In addition, it was found that WhatsApp as a tool of communication has helped the employee's performance as well. It was frequently mentioned by the participants that WhatsApp is an indispensable tool for their work because they can receive any answer from the office workers, and they can communicate with the customer through the office workers on WhatsApp when an urgent situation happens. It is remarkable that Freska adopts both tools to support the cleaners as both tools are complementary.

To sum up, technology is crucial to the employee performance. Although some employees may find it hard to adapt to the technological environment due to age, capacity and personal preference. The majority of the employees can benefit and gain more knowledge from the use of technology, thus deliver a better performance.

5.2   Recommendations

The following are the recommendations for Freska on their existing employee management system which would enhance employee performance. The recommendations were developed upon the foundation of literature review and primary data analysis provided in the previous chapters.

- According to the interviews, to serve the cleaners best, the main pages of 'Superheroes' should be simple and easy to browse. Therefore, it is recommended to organize the current 'support' section with less items. Moreover, a mobile app could be designed to replace the web app. Especially for youngsters, an app packed with all these functions are more trend and they can feel more relatable.

- To make is easier for the cleaners to communicate with the customers, any information from the customers written in Finnish should be automatically translated into English, and the customer's contact number could be added in 'Superheroes'. Further, it is suggested to have a profile of the cleaner which is accessible for the customer.

- For the cleaner's convenience, it would be good to show the route and time for their next assignment. In addition, include a function where they can add their schedule in their 'calendar'.

- In order to increase the feedback from the cleaners, it would be good to add a section in the 'Superheroes' where the cleaners can give feedback to the design team.

- To help the cleaners to have a more pleasant work experience, a community where the cleaners can interact with each other is ideal. It helps the cleaners to share knowledge, have more communication between each other, and become more engaged in the job.

- To make sure all the cleaners are having enough work as they wish, it is suggested to show the available assignment on the 'Superheroes' and the cleaner can receive the assignment by themselves.

- For the service through WhatsApp, it is necessary to make sure there is enough office workers to support the cleaners. It is important to note that when the office workers are under stress, they cannot help the cleaners patiently and efficiently, which would result in lowering the cleaner's engagement.

6   Research Limitations

Inevitably, this research has the following limitations:

- The sample size was comparatively small. A larger sample would most likely improve the research reliability, but it consumes enormous time to conduct. Therefore, the researcher suggests using a relatively larger sample in the case of a follow-up test.

- The relevance of the study results in terms of the type of firms. This is a small experiment that can only give explanations to the impact of technology in a cleaning company. The framework and operational philosophy may differ substantially from different types of industry, therefore the results may not sufficiently reflect the whole business industry.

- This study focused on the impact of technology on employee performance, although they are interrelated, it is a broad topic and they should be addressed independently.

- The recommendations can only apply to the commission company, because the research and interviews are specifically based on the company's condition and needs.

7　References

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8   Appendices

PERMISSION FORM

Dear participants,

My name is Yangxuan Zhou, I am doing a thesis research on the impact of technology on employee performance, with Kirsi Sievers from Kajaani University of Applied Sciences as the coordinator.

The purpose of this research is to explore the opinions and needs of Freska's cleaners towards 'superheroes. In deeper level, the aim is to understand how technology affects Freska cleaners' performance, and the information you will be asked to provide will be used to help to provide insights to achieve this objective.

The data you provide will be kept until the 31st of December 2020, so that it is available for scrutiny by the Kajaani University of Applied Sciences as part of the assessment process. If you later decide that you wish to withdraw from the study, please write to me at Yangxuan Zhou, email:zhouyangxuan96@gmail.com no later than the 30th of March 2020 and I will be able to remove your response from my analysis and findings, and destroy your response.

Please use the form below to request your consent. You have the right to ask for more information about the study and I will be happy to answer your questions.

Kindly regards,

Yangxuan Zhou

AUTHORIZATION FORM FOR PARTICIPATION IN THE STUDY

I_____ voluntarily agree to participate in this research study.

I am aware that my participation is voluntary and that I can suspend my participation, at any time, without being in any way affect the treatment of any current or future.

I agree to my interview being audio-recorded.

I understand that my answers are strictly confidential. The results are reported in such a way that my personal information is not identifiable.

I understand that my answer in this interview will only be used for this research.

I understand that disguised extracts from my interview may be quoted in dissertation or presentation.

Signature of participant   Place   Date

INTERVIEW QUESTIONS:

1. Overall, what is your impression of 'superheroes'?

2. How does "superheroes" help you to do your work?

3. Can you describe how is it for finding your way around 'superheroes'?

4. What do you think about the 'support' section in 'superheroes'?

5. Is there any information you expected to find but didn't?

6. Can you describe a situation in which 'superheroes' is most useful?

7. Can you describe any negative app experiences that you had?

8. Can you explain to me how this app could do more for you?

9. From 0 to 10, how much would you rate 'superheroes'?

10. What is the reason for your score?

11. Do you have anything you would like to add or ask?