

BEHAVIOUR TARGETED TRAINING: IMPROVING EMPLOYEE
ENGAGEMENT IN A SMALL AND MEDIUM
CANADIAN BUSINESS

by

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Dedication

This dissertation is dedicated first to my wife, Kelly. She has stood by my side as a constant source of support and encouragement during this graduate degree, as she has done through all other challenges I have taken on. She is truly an inspiration and has shown a strong positive mind despite her vast challenges, including a recent major stroke. I am genuinely thankful for having you in my life. This work is also dedicated to my daughters Shauna, Mandy and Angie, who I love very much. My dad, Mark, one of my strongest supporters, and my mom Sharry, who has always loved me unconditionally. Finally, I dedicate this dissertation to my beloved grandparents, who have meant and continue to mean so much to me. Although they are no longer here with us, they will never be forgotten. First, my grandfather Frank Brekke who I have and always will see as a great man to look up to, who lived his life through honesty, integrity and hard work, and my loving grandmother Louise Brekke who was the cornerstone of our family. I love you all.

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ABSTRACT
BEHAVIOUR TARGETED TRAINING: IMPROVING EMPLOYEE
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Companies are struggling to keep operating costs under control. They are finding it more challenging to source supplies, especially since Covid-19, which has now been followed by an expected global recession, which has compounded the difficulties companies were already facing. In addition, many large businesses are increasingly outsourcing their manufacturing to cheaper countries, making it even more difficult for small and medium-sized companies to compete. With this quickly changing technology, supply issues, staffing challenges, and the global pandemic, businesses must explore better, more effective ways to do business. One of the most effective ways of doing that is through employee training. Training increases engagement and performance by enhancing skills and proficiency, as confirmed in this study. The other substantial part of the equation is the desire to engage in training and employee preference determined by personality and behaviour, which plays a role in our everyday interactions and engagement in tasks. Still, current research demonstrates a lack of focus and detail on structuring training based on personality preferences to increase engagement and performance. This research examines the three main training methods used in industry and aims to answer whether personality

and behaviour traits make a difference in selecting training to increase employee engagement and performance.

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CHAPTER I: OVERVIEW

1.1 Introduction

Employee engagement is an essential aspect of every business. It is a large part of what will help determine whether a company is profitable or not. At the same time, disengagement leads to high employee turnover and a significant reduction in productivity, estimated in the public service sector in Canada to be approximately \$3.8 billion annually (McLaughlan, Majumder, Gelbukh & Lidwig, 2011). More than ever, employees are leaving workplaces in large numbers. This exit has happened since the Covid-19 pandemic, and the terms used to describe these are 'The great resignation' and 'Quiet quitting.' According to Serenko (2022), the great resignation was named by Anthony Klotz, an associate professor of management at Texas A&M University. This phenomenon has seen many employees voluntarily quit their jobs in a short period since March 2021. The food service sector in the USA has recorded a loss of more than 40% of its workforce, with the monthly turnover rate reaching 6.0% (Serenko, 2022). The primary reason for this substantial departure of employees is layoff due to the economic impact the pandemic took on businesses. Employees also had the opportunity to work from home during the COVID-19 pandemic. Working from home allowed employees to enjoy benefits they didn't previously have, including more time with family and reduced or eliminated commutes. It also allowed those employees to reexamine their relationship with work, redefine life priorities and long-term career goals and realize that the work experience should extend beyond a mere paycheck.

Similarly to the great resignation is 'Quiet quitting,' where employees work based on what they feel they are compensated for, only working hard enough to do their outlined

job and not getting fired. However, these employees, similar to the ones outlined in the great resignation, are pushing away from the old term 'work is life' (Lord, 2022).

Although only a few studies have been done on the great resignation and even fewer on quiet quitting, it looks pretty evident that employees want and are demanding change, and if they feel they are not being compensated or treated as they should, they are disengaging or resigning which should be a significant concern for companies.

According to Osborne and Hammoud (2017), the survival of companies depends on maximizing profits. Therefore, the leaders within those companies must find ways to engage their employees, which helps reduce turnover, increase retention, help employees feel appreciated and improve overall employee performance. The identified key areas to promote performance output and keep employees engaged, according to McLaughlan et al. (2011), are good two-way communication, involvement in decision-making, autonomy, an opportunity for advancement, being valued and having adequate training and development opportunities.

As stated by el Hajjar and Alkhanaizi (2018), employee training is a significant factor in attaining the goals and objectives of any organization. It is also effective in improving the performance of employees because it increases competence and engagement. Industries understand this importance and are investing huge capital in training. Over \$44 billion annually is estimated to be spent on training initiatives. Bretz and Thompsett (1992) found industry training can be broken down into five primary types: classroom traditional lecture style, on-job training, integrative training, social learning, and e-learning. Of these, e-learning has grown the quickest in popularity and is one of the most commonly used methods for soft training skills (Derouin, Fritzsche & Salas, 2011). Also, since the 1990s, integrative training has increasingly been used in the United States industry (Bretz & Thompsett, 1992). While these two more modern styles are gaining

popularity, the traditional lecture style is still frequently used in industry and academia. Likely because it effectively covers large chunks of material and can be adapted quickly and inexpensively (Omelicheva & Avdeyeva, 2008).

In line with training and behaviour are terms coined by Professor Carol Dweck: Growth mindset, Fixed mindset and Organizational mindset. Simply put, those with a growth mindset believe that intelligence and ability can be improved through perseverance, hard work and training and strive to challenge themselves in this process (Dweck, 2006). Professor Dweck's book *Mindset: The new psychology of success* shows that most successful business leaders and businesses worldwide have a growth mindset. These leaders believe in human development and encourage their employees to challenge themselves and praise them based on hard work and continuous improvement, even if they fail during the process. Dweck (2006) found that those with a growth mindset kept on learning, found success in the learning process, and were motivated to challenge themselves while not worrying about failing, as they saw it as clear areas to improve. These individuals also seemed to maintain a healthy sense of confidence during this process.

In contrast, Dweck (2006) found those with a fixed mindset were more focused on what they feel is natural ability and thought if they were not good at something, it couldn't be improved, so there was no sense wasting time on it. This fixed mindset then tended to lead to not wanting to challenge themselves or improve because they could be viewed as not as good and deflating their ego or what they felt as their self-worth. In business, this can be seen through leaders that expect perfection, which leads employees not to push themselves to risk making mistakes. For these reasons, it is vital that businesses not only conduct training but also encourage training and praise hard work, continuous improvement and employees who challenge themselves regardless of the potential initial

outcome. These employees will then continue to challenge themselves, helping to increase confidence, business innovation, engagement, and team performance.

The results from Dweck's (2006) study add more evidence to why leaders, among other aspects, must be aware of psychological differences and how they influence team engagement and performance outcomes. For example, Bowditch, Buono and Stewart (2007) stated that personal perception of our social and physical environment shapes and directs an employee's engagement. This proof has been shown through large meta-analyses documenting personality's significant impact on our interactions (Ma, 2005). Research has also indicated that employee personality characteristics are essential in deciding training success, suggesting that training tailored to those characteristics would be more effective (Lee et al., 2000). As a result, companies utilize personality models as part of their hiring process, employee role selection and job advancement. Still, there seems to be very little evidence identifying each personality type's preference towards learning styles, such as lecture style, collaborative style or web-based, which are the leading training methods used in industry today. However, based on research and knowledge about personalities, this would likely result in more effective training, resulting in increased employee engagement and performance.

Although significant research has been conducted on behavioural differences, personality, employee engagement and training, there is a gap in research which examines the impact of engagement with linking training to personality preferences. This research will bridge that gap and focus on personality preference for specific training methods using a small Canadian Emergency Service business and a medium-sized Canadian Foodservice Distribution Company in British Columbia and Alberta. Using these two very different businesses aims to make the research more generalizable across varied industries while still being narrow enough to be relevant. As well to further the knowledge, reduce

the current gap, and gain tangible results to answer if this training method will increase employee engagement during training which can then be expanded on through further research.

1.2 Definition of the Problem

In the current research and literature, there is a gap in exploring training effectiveness and behaviour preference for specific training methods and how those preferences may impact the retention of the material being taught and the engagement level during the training. For example, although research has shown that employee disengagement and high attrition rates are linked partly to training effectiveness and, as presented through the work of Motyka (2018), employee preferences improve engagement and job satisfaction, there is little to no research studying this area.

Similarly, in work done by Antony (2018), he found that respecting an employee's individuality helps increase organizational culture, encourages teamwork and openness, and fosters full employee engagement, which determines a company's ability to cope effectively with challenging situations. Furthermore, one of the leading social science researchers, Professor William Kahn, has also found and mentioned this and noted that minimal research investigates the link between personality traits and engagement (Kahn, 1990).

In work conducted by Kahn (1990), he states three conditions promote and are linked to personal engagement: meaningfulness, psychological safety and psychological availability. Meaningfulness is gained through employees being given clearly outlined, creative, engaging and challenging work. Psychological safety is the ability of employees to express themselves without negative consequences, which can be represented in the context of this research by employers training and then trusting their employees. Finally,

psychological availability, defined by Kahn (1990), asks whether employees have the physical and emotional resources to engage fully. These physical resources are linked partially to training and ensuring the training is as effective as possible so that the employees have the resources or tools to perform the task to their best abilities.

Due to this current gap, research is vital to evaluate whether linking personality preference and training effectively increase employee engagement. This would be beneficial to the industry and society. However, jobs and discretionary income are reduced if small and medium businesses fail, hurting the local economy.

1.3 Research Purpose and Questions

This research aims to build on and contribute to previous knowledge about training, engagement and personality and specifically contribute new research on the effect of personality preference on training styles concerning engagement levels. Investigating and understanding if behaviour and personality preference toward training increases engagement is essential and is a gap in current academic literature and research.

Research evidence shows a relationship between employee performance, training and engagement, as outlined in the study by Sendawula, Nakyejwe, Bananuka and Najjemba (2018). They found that employees who are receiving training and other resources from an organization show greater work engagement, likely because training enhances the psychological state of involvement, commitment and attachment, which in turn increases their performance. This research establishes that employee engagement is directly related to employee performance, partially gained through training. Still, as stated by Sendawula et al. (2018) and shown by other academic researchers, training improves employee performance only if done correctly and effectively.

Research shows that training is vital to a company's success, especially in today's challenging economy. It is also known that an individual's personality plays a crucial role in decision-making, interactions, and engagement. So more than ever in this demanding economy, businesses must look at ways to increase their competitive advantage by increasing employee engagement and improving their performance levels or risk closing their doors.

This research will involve two businesses: a small Emergency Service business in British Columbia, Canada and a medium-sized Foodservice Distribution business with its main facility in British Columbia, Canada and a small facility in Alberta, Canada. Both conduct and invest in regular training with their members and employees and feel effective training is essential to their businesses.

Therefore, to effectively evaluate the effect on engagement level that personality preference towards training takes, the following research questions need to be addressed:

- 1) What impact does tailored training specific to individual personalities have on employee engagement in a medium to small Canadian business?
- 2) How effective is structuring training methods such as lecture style, e-learning and an integrative approach to individual personality styles and preferences? Are the results consistent among the different groups used in this research?

1.4 Research Objective and Sub-Objectives

This research aims to gain a clear understanding of the impact personality plays concerning training engagement. The objective is to evaluate the results of using personality preferences towards training methods which will also be referred to throughout this research as behaviour-targeted training. This will be accomplished by assessing

personality preference towards specific training methods used in the industry today and establishing if there is an increase in engagement based on that training preference.

To measure the increase in engagement, the participants will take an engagement level questionnaire called the Utrecht work and well-being survey, established by Schaufeli and Bakker (2003). This questionnaire will be given before training and then again after completing all the training. The first questionnaire will be used as a base measurement. Then Pearson's correlation coefficient will be performed to see the significance of the relationship between the x and y variables, consisting of engagement and the five personality traits found within the big-five personality model. Then a second engagement-level questionnaire will be used to evaluate any positive change in engagement by comparing the first and second questionnaires. To signify significance, a set criterion has to be appointed as per the recommendations of Frick (1996). In the case of this research, that set criterion will be $>5\%$. This criterion will be used for Pearson's correlation coefficient and median results from each Utrecht work and well-being questionnaire.

The engagement level questionnaire and a demographic survey will be done before training, and a training evaluation survey will be completed at the end of the three training sessions. As well a big five-factor inventory questionnaire, which follows the work of John & Srivastava (1999), will also be completed before the training. These questionnaires, observations, and informal/unstructured interviews, along with three open-ended questions given at the end of the training is complete will provide the data for this research. The objective of this data will be to show evidence based on the data collected to reject the null hypothesis that personality preference towards a specific training style does not contribute to increased engagement. Specifically, how this will be done is explained in more detail in the methodology chapter.

The research will have the following sub-objectives:

- 1) To better understand the personal impact of behaviour and personality training in small and medium-sized Canadian businesses, specifically focusing on the Foodservice Distribution and Emergency Service sectors.
- 2) The ability to design, test and provide insights and recommendations about training, engagement and big five personality factor to industry leaders in the Canadian Foodservice Distribution and Emergency Service sector.
- 3) To understand what specific personality traits within the Five-factor model used in this research are most beneficial at increasing engagement in training resulting in a positive outcome, thus helping training practices be more effective.

1.5 Significance of the Study

This research will contribute to the specific business the research is conducted on by providing immediate feedback and recommendations. In addition, the industry on the potential benefits that could be gained through this training method and the academic world by publishing the research paper. Finally, this research paper, through its descriptive statistics and inferential statistics, will also provide a solid foundation for further research to build on.

Both Descriptive and Inferential statistics will be used in this study. Descriptive statistics will describe and explain the participant characteristics and data being gathered. Inferential statistics will make this research relevant to the total population. Descriptive statistics is a valuable tool and strategy for summarizing and describing data (Fisher & Marshall, 2009). As described by Stapor (2020), inferential statistics is taking a sample descriptive statistic and then using that to infer the population.

This study is of the utmost significance since companies invest large amounts of capital into training to increase engagement and performance, as shown in several research and business studies. For example, according to Bretz and Thompsett (1992), as shown in their research, companies in the United States invest \$44 billion per year on training initiatives.

However, Aturam (2016) demonstrated that inadequate training could lead to disengagement and attrition, while Ahmed, Phulpoto, Umrani and Abbas (2015) found effective training design enhances the willingness of an employee to engage in the learning process, which later boosts job performance through the newly enhanced skills.

According to the Gallup study conducted by Harter, Schmidt and Keyes (2003), disengaged employees miss an average of 3.5% more days per year than engaged employees. This employee disengagement has resulted in lost production, costing the United States economy \$292 to \$355 billion annually. This potential disengagement can be remedied through employee training, which, as found by Ahmed et al. (2015), enhances initial and post-training engagement, helps significantly reduce employee turnover, improves employee behaviour and increases employee job satisfaction and performance.

Therefore, businesses must look at ways to increase their competitive advantage by increasing employee engagement and improving their performance levels or risk of going out of business. This would affect not only the company that has to close its doors but also the community the business is in, the employees that work at that company, and ultimately the economy. Which is why this research is highly significant and will provide essential data that could add a tool businesses could use to increase employee engagement during training which could be cost-effective. In that case, it can assist them in keeping operating costs under control and have better employee engagement, likely resulting in higher performance and a reduced attrition rate.

CHAPTER II: REVIEW OF LITERATURE

2.1 Overview of Literature Review

As companies struggle with increased global influence and drive for a competitive advantage, they seek answers to engage their employees, improve performance, and increase the organization's effectiveness (Baran & Sypniewska, 2019). One area to increase engagement and employee effectiveness is through training. This literature review will explore the research that has been done on the main training methods used in the industry and how engagement, performance as well as behaviour and personality play a significant part in training effectiveness and retention of learned material and skills.

This literature review will be broken down into six main topics, which all build upon each other, clearly explain the study's importance and aim, and help by providing more information that will be used to answer the research questions. The topics will be as follows:

- Purpose of employee training
- E-learning training method
- Lecture-style training method
- Integrative (Collaborative) learning method
- Engagement
- Performance

2.2 Purpose of Employee Training

In the current demanding labour market, employees need to develop their competencies, whether independently or directed to do so, and organizations should have

employees capable of swiftly adjusting to continuously fluctuating business environments (Jehanzeb & Bashir, 2013). One way to do this is through employee training, which, as described by Jehanzeb and Bashir (2013), is an organized method of learning and development that expands the efficiency of individuals, groups, and the organization.

Sahinidis and Bouris (2008) found that learning through training could positively affect an organization's performance and is critical in attaining its goals. Training has also impacted the employee's motivation and commitment to the organization. They did this study because they found a gap concerning the study of employee perceived training effectiveness and its relationship to employee attitudes. Sahinidis and Bouris (2008) researched 134 employees and managers of five large Greek organizations. The data was collected through a four-part questionnaire the participants filled out after completing the training.

Han and Stieha (2020) said in their research paper that organizations seeking a competitive edge, increasingly highlight ways to bolster employee learning and performance, resulting in more significant innovation, creativity, and collaboration. Studies have examined a growth mindset as one of those factors that enhances workplace engagement. Carol Susan Dweck, Professor of Psychology at Stanford University, researched and developed the terms growth mindset and fixed mindset. She described a growth mindset as the belief that intellectual abilities can be increased and a fixed mindset as the belief intellectual abilities are perpetual.

Claro, Paunesku and Dweck (2016) found that students with a fixed mindset tend to avoid difficult situations where they could struggle or fail because it may negatively reflect their sense of intelligence. At the same time, students with a growth mindset view complex tasks as a way to increase their knowledge and abilities and seek out these experiences. In another study by Professor Dweck, she and her research colleagues

focused on what they called an Organizational Mindset. They stated Organizational culture is a critical determinant of an organization's success because it influences employee satisfaction and retention and company profits and productivity. Therefore, they suggested that organizational mindset shapes organizational culture (Canning, Murphy, Emerson, Chatman, Dweck and Kray, 2019). They conducted three studies examining organizational mindset exploring whether a company views talent as fixed or workable. The questions that were being asked were:

Q1. Employees who work in organizations that are perceived to embrace more of a fixed mindset will be less satisfied with their company's organizational culture.

Q2. Organizations that subscribe to fixed mindset beliefs will be evaluated as having less collaborative, less innovative, and less ethical cultures than those that support growth mindset beliefs.

Q3. Organizational mindsets will influence perceptions of a company's cultural norms, which will, in turn, mediate employees' organizational trust and commitment to the organization.

Q4. Supervisors who work in fixed (vs. growth) mindset companies will rate their employees as less collaborative, innovative, and ethical and perceive them as less trusting and committed to the organization.

Canning et al. (2019) found that Organizational mindsets predicted employees' satisfaction with their company's culture and values but did not predict other positive company characteristics, such as work-life balance indicators. Organizational mindsets also predict cultural norms that mediate organizational trust and commitment. They concluded that a fixed mindset organization rewarded individual ability and talent, resulting in employees prioritizing their knowledge, competing with colleagues, and avoiding taking risks, as failures could show incompetence. A growth mindset rewards

learning, motivating employees to grow their skills and be more innovative (Canning et al., 2019).

This organizational mindset is essential for companies to focus on when conducting training programs. Still, as shown by Canning et al. (2019), they also must embrace a learning culture over a personal achievement culture to help employees embrace participating in training initiatives and be rewarded for continuous improvement. Suppose companies don't adopt this mindset and instead take a more fixed mindset. In that case, it may result in employees who don't want to participate in training as they could feel embarrassed by making mistakes or not knowing how to do things. This could bring a feeling and worry of being viewed as inept in effectively doing a job or role.

Another similar study by Stoycheva and Ruskov (2015) states that a growth mindset plays a part in the workforce, especially in human resource development. Stoycheva and Ruskov (2015) explain that a growth mindset in the workforce can be described as an entrepreneurial mindset. This mindset is crucial to a thriving economy, and one can build this by constantly challenging oneself through building skills and experiences.

Similarly, another study on growth mindset by Han and Stieha (2020) found that growth mindset influences behaviours within the workplace greatly and increases work engagement, task performance and workplace satisfaction. Participants' reluctance to act on new ideas was a fixed mindset. Han and Stieha (2020) felt it essential to comprehensively review how Dweck's growth mindset is applied and researched in conjunction with Human Resource Development-related topics. They examined the scholarly literature focusing on adult employees and identified empirical studies linking a growth mindset and Human Resource Development related variables and outcomes. After removing duplicates, their combined research included 177 literature articles. Their analysis and focus on Human Resources stated that a growth mindset could be developed

by interventions, such as training, coaching, leadership development, recruiting human resource practices, and performance evaluation systems. They also mentioned that a well-designed training program integrating a growth mindset might shape employees' openness to increasing their level of engagement in creative activities in the workplace and felt management should embrace the belief that employees can grow and develop new skills when pushed outside of comfort zones

As shown in practice and many studies outlined in this literature review, training is essential to enable companies to survive in the rapidly changing markets and ever-increasing new technology, as found through the research conducted by Gaun and Frenkel (2019). Their study was on two Chinese garment factories supplying an Australian retailer. They collected data using a survey with the time-lagged method. Four hundred fifteen questionnaires were handed out to employees to assemble the data throughout the companies. Of the 415 questionnaires, 360 were returned, giving them a response rate of 83.9%. The study found clear evidence that training enhances task performance by encouraging employees' work engagement. This relationship is strengthened by management maintaining a solid human resources system. Furthermore, they found that employees who receive training are more confident and have higher skill levels, resulting in more motivation to overcome obstacles and engage in work. In addition, organizations that develop and care for their employees through training will benefit through improved job performance (Guan & Frenkel, 2019).

However, poor performance is almost always only partially due to the need for training. Training is appropriate when an individual's performance is improved with additional skills and expertise (Berge, 2008). Essentially, training sometimes lacks planning, sponsorship, and budget or because training is done for the wrong reasons. Evaluation of training is also tricky, which is why, in some cases, it is difficult or

impossible to evaluate the impact and effectiveness of workplace training properly.

Historically, training was attempted in one shot, so it was easier to put a cost analysis to that. Still, today, there is a shift toward informal learning and a continuous process of improving organizational performance. As a result, new ways of evaluating these processes are needed (Berge, 2008).

As well Laguna and Purc (2016) discovered, more often, formal education appears insufficient. Laguna and Purc's (2016) study investigated the role personality traits play concerning training initiation and found that previous studies focused primarily on training methods to identify factors that will result in increased training effectiveness but felt little emphasis looked at motivation in relation to this and thought one needs the inspiration to start training before commencing the training itself, and so thought it was essential to explain the link between personality and training initiation.

As a result of the missing information on motivation, which was important, Laguna and Purc (2016) conducted a **hierarchical linear model** to add variables previously not included to question the possible link between personalities and training initiation. They broke their studies into two parts conducted on 209 employees from small and medium companies using questionnaires. Specifically, the questionnaires were the 10-item personality inventory, the training intention and planning scales.

Once the first part was complete, they used a time-lagged design and waited three months to conduct the second part administering the questionnaires again. Their study showed a significant role openness to experience plays in training motivation, which has rarely been included in other studies. There was a positive relationship between personality traits and intention to undertake training, except for neuroticism. At the same time, they found conscientiousness and openness to experience were significant in training action planning. The study conducted by Laguna and Purc (2016) found personalities

highly important. They found that extraversion and emotional stability were unrelated to training intention.

On the other hand, openness to experience was positively associated with training intention, action planning and training action initiation. Laguna and Purc (2016) hypothesized that this finding might be due to Openness to experience linked to curiosity. Most previous studies have focused on the importance of conscientiousness for predicting training motivation.

Similar to the research conducted by Laguna and Purc (2016), an article written by Kraiger and Ford (2021) showed a need for understanding and applying instructional principles to be the primary methods for enhancing training effectiveness. The purpose of their article was to direct attention to how individuals learn to organize what we know and need to know about maximizing training effectiveness. Their report notes that effective workplace instruction facilitates encoding by improving learner engagement, directing attention to crucial material, and drawing connections between new content and what the learners already know or need to know to perform their jobs.

The training science seeks to identify individual difference variables, such as motivation to learn and goal orientation, that are predictors or moderators of the learning during training or transfer after it. They commented in the article that by designating the learner as a primary element, we establish the learner as the point of teaching and highlight the importance of examining how learner variability interacts with instructional principles and methods. This approach assumes individuals are unique and have innate, measurable learning styles. Their hypothesis states that learners will learn better if provided instruction in their preferred method. Kraiger and Ford (2021) finalized the article, saying that learner, teaching, and training method should focus on workplace instruction to reinvigorate training research.

In economic terms, training represents a significant outlay for American companies, with estimates of more than \$55 billion annually (Tziner, Senior & Weisberg, 2007). In addition, Ali Asghar Sandhu et al. (2012) established that training provides the necessary knowledge, skills, and abilities to perform a job correctly, producing improved financial results and net sales. However, also as per Kular, Gatenby, Rees, Soane and Truss (2008), there is a need for future research to concentrate on individual differences and whether variables such as personality impact engagement. Similarly, Diamantidis and Chatzoglou (2014) found and commented that very few studies examine how trainees' personality affects their learning and self-efficacy levels. In addition, much of the research has been conducted in the US, and future research must further explore other countries' engagement levels (Kular et al., 2008).

Previous researchers show that organizations' growth, goodwill, and development depend on various factors. One of those factors at play is employee training, which enhances an employee's performance and organizational productivity (Shantha, 2019). The research conducted by Shantha (2019) was a descriptive analysis focused on the impact training takes on performance. The study was on 166 employees from 58 banks of Ceylon in Sri Lanka. Data for this research was gathered through structured questionnaires handed out to employees. Then a multi-stage sampling method was used to select the 166 employees from the 458 employee population. This study found a positive link between training and employee performance while learning culture was found to have no significant relationship. Therefore, training is essential to attaining any organization's goals and objectives.

Moreover, it is a systematic way of improving the engagement and performance of employees, as it increases competence and productivity, links job requirements and the current job specification and eliminates performance problems. But, as stated by el Hajjar

and Alkhanaizi (2018), training requires time, revenue, and energy, which is why practical training is highly important. In the United States alone, companies in 2014 spent US\$70 billion on employee training, which is why it is vital that training match the needs of the teams and individual employees and that the effectiveness is measured (el Hajjar & Alkhanaizi, 2018). According to el Hajjar and Alkhanaizi (2018), training selection can be broken down to include instructor-led sessions, computer-based training, web-based training, and self-directed, interactive, or multimedia-inspired lessons. Once the training selection is established, we must look at the willingness of the employee to take on the training.

In industry today, the main training methods used, similarly stated by el Hajjar and Alkhanaizi (2018), are classroom traditional lecture style, integrative learning style, on-the-job training, social learning, which refers to observing, imitating and modelling, and typically referred to as shadowing and e-learning. However, for this research, e-learning, and integrative learning, sometimes referred to as active learning and lecture style, will be the focus methods and will now be explained with research on the effectiveness of each on its own.

2.3 E-Learning Training Method

E-learning methods have become very popular in the past decade, which, as stated by Bondarouk and Ruël (2010), is due to the shift from a product-based to a knowledge-based economy. This change has increased the demand for workers with high-order thinking and problem-solving skills to solve intricate business issues. Due to this, organizations need to educate and train more often and be able to do it anytime and from any place, especially with more employees and employers working remotely. In addition, Bondarouk and Ruël (2010) found through their study that employees are starting to prefer

on-demand training and access to media, likely caused by their need for instant feedback and responses and quick absorption of information from multiple sources.

A study by Derouin, Fritzsche and Salas (2011) found that 95% of respondents to a 2003 American Society for Training and Development survey used some e-learning in their companies. It has also become the most used training practice for soft skills, including management, leadership, communication, customer service, quality management and human resources. The technology around e-learning is also continually growing. This can be seen through things like SmartTutor, a web-based tutoring system used in adult education in Hong Kong and can provide personalized feedback on performance, tailored advice and adaptive tests based on students' current knowledge level (Derouin, Fritzsche & Salas, 2011). E-learning is used frequently and has become popular because it allows organizations to conduct employee training regularly and is easier to change and update content. It also doesn't require travel or a facility or class and can be done with greater control over their learning (Derouin, Fritzsche & Salas, 2011).

Interestingly though, they found in their study no difference in the achievement of students in traditional programs compared to e-learning programs. Derouin, Fritzsche and Salas (2011) revealed that the participants in their study received a better accuracy percentage in a more real-world task environment than through e-learning of, between 27% and 32% and completed tasks 41% to 51% quicker. They concluded that training would be more beneficial if it were learner-focused rather than technology-focused, but we can't discredit the use of technology to aid in training. This method of training is being used and invested in heavily. Garavan, Carbery, O'Malley and O'Donnell (2010) found that in 2009, the training industry was estimated to be worth \$90 billion worldwide, with \$20 billion spent on e-learning. In the UK, it is projected that growth in e-learning will be upwards of 15 percent per annum. But, organizations do have concerns with moving to e-

learning as this method tends to have low participation and high dropout rates, likely due to e-learning being an isolated activity that leads to high attrition rates (Garavan et al., 2010).

Self-efficacy and learner motivation must be considered to counter this characteristic of trainees and high attrition rates. Garavan et al. (2010) study focused on five variables: general-person characteristics, e-learning instructional design characteristics, motivation to learn, self-efficacy, and perceived barriers and enablers. The sample was 275 Irish organizations that provided voluntary e-learning to their employees. An initial selection of 1500 employees was selected, resulting in a response rate of 37 percent. Eighty-five percent of respondents were aged between 16 and 44. This is a highly educated sample of primarily full-time employees, with 61 percent reporting third-level qualifications and 21 percent reporting postgraduate qualifications. Forty-nine percent of respondents were described as managers. Fifty-one percent of respondents described their job title as operations, administration or supervisory. Forty-nine percent had participated in an e-learning training programme previously. Motivation to learn was measured using a 16-item scale, general self-efficacy was measured using a 13-item scale, and task-specific self-efficacy was measured using a three-item scale. The instructional features of e-learning were measured using a 12-item scale. Finally, participation in e-learning was measured by asking respondents to indicate whether or not they had participated in and completed any form of e-learning activity in the past year.

Garavan et al. (2010) argued that younger trainees would be more fascinated with technology and are much more comfortable using technology. Still, as educational levels and levels of digital literacy increase over time, this argument is now subject to debate. It found that a single age group, those 36–45, reported the highest level of learning and participation in e-learning. They hypothesized that years of work experience would make

employees more confident in e-learning situations. The study supported the literature that general-person characteristics, motivation to learn, self-efficacy, and perceived barriers play a role in participation in e-learning.

In the last twenty years, many countries have emphasized knowledge and an educated population as a competitive advantage in the global economy. The increasing emphasis on learning can be found in the thought process that we are in the midst of a revolution in scope and effect as the industrial revolution (Welle-Strand & Thune, 2003). Today's global market forces all organizations to find ways of adapting to changed surroundings or surrender. In Welle-Strand and Thune's (2003) pilot study, they looked at the uses of technology to enable learning within a formal educational setting in a higher education institution and within a corporation. Two pilot case studies were conducted with policy analysis and semi-structured interviews with crucial personnel at the Norwegian School of Management and Telenor, a Norwegian telecommunications company, to investigate the two organizations concerning e-learning policy and practice.

These two Norwegian cases were selected due to their commitment to technology-enabled learning. The aim was to investigate the responsibility and actual use of information and communications technology for learning (Welle-Strand & Thune, 2003). They found the literature to suggest and the empirical data to confirm that the information and communications technology revolution has dramatically affected universities' and corporations' policies and that implementation was expected to facilitate learning and make it more efficient (Welle-Strand & Thune, 2003). However, they found insufficient empirical evidence that investment in e-learning is practical, especially regarding the limited knowledge of long-term effects.

Practitioners and researchers agree that technological advances dramatically alter training and development (Welsh, Wanberg, Brown & Simmering, 2003). In an empirical

study by Welsh et al. (2003), they looked to present a comprehensive review of the practitioner and research literature on e-learning from interviews with managers and consultants directly involved in e-learning initiatives. Specifically, their study looked to answer the following questions: What is e-learning, and how do organizations use it? Why are organizations using e-learning? What are the potential drawbacks of using e-learning? And What has empirical research found regarding e-learning effectiveness, efficiency, attrition, and appeal to learners? Welsh et al. (2003) concluded that most people could learn effectively from technology-delivered courses.

However, technology delivery and classroom delivery should be considered cautiously. Also, that research suggests technology can reduce training costs if there are many learners, if the learners are geographically dispersed and if the course will be repeated several times. They also suggested low completion rates are likely if classes are perceived as optional or have little impact on the learner (Welsh et al., 2003). Moreover, in some situations, completing e-learning courses in their entirety may not be necessary if the employee can get what they need from part of a course. Finally, research suggests that adults generally have positive attitudes toward technology-delivered classes.

2.4 Lecture-Style Training Method

The next style to look at is lecture-style, and according to Omelicheva and Avdeyeva (2008), lecture style is the oldest known method. Critics of this method claim this style doesn't allow for active learning, ideas, collaboration or meaningful talking and debating. Omelicheva and Avdeyeva (2008) mentioned that some are pushing active learning strategies to increase critical thinking, which follows an integrative method. One area used now is debates between students, but they found no compelling evidence linking debates to improved learning. They discovered that the lecture style is likely used because

it is inexpensive and requires only one instructor. Instructors and students are already using it, so it requires no extra time that would be necessary to change training methods. But, they also found that lectures don't excel in fostering application skills, analysis or evaluation.

A study was conducted by Khoshnevisasl, Sadeghzadeh, Mazloomzadeh, Feshareki, and Ahmadiafshar (2014) on 40 medical students in the Zanjan University of Medical Sciences pediatric ward. The students were enrolled in the study and divided into two groups by simple randomization. Two topics in pediatric courses were chosen. One of the topics was presented in a lecture-based format for the first group and a problem-based format for the second group. The other topic was the opposite: the problem-based format was done with the first group, and the lecture-based design was used for the second group. In the lecture-based method, students only received information from the lecturer and attempted to memorize the content instead of understanding the concepts. First, an exam was taken to evaluate the students' knowledge. Then a satisfaction questionnaire was conducted by the students. The exam tests consisted of 10 questions; each subject had five similar questions. Khoshnevisasl et al. (2014) found the difference was not statistically significant. Still, Students preferred problem-based learning over lecture-based learning because of the motivation boost, felt a higher quality of education, knowledge retention, class attractiveness, and practical use.

Another similar comparison study was conducted by Antepohl and Herzig (1999) with one-hundred and twenty-three students randomly assigned to either problem-based learning, with tutorial groups of up to nine students, or the traditional, lecture-based course. An analysis of the results from multiple-choice and short-essay questions revealed similar scores that tend to favour problem-based learning. In addition, Antepohl and Herzig (1999) found that students considered problem-based education an effective

learning method and favoured it over the lecture format. Interestingly they found most students in both the study group and the control group would have preferred the problem-based course even before they had experienced it.

Per Carriger (2016), problem-based learning is an approach to instruction that is learner-centric rather than instructor-centric. It empowers learners to explore a topic independently through research and integrating theory and practice. Problem-based learning is differentiated from traditional, lecture-based instruction by employing a real-world problem that engages the learner in active exploration rather than providing the learner with passive reception of lecture material.

However, lecture-based instruction leads to better knowledge acquisition, and combining the two produces the best learning outcome (Carriger, 2016). But they also noted that very little had been done looking at the effectiveness of problem-based learning, particularly in the management classroom. This is why they conducted a study directly comparing the learning outcomes for a problem-based, lecture-based, and hybrid approach to teaching the same college course. Seventy-six students participated in this research. Eighteen of these students were enrolled and participated in the lecture-based offering of the course. Thirty-two of these students were enrolled and participated in the problem-based offering of the course, and twenty-six of these students were registered and participated in the hybrid offering of this course.

The lecture-based approach consisted of twice-weekly, hour-a-half lectures. The problem-based approach consisted of weekly, two-and-a-half-hour sessions incorporating a typical problem-based delivery. Both had a mid-term and final essay exam to assess concept learning and three writing assignments to evaluate concept learning and critical thinking. There was also a 50-question multiple-choice exam at the end. Their study shows hybrid and problem-based approaches, rather than lecture-based techniques, promote more

critical thinking skills. Students seem to respond less positively to a problem-based learning format than a hybrid approach (Carriger, 2016). Alternatively, students react less positively to a purely lecture-based instruction format than a hybrid approach.

Similarly, Omelicheva and Avdeyeva's (2008) study between the fall of 2005 and spring of 2006 used 60 undergraduate students enrolled in an introductory political science course at a large research university. They selected six curriculum topics; one, three and five were presented using a debate format, and two, four and six were presented in a lecture format. In addition, the students received a brief outline of the topics and a pre-test questionnaire asking about their interests and concerns over the topics.

Omelicheva and Avdeyeva (2008) found that better comprehension, application, and critical thinking were established through the debate format. On the other hand, basic knowledge, memorization, and information recognition were better demonstrated in the lecture format. Therefore, they concluded that both techniques would provide the most effective training. This was also confirmed by Wilson (2012). He found no discernable evidence showing one style is better than another but that some students performed better in one type of training than another, likely due to their preferred learning style.

2.5 Integrative Learning Method

The next method to be looked at is integrative training which can be described as active learning. An integrative training approach combines techniques and strategies such as physical relaxation, mental concentration, guided imagery, suggestive principles, collaboration, group learning and problem-based learning (Bretz & Thompsett, 1992). In addition, it has the learners more involved in the learning process and removes the barriers in other methods, such as negative reinforcement, fear of failure, boredom and anxiety (Bretz & Thompsett, 1992). Similarly, Walshe and O'Brien (2013) stated that integrative

learning is fostered intentionally by developing material that provides learners with multiple opportunities to make connections.

Through reports, Bretz and Thompsett (1992) found that students learn more when integrated learning approaches are utilized and have increased satisfaction in the training programs, which they wanted to confirm. Their study used a three-day manufacturing resource planning course taught in an integrated and traditional lecture-style learning method. In the study, the total sample size was 184 staff, and of that, twelve received no training and were used as control, while 172 completed the training. The total who received training was broken down into four groups. Group one received a pre-test, integrative learning and a post-test. Group two received a pre-test, traditional training and a post-test. Group three received integrative and post-test training, and group four received traditional training and a post-test. The group members were selected using random sampling, mainly married males with an average age of 42 years and 18 years of tenure with the company. Bretz and Thompsett (1992) found no difference between the groups in the pre-test. Both training styles were found to have similar positive outcomes after the training but found subjects to react more favourably towards the integrative training.

Incorporating strategies to integrate theoretical and clinical components are vital in nursing programs. Integrative learning facilitates lifelong learning and cultivates clinical inquiry skills. Thus fostering integrative learning is essential (Walshe & O'Brien, 2013). Not as vital, but the need is also similar in other fields, such as business school. Pal and Busing (2008) said providing hands-on experience is beneficial to long-term professional success, and in their study, participants found learning operations management in an integrated format very useful. It was also stated by Walshe and O'Brien (2013) that integrative learning must be intentionally and strategically designed and fostered.

Walshe and O'Brien (2013) conducted a descriptive analysis of 34 nursing students in their final year of undergraduate nursing. The students participated in three cycles of problem-based learning and associated simulations. An assessment rubric focused on patient assessment, clinical decision-making, and technical and communication skills was used by students and assessors to score simulation performances. The objective was to evaluate the effectiveness of the integrative strategy by assessing performance in simulated clinical events. They observed and evaluated the application of theory to practice, the ability to connect skills and knowledge from one course to solve and explore issues in another, and the capacity to reflect and identify connections made over time (Walshe & O'Brien, 2013). Walshe and O'Brien (2013) found positive performance improvement directly related to students' relationships between the problems they explored and the experiences they gained during the simulated clinical events.

According to Huber and Hutchings (2004), integrative learning is rising. This is likely because the knowledge that helps develop integrative capacities is vital. It builds habits of mind that prepare the learner to make informed judgments in personal, professional, and civic life. In addition, the ability to think critically and problem-solve increases the power of the learner to see connections and differences among disciplines (Huber & Hutchings, 2004). This is also seen through the increase in what is known as adventure learning. As Petrini (1990) stated, adventure learning is learning by doing. Still, adventure learning is typically used to help improve leadership, communication, personal growth, creativity and teamwork instead of teaching a specific skill. In adventure learning, the participant can quickly learn and gain a clear picture of the group dynamics and their strengths and weaknesses, which can then be transferred back to their work, school and everyday life (Petrini, 1990).

2.6 Engagement & Performance

With effective training comes increased engagement, knowledge and performance, which is the basis of engaging in training in the first place and is the entire purpose companies invest time and money into training. But, the effective engagement of employees is one of the most significant challenges in today's workplace. Osborne and Hammoud (2017) state that an engaged workforce separates profitable from unprofitable organizations.

Similarly, Little and Little (2000) said engagement is a psychological state where employees feel satisfied, involved, empowered and committed, and noted that having engaged employees offers substantial benefits. In contrast, disengaged employees come at a high cost. Kular and Gatenby (2008) have had a similar finding that there may be a strong link between engagement, employee performance and business outcomes. Most organizations know and believe that engagement is a dominant source of competitive advantage (Kular & Gatenby, 2008).

Mclaughlan et al.(2011) found that leadership focusing on employee engagement increases employee satisfaction, commitment, effort, and retention by 14 to 39%.

Moreover, that focus produces top-quartile revenue growth of 2.5 times that of organizations in the bottom quartile. In contrast, disengaged employees cost US corporations upwards of \$350 billion annually (Osborne and Hammoud, 2017). Osborne and Hammoud (2017) found that disengaged employees represented thirty percent of US employees at work, and a staggeringly low 13% worldwide were engaged.

According to Kahn (1990), personal engagement is the sustained connection and drive within oneself. This engagement promotes relationships at work and with others.

Conversely, disengagement is shown through the evacuation or suppression of a person's expressive and dynamic self. Kahn (1990) found three psychological conditions that

promote and are connected to personal engagement: meaningfulness, psychological safety, and psychological availability. Psychological meaningfulness is shown through those given engaging work that is challenging, clearly outlined, varied, and creative.

Psychological safety is gained by expressing themselves without fear of negative consequences to their image, status or career. Statistics show a high level of psychological safety is achieved through a supportive administrative environment, allowing staff to try and potentially fail without fear of reprimand. Finally, psychological availability is the sense of having physical, emotional or psychological resources to engage at a particular moment which can be summed as the readiness and confidence to engage in a task.

In the study Kahn conducted in 1990, he felt researchers gave less attention to how people occupy roles than how fully they are psychologically present during particular moments of role performances. Because of this structure, his research aimed to fill this gap by designing and generating a theoretical framework to understand self-in-role processes and suggest directions for future research. His concern was when people bring themselves into or remove themselves from particular task behaviours. His research used a descriptive theory on two areas: a summer camp in the West Indies, USA, where he participated and observed. The second area was an architecture firm in the northeastern United States, where he was an outside researcher. With the summer camp, he collected data from 16 counsellors, nine men and seven women, ranging in age from 20 to 35 years, with an average age of 25.5 years. The qualitative methods used were observation, document analysis, self-reflection, and in-depth interviewing.

In the architecture firm, he collected data on 16 firm members, ten men and six women, choosing them for the diversity of their experiences, demographic traits, and positions in the firm. This research found that psychological experiences of work and work contexts shape the processes of people presenting and absenting themselves during

task performances. However, he also identified his work as being very generalized.

Therefore, needed future research developing a dynamic process model explaining how the variables documented above combine to produce moments of personal engagement and disengagement (Kahn, 1990).

Conversely, Kahn found that organizational reluctance to give employees some freedom resulted in employees who felt they were not trusted and would fear overstepping their boundaries (Kahn, 1990). Data indicates that personal engagement is linked to elevated levels of psychological availability. In addition, Kahn (1990) found four types of distractions that influenced psychological availability: individual insecurity, depletion of emotional energy, physical energy, and personal life outside work.

In line with the work done by Kahn, a qualitative study on the manifestation of engagement was done by Bakker (2008). They concluded the study by stating that organizational behaviour approaches must also include the pursuit of employee happiness, health, and engagement and that there was a positive relationship between engagement and performance. Their study was conducted on a group of dutch employees who were first given explorative interviews with open-ended questions about the jobs' positive and negative aspects, followed by an engagement survey. Bakker (2008) concluded that further research was needed to test whether the Work Engagement Monitor is effective in helping employees to cope with their demands, mobilize their resources, stay healthy, and perform well.

Similar to results found by Kahn in a literature review conducted in 2018, Antony (2018) found that organizations with engaged employees tend to perform better, resulting in increased productivity, employee retention, loyalty, positive attitude, and reduced absenteeism. Conversely, an engaged employee who is micromanaged is not likely to stay engaged or stay with a company for long. As part of Antony's literature review, Antony

asked random employees from some top employers what made their employers effective. Those employees said what they feel makes a good employer is providing the employees with the tools, resources, and processes to perform at a high level. In addition, employers who invest in their employees through training and development help them gain new skills, elevating their skill levels and helping them move up the career ladder. Furthermore, training programs help enhance employees' skill levels, increasing their feeling valued and improving performance (Antony, 2018).

In 2006, a Gallup report analysis found a nearly \$300 billion loss in the United States gross national product, resulting from poor employee output (Aturamu, 2016). In the qualitative explanatory case study, Aturamu (2016) found evidence suggesting disengagement and high attrition can be attributed to poor communication between employees and employers. There are also ineffective listening, unfavourable shift patterns, inadequate training support, and limited career development opportunities. Aturamu (2016) reached this conclusion through a study of two Canadian manufacturing companies in Calgary, Alberta, conducted on production workers. They collected data using semi-structured interviews with 18 participants, nine from each manufacturing company and selected them using purposive sampling. The criteria they used for the sample were a minimum age of 18 years, employment in the company for at least one year, and a position as a front-line employee or front-line supervisor.

On the same level as engagement is motivation; a motivated person is engaged, and motivation is linked closely to performance. An increase in performance helps enterprises secure the best possible utilization of resources. As a result, they increase productivity and efficiency, which aids in the reduction of operating costs (Shahzadi, Jazed, Pirzada, Nasreen & Khanam, 2014).

Research conducted by measuring and analyzing the theoretical framework and models related to employee development and its effects on performance by Hameed and Waheed (2011) established five employee development variables. Those variables that affect employee performance are coaching, training, empowerment, participation and delegation and employee development, which are directly related. In addition, they concluded through their research that employee development is gained through skills growth, self-direction, employee attitude and behaviour and employee learning, which directly results in an increase in employee performance and Organizational Effectiveness (Hameed & Waheed, 2011).

Shahzadi et al. (2014) found that many employees from private firms face motivational problems in Pakistan. So they focused research on understanding and finding out how to encourage workers on performance in private firms, particularly in Multan District, Pakistan. They conducted a descriptive analysis of fifty-three participants chosen through convenience sampling to accomplish this. Each participant was given a 17-question questionnaire as well the researchers observed the behaviours of employees in the working environment. This research found that firms that care for their workers progress rapidly and link employee motivation and performance. In addition, according to Shahzadi et al. (2014), employees who commit to development and training are more satisfied, resulting in positive performance. But another critical factor that needs to be taken into account is compensation, as stated in a study conducted in India by Mittal (2021). Mittal (2021) found that pay based on employee performance positively impacted employee engagement and reduced attrition.

Similarly, if there are limited opportunities for advancement or promotion, employees are not as likely to participate in employee developmental activities, and performance will be reduced (Hameed & Waheed, 2011). Hameed and Waheed (2011)

stated that if employees are satisfied with their job, they are more committed, and their performance increases, which helps the organization achieve its goals. Organizations that support and encourage employees to participate in decision-making increase the performance of the employees.

In 2017 Pradhan and Panda (2017) conducted a more extensive study to examine the moderating role of passion between purpose and performance. They found a positive relationship was evident between purpose and performance. The more comprehensive study was done using hierarchical regression analysis and convenience sampling of 307 officials working in the Indian Railways. Of the 307 volunteers, the majority were male, as this sector in India is male-dominated, and the average tenure was just over six years. Among the respondents, 28.7% were 25 to 34, 41.6% were 35 to 49, and the remaining were 50 or older. They used a 21-item Purpose Checkup Scale, The Work Passion Scale, and the Employee Performance Scale survey to gather the data for their study.

Richardson (2014) noted that tardiness and absenteeism of full-time employees resulted in productivity losses costing organizations between \$200 to \$700 per employee missed workdays daily. In addition, organizations lose an average of \$47,000 when replacing each employee with two years of tenure or more. Approximately \$9,000 annually replaces each first-year employee, so training and engagement are necessary.

Richardson (2014) conducted a smaller qualitative single case study to explore what strategies are essential for organizational leaders to improve workplace performance. The study consisted of a mix of 20 people who were managers, floor employees, and clerical staff from a business organization in Southwest Georgia. The participants were selected based on employee tenure of at least one year of experience. Maslow's hierarchy of needs served as the conceptual framework for the study, and data collection was done through face-to-face and semi-structured interviews. Their research revealed that

employee compensation, communication, and a positive work environment were significant factors in workplace performance.

Similarly, Kahn (1990) stated that employees need to be challenged and engaged by their employers to feel psychological meaningfulness. Still, the employees need the tools to do the job, which comes from effective training. Also, studies and research have shown the importance that personality and behaviours play in decision-making, interactions, performance, and engagement, as Hameed and Waheed (2011) have demonstrated with a clear link between employee development, engagement, and performance. But still, little research focuses on the impact personality plays regarding training and how that can be utilized to make the training more effective.

These findings are being identified and remedied in business schools as they work to change how they deliver courses to engage their students better, which will directly impact future leaders and businesses. In the past, most business schools gave core courses in a silo approach. As a result, these schools were turning out more narrowly focused graduates who were often unaware of how decision-making in one area could affect others (Pal & Busing, 2008). This is likely why you are now seeing more business schools, including the top ivy league schools using mixtures of problem-based learning, integrative learning, case method and e-learning.

For example, Harvard Business School has used the case study method since 1920, and McMaster has used the problem-based learning method since 1969 (DeLacey & Leonard, 2002). But more recently, Harvard Business School moved into e-learning distance education by creating a course delivery method called Harvard Business School Interactive (DeLacey & Leonard, 2002). McMaster University also now offers e-learning courses, as do many other Universities around the globe. This shows the need to adapt, change, challenge and continually improve the learning delivery methods.

2.4 Summary

In summary, it is shown that the main methods of training used in academics and industry are similar and primarily consist of e-learning and an integrated hybrid of lecture-based, problem-based, and debate based with slight variations. Using a more hybrid or integrated active learning method improves the learners' decision-making process instead of following a silo approach, which ends with negative results, as Pal and Busing (2008) stated. Similarly, the reason for training and what academics and industry are looking to get is engaged learning resulting in the retention of the material taught, which the learner can then apply. This training also helps foster a growth mindset that dramatically influences workplace behaviours, as Han and Stieha (2020) stated. Increasing work engagement improves task performance and workplace satisfaction, similar to what Little and Little (2000) state that engaged employees feel satisfied, involved, empowered and committed.

Antony (2018) found that organizations with engaged employees tend to perform better, resulting in increased productivity, employee retention, loyalty, positive attitude, and reduced absenteeism. But it was also shown that personality and behaviour play an important part in decision-making, interactions, performance, and engagement, as Hameed and Waheed (2011) found, which is where the gap in current studies' is with linking training, engagement to behaviour or personality preferences.

The research methodology will follow this literature review, including an overview of the research problem, research design, population and sample, instrumentation, data collection procedure, and data analysis procedures. Then a fully detailed explanation of the research findings, recommendations, limitations and conclusion will finalize this dissertation.

CHAPTER III: METHODOLOGY

3.1 Overview of the Research

Research and evidence show that training is vital to a company's success, especially in today's demanding market. It also is shown how an individual's behaviours, personality and mindset play a critical role in decision-making, interactions, and engagement. But there is a gap in the academic research looking to combine these areas, which could result in more engaged employees, more effective training, and increased performance.

This research will be conducted using a mixed method, with the primary quantitative data collected using questionnaires. At the same time, the qualitative data will be collected through open-ended questions, unstructured interviews and observations. The open-ended questions will be: Which training session do you like best and why? Which training session do you like least, and why? And the final open-ended question is, Do you feel that if training were conducted in your preferred style, you would enjoy the training more and why? This mix of qualitative data will give context and potential insight into the numeric data gathered and, with the combination of both a qualitative and quantitative method, will provide the best complete picture of this new area of research. As a benefit, insight is also achieved through extensive experience in these two businesses as a mid to senior-level leader. This experience also provides the ability to understand industry-specific terms and practices better. Due to involvement with these companies, and typical with most quantitative and qualitative research, the researcher will not participate in the study or training seminars but rather be an observer to help reduce potential bias or subjectivity.

The quantitative data will then be run through Cronbach's Alpha Coefficient to validate the scale's internal consistency. Microsoft Excel will be used for the statistical analysis and graphical data representation. In addition, the industry-gained expertise will be used to observe and validate the findings to ensure the result makes sense. This expertise has been achieved through working as a senior-level manager for more than 15 years in the Foodservice Distribution company and six years in the Emergency Service company. Due to this involvement with these companies, and typical with most quantitative research, direct participation in the study or training seminars won't be done. Still, participation will be done as an observer to help reduce potential bias or subjectivity.

Quantitative research, as described by Kahn (2014), is conducted in a more structured environment that often allows the researcher to control study variables and environment and is gathered through tools such as research questionnaires and surveys. In addition, quantitative analysis may be used to determine relationships between variables and outcomes (Rutberg & Bouikidis, 2018). In quantitative research, the data is collected through statistical tools. On the other hand, as described by Kahn (2014), a qualitative method is an inquiry process of understanding based on distinct methodological traditions of inquiry that explore a social or human problem. The researcher builds a complex picture, analyzes, reports details of participants, and conducts the study in a natural setting. According to Byrne and Humble (2007), a mixed-method research design combines qualitative and quantitative methods to answer the research questions allowing the research to gather both exploratory and confirmatory data. A mixed method is also very good at explaining contradictory results that may emerge in the study and help neutralize data collection limitations that all methods carry (Byrne & Humble, 2007).

This research will be broken down into ten main parts:

1. Construct and prepare the questionnaires and surveys that will be used for collecting the data.
2. Plan and prepare the training sessions that will be the foundation of the research.
3. Assemble a pilot study group, have the members sign the voluntary participation forms and run the pilot study. The aim will be to find and reduce errors in the surveys and training used in the primary research and gained from pilot group feedback. Then the final objective will be to find a model which best fits the data.
4. Select the participants who will be asked if they would like to participate in the study through random sampling.
5. Explain the study's objective and have participants sign the voluntary consent forms.
6. Break the participants into manageable training groups and have the participants fill in the big five-factor inventory survey, demographic questionnaire and engagement level questionnaire.
7. Conduct the three training sessions and have participants fill in the training evaluation survey at the end of each session.
8. Once all training is complete, have the participants fill out the engagement level questionnaire again.
9. Begin data cleaning, structuring, analysis and modelling.
10. The final stage will be to document the findings, finalize the dissertation and present the results to the two companies involved in the research.

3.2 Operationalization of Theoretical Constructs

Eden, Fielt and Murphy (2020) noted that it is crucial to establish nominal validity when operationalizing a construct, which reflects the extent to which a construct predicts and measure's the accuracy of a well-established theoretical model. Simplified operationalizing a construct is the relationship among theoretical constructs by measuring variables corresponding to those constructs and looking at statistical correlations in variables. In this research, the theory is that personality preference toward a training method positively affects training engagement. The constructs are the three training models: e-learning, integrative approach, traditional lecture style, and employee personality, gathered using John and Srivastava's (1999) 44-question Big-five personality survey. This will be operationalized by recording and calculating training effectiveness through quizzes, engagement questionnaires, demographic questionnaires, unstructured interviews, observations and open-ended questions.

According to Williams (2007), the main approaches to conducting research are qualitative, quantitative and mixed-method. Typically, when the researcher is looking for numerical data, they select the quantitative approach, whereas the qualitative approach is used when textural data is required. The mixed method is when research is needed for numeric and textural data (Williams, 2007).

This research will use a mixed-method approach to collect numeric and textural data, as Williams (2007) stated. The quantitative data will be used to establish and validate a relationship between the variables, specifically whether training preference based on personality is linked to increased engagement. The data will be gained through the big five-personality inventory and self-administered closed-ended questionnaires, which will be delivered before and after training and broken down into three main types: lecture style, integrative style and e-learning, and finally, three open-ended questions, unstructured interviews and observation will be used to collect qualitative data to allow for a better

view of the whole picture being told by the quantitative data gathered and help better answer the research questions.

The data in this research will use descriptive and inferential statistics. First, descriptive statistics will be used to describe the participant characteristics then inferential statistics will be conducted to make generalizations about the population. In addition, one of the inferential tools used is a two-way analysis of variance (ANOVA). Finally, after the examination, the data will be graphically represented.

3.3 Research Purpose and Questions

All research aims to present and link relevant literature, data, trends and other important information that justifies the research's need. This is accomplished by the researcher connecting previous research and literature to create an argument and identify a gap that can then be explained and warrant research being conducted (Newman & Covrig, 2013).

This research aims to understand the impact of personality and behaviour on training engagement and if that differs based on the training method used. It will be conducted in a structured environment through participant data collected and gathered from questionnaires, unstructured interviews, open-ended questions and observations. This mixed method dissertation will be used to gain as much data, knowledge and feedback as possible to explain further the relationship and potential significance of behaviour in training effectiveness.

This research is vital to industry and society as a business's success or failure can directly impact the surrounding population's available jobs and discretionary income, significantly affecting the economy. The questions for this research are as follows:

- 1) What impact does tailored training specific to individual personalities have on employee engagement in a medium to small Canadian business?
- 2) How effective is structuring training methods such as lecture style, e-learning and an integrative approach to individual personality styles and preferences? Are the results consistent among the different personality groups used in this research?

The sub-objectives of this research are:

- 1) To better understand the individual impact of behaviour and personality training in small and medium-size Canadian businesses, specifically focusing on the Foodservice distribution and emergency service sectors.
- 2) The ability to design, test and provide insights and recommendations about training and engagement to Canadian Foodservice distribution and Emergency service industry leaders.
- 3) To understand what specific personality traits used in this study within the Five-factor model are most beneficial at increasing engagement in training resulting in a positive outcome, thus helping training practices be more effective.

3.4 Research Design

This mixed-method research will use six training topics on two businesses within different industries. As previously stated, three training topics will be taught in each company: one through e-learning, one in lecture and one in an integrative style, also referred to throughout this paper as a collaborative method. Also, as outlined earlier, descriptive and inferential statistics will both be used in this research. This will be accomplished by gathering and running statistical analysis collected from the questionnaires and quizzes, describing the findings, and outlining the trends that can be seen. Applying the same training methods and procedures among two businesses and

conducting inferential statistics will allow the outcomes to be generalizable to the overall population and replicated by other researchers.

The description and training method in the emergency service business will be hypothermia refresher training, conducted using an integrative method. In this method, participants receive instructions, open discussion, visual displays, and work hands-on in groups. The next training will be swift-water awareness training, guided through e-learning. The final training seminar on the emergency service business will be air ambulance training, achieved through lecture-style in-class training. These three training courses are essential for operating their jobs safely and effectively. They are part of the training undertaken several times annually to ensure members maintain high expertise and safety.

In the Foodservice Distribution business, the training description and methods will be Microsoft Excel training at either a beginner or intermediate level, dependent on the current skill level, which will be taught through e-learning. The next training seminar will be food & ingredient safety refresher training which will be conducted using the integrative method. In this integrative method, the participants will receive the training through videos, lectures, team collaboration, and open discussion. The final training will be food traceability refresher training conducted using an in-class lecture style. These training courses are vital for the employees' effectiveness, maintaining required certification, which, if lost, would account for hundreds of thousands in lost revenue, and ensuring the safety of the consumer, the end-user who purchases the product from the company.

Before the training for each company, participants will fill out a Utrecht work and well-being questionnaire following the work and model of Schaufeli and Bakker (2003). This will then be filled out again at the end of the training. Schaufeli and Bakker (2003)

describe work engagement as a positive work-related state of fulfillment characterized by vigour, dedication and absorption. The purpose of doing this once before the training is to get a baseline engagement level and, in the end, to gather data on any potential change in the participant engagement levels. Before the start of training, the participants will also fill out a demographic questionnaire to gather details such as age, education level, gender, ethnicity, and marital status, allowing the collection of participants' general characteristics and potential patterns. Finally, the participants will also fill out the Big five-factor inventory questionnaire to gather specific personality information from each participant; specifically, the focus of the research will be on extraversion, openness to experience and conscientiousness, which through multiple other researchers' works, seem to play the most significant impact on training initiation, engagement and retention of material, but will also look at the effects that may come from the other personality traits in the big five inventory, which are agreeableness and neuroticism. These personality traits will be the foundation of this dissertation, specifically the three outlined as the primary focus. The Big five-factor inventory will follow John and Srivastava's (1999) template.

After each training course, the group will take a quiz on the material taught to establish training retention. The participants will then fill out a training evaluation questionnaire similar to the evaluation training questionnaire done by Kirkpatrick and Craig (1970). This will provide valuable data on the participant's feelings about the training method delivery and structure. In addition, the training effect survey will be used to help validate the findings gathered from the engagement level surveys. Additionally, observations and unstructured interviews will be conducted during and directly after the three training programs to collect qualitative data. Finally, the participants will answer three open-ended questions focused on the training session preference, why they liked a

particular style more than another, and if they felt that preference would lead to them participating and enjoying training more.

Before the research volunteers fill out the questionnaires, a small test group of experts from the Foodservice Distribution business who are not included in the primary research will be used for a pilot study group. They will be given the questionnaires and participate in one of the three training sessions. The purpose is to ensure that the questionnaires are easy to fill out accurately, are error-free, and produce the results needed, coding procedures are tested for uploading onto the software, and the best fitting model is used.

3.5 Population and Sample

As Israel (1992) explained, three areas are typically needed to determine the sample size. These are the precision, confidence or risk level, and the degree of variability in the measured attributes. This dissertation will follow Israel's (1992) recommendation of using a sample size calculation formula with a 95% confidence level and 5% precision while adding 10% to help compensate volunteers who cannot be contacted or don't respond. This specific sample size calculation is being done to represent the population for better research validity.

In the case of the Foodservice Distribution business, the research will exclude employees who don't speak English, are temporary workers or don't have basic computer skills. Any member who wishes not to be included in the research will also be excluded. This is to ensure reliability, ease of access and understanding for the participants and ethics of the study. Unlike the Foodservice Distribution company, there are no temporary members in the Emergency Service company; they all work in one location, and their primary language is English. But they do have some support members who are not

involved in the primary training, which will be excluded from the study. Again, those who wish not to be involved in the research will also be excluded.

As well as the research participants, four members not included in the primary study will be selected as a pilot study team, as mentioned earlier. This test team will be chosen from the Foodservice Distribution business, from all different departments and will be mid to senior-level managers. These members were selected because they either did not have the time to be involved in the primary study or were part of the members teaching the training courses to be run in the primary research. Also, four members were chosen to provide enough data to test the tools and statistical model while not using too many test members, limiting the primary study's available participants.

These four members will be administered all the surveys and included in the e-learning excel training, followed by the engagement level questionnaire, course evaluation survey and a small skill test. The pilot study team will not be included in the lecture-based training or integrative training due to the time constraints and availability of the test team.

The purpose of using this team is to test the accuracy, legibility and ease of use of the surveys and test the statistical model intended to be used in the primary study. In addition, by performing this pilot study, potential errors and complications can be worked out before conducting the primary research, ensuring accuracy and reducing the time required to fix the mistakes in the leading study group while also understanding this pilot study may not eliminate all errors. In, Junyong (2017) stated obtaining high-quality research outcomes is paramount. To accomplish this, analyzing and performing a pilot study before the main study can be very beneficial. Furthermore, by conducting a pilot study, researchers become better aware of procedures used for the primary research and make changes or corrections, which aids them in selecting the most optimal methods for answering the research questions in the main study.

3.6 Participant Selection

In qualitative and quantitative research, standardization of the procedures is required, as is the random selection of participants. Randomization removes the potential to influence and bias external variables and helps ensure generalized results (Sargeant, 2012). In addition, quantitative research requires a statistical calculation to select the sample size to provide sufficient participants for the outcome to be attributed successfully to the phenomenon being studied. Finally, the subjects must be able to inform and contribute perspectives directly to the research topics (Sargeant, 2012).

In this research, the volunteers were selected from two separate businesses. One was a medium size Foodservice Distribution business with its main facility in British Columbia, Canada and a small facility in Alberta, Canada. The second was a small Emergency Service business in British Columbia, Canada.

The participants from each business were selected using a simple random probability sampling method. According to Acharya, Prakash, Saxena & Nigam (2013), this probability sampling method is considered the gold standard in sampling methodology and the best generalizability method. This is because every individual has an equal chance of being selected from the population, minimal knowledge of the population is required, the internal and external validity is high, and it tends to be simple to analyze data. Data for this research method is selected using a random number table or computer generator and can also be done using a lottery method (Acharya, Prakash, Saxena & Nigam, 2013).

The total population number and employee numbers were used for this research. First, the total population of each company was run through a sample calculator, establishing a 95% confidence level and a 5% margin of error. This number was then taken, and 10% was added to account for potential dropouts using Israel's (1992)

recommendations. Once this sample was established, the participants were selected using a lottery method. Next, the employee numbers were randomly drawn from the lottery until the total required participants were selected. Once the participants were selected, they were reached out to explain the research, that it was voluntary, and that they could opt-out at any time. Furthermore, the participants were described what was expected of them with the time required and asked if they would be interested in volunteering to participate in the research study, being involved in the training sessions, and filling in the surveys.

As part of the participant selection process, strict and purposeful confidentiality and anonymity will be taken towards the volunteer participants and companies involved in the research. This will include participant specifics such as the individual's name and job descriptions not included in the study. Instead of participant names, employee and team member numbers will be used, or other methods such as listing members as participants one, two, three etc. Instead of job descriptions, overall departments and management levels such as mid, senior, junior or support members will be used. In line with this, the specific company names will not be used in this study, the particular industry won't be used, and the city the business resides in will also not be used. Instead, a more broad industry term will be used: Foodservice Distribution and Emergency Service.

Furthermore, the specific city of the business will not be used; instead, the province and country will be used. As well as these, the data and records will be confidential, with only the primary researcher having access and the access being password locked.

According to the study conducted by Wiles, Crow, Heath and Charles (2008), to keep confidentiality, identifiable information about an individual should not be disclosed without the participant's permission, which includes not disclosing individual personal information which may identify a participant deliberately or accidentally. Also, according

to Wiles et al. (2008), the data and records should be held securely, ensuring only authorized research team members can access them. Furthermore, the researchers should not discuss issues or details about members of the research with others outside the research team, and anonymizing individuals and places should be taken to protect the participants' identities. This study will aim to follow the recommendations by Wiles et al. (2008) to keep the study's volunteers confidential and abide by research ethics standards.

3.7 Instrumentation

In this research, the instruments used to collect the participant data will be structured questionnaires, quizzes, open-ended questions, informal interviews and observations. As stated by Bird (2009), questionnaires give the ability to have all the data in the same format, which means that all the questions are asked of the whole population of participants in the same way, making the collected data comparable within the data set. Questionnaires also are great in social sciences and are a well-established tool as they give the ability to collect data on participant characteristics, behaviour, attitudes, beliefs and reason for actions taken specifically to the research topic being investigated (Bird, 2009). Furthermore, according to Geer (1988), open-ended questions measure participants' attitudes rather than just their ability to articulate a response.

In the case of this research, the questionnaires are purposely structured to gain the best insights and baseline. For example, a demographic survey will be structured similarly to the guidelines explained in the research conducted by Hughes, Camden and Yangchen (2016). In their study, they explained the importance of using updated demographic questions, which they felt were necessary for ethical and professional reasons for ensuring inclusion and helping to advance diversity in research and for research integrity reasons. They also stated that demographic questions are essential to include in almost every social

science research to accurately describe the research sample (Hughes, Camden & Yangchen, 2016).

Next, the Big five-factor inventory questionnaire and recommendations will be conducted using John and Srivastava's (1999) Big five-factor inventory questionnaire. This research focuses on the personality traits of extraversion, conscientiousness and openness to experience, following the findings from Laguna and Purc (2016). They found those high in conscientiousness look to have a more significant ability to implement the newly learned skills gained from training which makes sense since these individuals tend to be hardworking, persistent and goal-oriented. At the same time, openness to experience was positively associated with training intention, action planning and training action initiation, likely because it is closely linked to creativity. As for extroversion, as outlined by Moyle and Hackston (2018), these individuals work well in groups and thrive off being around others. On the other hand, introverts are the opposite and tend to feel more drained from working with too many people.

Then the Utrecht work and well-being questionnaire established by Schaufeli and Bakker (2003) will be performed following their recommendations. This questionnaire is organized in a five-point Likert style and, according to Schaufeli and Bakker (2003), is the most effective way to measure engagement. Engagement is defined by Schaufeli and Bakker (2003) as an individual's vigour, dedication and absorption.

The Likert style's advantage is its simplicity and versatility. It also strikes a compromise between offering enough choice to the respondent and making things manageable (Johns, 2010). Johns (2010) also noted that research confirms that surveys with answers less than five or above seven become significantly less accurate. Therefore, these three questionnaires, the demographic, Big five-factor inventory and Utrecht work and well-being scale, will be conducted considering these recommendations.

A quiz will be included in each training seminar at the end of the training, and participants will be told about this quiz before the start of the training. The idea behind telling the participants about the examination and giving the quiz is to ensure participants are actively working to retain and learn the information and skills taught in the training seminars. The participants will then be given a training evaluation survey to note their feelings about the training instruction and method. As Huda, Khan and Karim (2012) stated, training is a performance development process to learn new techniques and strategies to perform their job efficiently and effectively. They noted that effective training programs also help the employees concentrate on their individual career development, which ultimately assists in achieving organizational short and long-term objectives. In addition, if this training is effectively set up and conducted, it is shown to help sustain profitability and be an excellent investment. Huda, Khan & Karim (2012) encourage the use of the training evaluation survey to help validate the effect of the programs.

After all the training, the participants will do another Utrecht work well-being questionnaire. The aim and reason for conducting a second Utrecht work and well-being questionnaire are to report any changes in engagement that may have been gained from the training. This research instrument, along with the training evaluation form, open-ended questions, observations and unstructured interviews, will provide feedback from the participants on the training structure, delivery and preference for each type of training. The results will then help verify if the participant's personality style based on the Big Five-factor inventory questionnaire aligns with their preferences.

3.8 Data Collection Procedures

Data collected in social science is done in several different ways. For example, in a quantitative research method, data is typically collected in one of two ways. First are

through experiments or quasi-experiments, which are used because they usually involve a research design that allows strong but casual inferences. The second method is through surveys using a structured questionnaire which is an excellent tool as it typically consists of collecting data on a large number of variables from a large and representative sample of participants (Hox & Boeijs, 2005). These techniques use either primary data, original data collected for the research, or secondary data, collected from past research (Hox & Boeijs, 2005).

In a qualitative research method, structured and semi-structured interviews are the most frequently used tools (Harris & Brown, 2010). Qualitative research seeks to understand how people experience different events, places, and processes. Interviews can be used to explain and interpret quantitative research results and provide exploratory data that are later developed by quantitative research (Curran, Lochrie & Gorman, 2014). As McGuirk and O'Neill (2016) describe, open-ended questionnaires are another qualitative tool used in human geography. They can provide insights into social trends, processes, values, attitudes, and interpretations. These open-ended questionnaires are a more practical research tool as they can be cost-effective, such as online distributed surveys, reducing paper costs and waste.

In mixed-method research, combinations of the tools used in qualitative and quantitative methods are used. In social science research, no single data collection method is ideal because each method has strengths and weaknesses. Combining quantitative and qualitative approaches in research design and data collection should be considered whenever possible because it improves the validity and reliability of the resulting data (Abowitz & Toole, 2010).

Harris and Brown (2010) mention that questionnaires and interviews have differing and possibly complementary strengths and weaknesses. This study uses

structured surveys, an end-of-course quiz, open-ended questions, unstructured interviews and observations for the primary data, and an in-depth literature review for secondary data. The participants are given the Big-five factor personality inventory, demographic and Utrecht work and well-being survey before training. After the three training sessions, the participant will be given a training evaluation survey to fill out. Then once the three training seminars are complete, the participants will be given the Utrecht work and well-being survey a second time to fill out. Staff included in this study will be a mix of work levels from general labour to senior management. Their team and employee numbers will be used rather than their names to keep the participants' names confidential. In this research paper, the participants will be referred to as participants 1, 2, 3, etc., and neither their names nor employee numbers will be shown.

In most cases, the data will be displayed in overall group findings rather than as one specific participant. In addition, for the open-ended questions, the particular participants will not be shown, which will all aid in maintaining high confidentiality. Also, in line with these steps to keep confidentiality, the same attention will be taken to changing industry or company-specific terms, which, if not changed, could help identify a specific company.

Before commencing the full-scale research study, four members of the Foodservice Distribution business will complete a pilot study, which will not be a part of the full-scale research. Pilot studies are a crucial element of a good study design, but conducting a pilot study does not guarantee success in the main study; it does, though, increase the likelihood of success (Teijlingen & Hundley, 2001). The pilot group will receive the same questionnaires as the full-scale study participants. Still, they will only do one of the three training seminars, either the introductory or Intermediate excel course taught through e-learning. This group, similar to the primary study group, will all be volunteers, fill out a

volunteer form, and the same attention to confidentiality used in the primary study group will be used in this group

One of the primary advantages of conducting a pilot study is that it can provide information about where the research project could fail. For example, it can show what potential research protocols areas not being followed. As stated by Teijlingen and Hundley (2001), if the selected research methods and instruments are inappropriate or too complicated to effectively and accurately run and display the data, which can be shown through overfitting and underfitting the data to a model, thus providing unreliable information. But some limitations must be considered, and work must be done to limit them. These limitations are that a pilot study does not guarantee success in full-scale research. For example, suppose the pilot study data is included in the main full-scale study. In that case, it can contaminate the data results, another example is when the pilot study participants are included in the full-scale study, but new data is collected from them (Teijlingen & Hundley, 2001). Therefore, to help reduce potential limitations, the data collected and participants will not be included in the full-scale study. The primary purpose of the pilot study in this research will be to test the surveys, data collection procedure and statistical model intended to be used and make corrections or changes as needed to gain the best insights for the study.

Microsoft forms are used to structure the questionnaires and quizzes, which is one of the tools available in Microsoft 365 productivity software. This is used to help ensure the ease of use for the participants, help ensure the questionnaires are fully completed, and help with the initial data structuring before cleaning and analysis. Also, in the Foodservice Distribution business, the training for the integrative and lecture-based methods will be done using power point and Microsoft teams to allow the training to be conducted in a way that allows remote worker participation. This will also help reduce the potential of

overcrowding in one office and aid the facilitators in conducting the training in a more manageable fashion. First, the data collected from these questionnaires will be entered into Microsoft Excel, and then the quantitative data will be analyzed with Cronbach's Alpha. Cronbach Alpha is among the most commonly reported reliability estimates in the language testing literature (Ercan, Yazici, Sigirli, Ediz & Kan, 2007).

Furthermore, according to Ercan et al. (2007), a benefit of the Cronbach Alpha was that the sample size didn't make any significant differences. As stated in the research by Gliem and Gliem (2003), Cronbach's Alpha reliability coefficient typically ranges between 0 and 1. The closer Cronbach's alpha coefficient is to 1.0, the greater the internal consistency of the items in the scale, and they stated that a value of 0.70 or more was the minimum acceptable range. While Maghnati, Ling and Nasermodeli (2012) used the recommendation from Hair et al. (2003), who are highly regarded and stated a value of more than 0.60 as the minimum acceptable value. Therefore, taking into account both researcher's general recommendations, the following will be used in this study:

(α) >0.9 – Excellent

(α) >0.8 – Very Good

(α) >0.7 – Good

(α) >0.6 – Acceptable

(α) >0.5 – Poor

(α) <0.5 -- Unacceptable

These two tools, in combination, will measure the data's internal consistency and reliability and aim to answer the research questions.

The qualitative data gathered from open-ended questionnaires will be organized in Excel first. Then separation will be made based on what training the participants liked the most and least, and then using the quantitative data to visualize any similarities and links

to their specific personalities. After those connections are established, the long answer responses, observations and unstructured interviews will be used to help validate these findings and give personal insight, which can't be shown using only quantitative data. Following this, a similar method will be used for the last open-ended question, asking if the participants feel more willing to engage in training if it was delivered in their preferred training methods. All this qualitative data aims to help build on and potentially explain the findings from the quantitative data, providing a broader picture.

The data collected from the primary study participant questionnaires will be compared and analyzed to establish any change in engagement due to personality preference toward a specific training method. The quizzes, open-ended questions, observations and unstructured interviews will also aid in understanding the participant's feedback and help validate the quantitative data gathered. While simultaneously monitoring material retention and any potential feedback given during or after the training that may be pertinent to the study results. Then, based on those findings, answer if those personality preferences towards a specific training style increase employee engagement.

3.9 Data Analysis

Data analysis is one of the most critical aspects of doing adequate research. Without proper data analysis, the study will be unable to answer the research questions and therefore result in the research not being valid or justifiable.

As most of this research paper will use quantitative research data, this dissertation will follow the steps and procedures laid out by Leahey (2008) and Williman (2010). The four main steps involved in data analysis in quantitative research are editing, coding, data entry, and cleaning of the data (Leahey, 2008). In editing, the data is checked for completeness and is readable and error-free. Data coding is the process of assigning

numbers to all possible responses. The information is then entered into a statistical computer program such as Microsoft Excel, which is used in this research paper. The final step followed is cleaning the data. According to Leahey (2008), cleaning the data ensures no errors could have happened during data entry. Then finally, the data is run through Cronbach Alpha to validate the internal consistence of the questionnaire data. Then, the information is presented in a fashion that is easily readable through visual representations.

The data will aim to answer the research questions by structuring the data analysis around the data collected from the self-administered close-ended questions found in the five questionnaires containing the quantitative data. Finally, the open-ended questions from a questionnaire, informal interviews and observations will be used to gain a better insight into the participants and help validate the findings from the quantitative data. Then a descriptive analysis and a two-way analysis of variance (ANOVA) will be done to verify the effect personality has on training preference and what effect training has on engagement. This data will then be run through a statistical analysis model using inferential and descriptive statistics. The best way to address the inherent limitations of any singular methodological approach or individual measure is to utilize a mixed methods research design (Abowitz & Toole, 2010).

This research will be structured around the participants' personality and behaviour, which will be gathered from the Big Five Factor personality questionnaire—using all five personality types but focusing on openness to experience, conscientiousness and extraversion, which follows the findings from Shantha (2019). Shantha (2019) found Openness to experience is positively linked to training intention, action planning, and training initiation, whereas conscientiousness is tied to retention.

Multiple methods will be used to gain the best analysis: Analysis of variance, Descriptive, and Pearson correlation coefficient. The correlation coefficient measures a

linear correlation, which is the relationship between variables and is an inferential statistic. Sedgwick (2012) described that the Pearson correlation coefficient measures the strength of linear association between two variables and can take a value from -1 through 0 to $+1$. Where -1 would be a negative association, $+1$ a positive association and 0 would be no association, the correlation coefficient is written as a small (r). Hemphill (2003) stated that most guidelines presented that use correlation coefficients are unrealistically large and inappropriate in behavioural sciences. Hemphill (2003) found that the most widely known guidelines or “operational definitions” that are more realistic for interpreting the magnitude of correlation coefficients typically found in the behavioural sciences were in the 1988 research by Cohen. The guidelines that this research will follow, as presented by Hemphill (2003), are as follows:

(r) = 0.10 to 0.25 (+or-) - Small correlation

(r) = 0.26 to 0.45 (+or-) - Medium correlation

(r) = 0.46 (+or-) - Large correlation

Also stated by Sedgwick (2012), the correlation coefficient can also be used for Hypothesis testing. For example, a null hypothesis would be that the correlation coefficient from which the sample was taken is zero. In comparison, the alternative hypothesis would be the correlation coefficient is not equal to zero and may show a positive or negative association.

In a two-way analysis of variance (ANOVA), another inferential statistic, the variables will be the findings from the Utrecht Work engagement questionnaire done before and after the structured training. In addition, a descriptive analysis will be done with the training quiz results and the demographic questionnaires, which will break down the results based on gender, education, age, ethnicity and relationship status to verify and describe any links between these groups.

According to Kaufmann and Schering (2007), analysis of variance is a statistical tool commonly used in statistical techniques used in various fields and experiments, including psychology and social science. Analysis of variance allows the ability to perform hypothesis tests to determine which factors being analyzed influence the outcome.

Data for this research is analyzed using inferential and descriptive statistics. Williman (2010) stated two statistical analysis classes used in quantitative research are descriptive and inferential. Descriptive tests show the data in the sense of how the values of a variable are distributed specifically to individual groups. At the same time, Walliman (2010) described that inferential tests suggest results from a sample concerning a population. The ability to generalize this to the total population will be gained using the same training methods on two separate businesses within two distinctly different industries and conducting inferential statistics.

To verify whether a significant positive change in engagement level is shown based on personality preference towards a specific training style, a statistical model showing the possible outcomes of a particular event will be conducted. The probability value (P-value) will be used to reject the null hypothesis. For example, a P-value greater than 0.05 will be seen to establish if the null hypothesis is correct. Otherwise, it will be rejected if the P-value is less than 0.05. P-values in scientific studies are used to determine whether a null hypothesis formulated before the performance of the study is to be accepted or rejected. In exploratory analyses, P-values enable the recognition of statistically noteworthy findings (Prel, Hommel, Rohrig & Blettner, 2009). A similar definition can be found in Wikipedia, which paraphrased states the P-value is the probability of obtaining results less than the results observed, assuming the null hypothesis is correct.

There is currently a lot of debate over P-value significance and whether it should be lower than the typical 0.05. Still, this research and the fact that these debates have not resulted in scientific evidence against the standard 0.05 P-Value, which will be used in this study.

This statistical analysis will use the participant's personality as the independent variable, engagement level as the dependent variable, and the results from the training evaluation as a dependent variable. First, as described early, the quiz results and demographic findings will be analyzed using descriptive analysis. At the start of the research, the Utrecht work engagement scale results and personality inventory will be used as the starting point. Then, another will be done using the engagement level received after the completed training and plotted to show any increase in engagement. For example, if the mean of the participant results is greater than 5% or if there is an increase shown through the correlation coefficient. In that case, this will show the significance and reject the null hypothesis that training based on personality preference shows no significant positive results.

According to Frick (1996), null hypothesis testing is used in most experiments. In the experiment, a null hypothesis is constructed, and then the P-value is calculated, which is the probability of achieving the outcome. If the P-value is less than a set criterion which in almost all cases is 0.05, the experimenter rejects the null hypothesis and states that there is significance.

Finally, the survey results from the final engagement survey, training evaluation survey, and personality will be analyzed using descriptive analysis and two-way analysis of variance (ANOVA). The dependent variables will be participant engagement and training evaluation results. The independent variables will be the participants' openness to experience, extraversion, conscientiousness, agreeableness, and neuroticism gathered from

the Big five-factor personality questionnaire. The result will aim to show if any significant positive results indicate that personality plays a significant role in training preference.

The open-ended questions, unstructured interviews and observations in this study will be used to collect qualitative data, providing a broader understanding of the study findings. As Bachiochi and Weiner (2004) described, qualitative and quantitative approaches can complement each other and give researchers opportunities not otherwise possible, to strengthen their conclusions and help confirm their study's theory or hypothesis. Qualitative data also provides excellent in-depth knowledge of the studied participants, but qualitative research is limited in generalizability (Bachiochi & Weiner, 2004). This is precisely why, in the case of this study, a mixed method is being used.

In order to analyze the findings gathered from the open-ended questionnaires and unstructured interviews, the results and responses will be entered into tables in Excel, allowing the ability to see the connections between preferences visually and then link those to the participant's specific personality, which was gathered from the big-five personality questionnaire previously. Then with the long-form answers and conclusions on why participants like or dislike a particular training style. Lastly, the final open-ended question on the questionnaire will be analyzed following a similar method. The findings from the quantitative data gathered with direct participant feedback will help strengthen the conclusions and gain a broader understanding, as Bachiochi and Weiner found in their 2004 study.

All this data, including the participant's open-ended questions, observations and unstructured interview feedback, will then be used to answer the research questions. The research questions will be answered by describing the results in detail and graphically representing them. While at the same time, by describing the results in detail, how those

results were obtained, and graphically representing them, other researchers can do the same study or, better yet, add to the research through further research.

CHAPTER IV:

RESULTS

4.1 Introduction

This chapter contains the significant findings of this research, which consist of three sections: the pilot study describing the participants, results, and participant feedback. In addition, what constraints were found and how those were repaired to ensure the research was ready for the primary study group. This chapter will also consist of and, most importantly, have an in-depth description of the primary research study, including descriptive and inferential statistics from the participant data, which was gathered using four questionnaires and end the training knowledge test, long answer questionnaires, unstructured interviews and observations.

In the previous chapter, a complete methodology breakdown was done, including the research design, data collection instruments, research purpose, validation procedures, and the importance of this research.

In this current chapter, the research data will show an in-depth discussion and critical evaluation of the research findings, their significance, and their purpose. This chapter will be broken down into four separate stages. The first stage will be the details and finding from the Pilot study group, and this will then be followed by the participant findings from the Foodservice Distribution group, then by the Emergency Service group, and finally, the Foodservice Distribution and Emergency Service groups will be grouped together to give the overall participant findings for the study which will provide all the details required to answer the research questions.

As part of this research study, an extensive literature review was used to assist and support this research's findings regarding engagement, training and employee

performance. This study then aims to add new data and discoveries about the effect training preference takes on retaining information, training initiation and employee engagement and finally answer the research questions and accomplish the sub-objectives. This research will then bridge the gap using this new information and data backed by the extensive current literature on engagement, training, performance and personality. Therefore, this chapter provides the significance of the study through the data analysis and results. While also showing and explaining the known limitations, making suggestions for improvements, and explaining what directions other future research should take.

4.2 Pilot Study Group

Following the recommendations of Lackey et al. (1997), the research study should include a small pilot study conducted to search for defects in the methodology. In this pilot study, all the main components, such as instruments, directions, and data recording forms, should be included, including the participants guaranteed confidentiality and anonymity. Participants should come from the same population as the primary study but not be included in the main study. The size varies and depends on the size of the significant research and the time available to do the pilot study.

By conducting a pilot study, defects can be found without investing much time or money in finding and trying to remedy them, which will likely be the case on a much larger scale in the main study. But because a pilot study is much smaller than the main study, it will probably not reveal all defects. Also, because participants in the pilot study shouldn't be included in the main study, this may deplete the potential population for significant research. Still, knowing these drawbacks, it is recommended to do a pilot study if the researcher is not experienced in the instruments and methodology being used with a

specific population. In contrast, if the researcher is experienced, then a pilot study may not be required (Lackey et al., 1997).

The population of this pilot study was to be four volunteer participants taken from a medium size Foodservice Distribution company. Unfortunately, one of the selected participants had to pull out of the pilot study due to time constraints, so the pilot study was conducted on three members. The participants were mid to senior-level managers from different departments within the same company. They were asked if they would like to participate and then filled in the volunteer and confidentiality agreement form. Afterward, the participants were given the same tools and questionnaires as the primary study. First, the pilot study participants were given the Big-five personality inventory questionnaire, the Utrecht work and well-being questionnaire, and a demographic survey. Once those were complete, the participants took an e-learning course in excel. They chose whether they wanted to do the intermediate or beginner class. At the end of the course, they filled in the Utrecht Work and well-being questionnaire and course evaluation and did a small skills test, all of which are the same tools and procedures the main study will follow.

4.3 Findings From the Pilot Study

The pilot study group consisted of three volunteers from different departments, educational backgrounds and a mix of ethnicity and age groups. All members had post-secondary education; one had two years of college, another with a bachelor's degree, and the third had a master's degree. All three were either married or in a common-law relationship. All three were males, one Caucasian in the 25 to 34 age group, one Caucasian in the 55 to 64 age group and the final one Asian also in the 55 to 64 age group. Below is table one, which shows the demographic breakdown of all three members that participated in the pilot study.

Table 1*Demographic of Pilot Study Group*

| Participants | Gender | Age | Ethnicity | Education | Relationship Status |
|---------------|--------|----------|-----------|-------------------------|---------------------|
| Participant 1 | Male | 55 to 64 | White | Graduate degree | Married |
| Participant 2 | Male | 55 to 64 | Asian | Undergraduate degree | Married |
| Participant 3 | Male | 25 to 34 | White | 1 or 2 years of college | Common-law |

In the past year, participant one did training or learning one to two times independently and found the excel training somewhat beneficial to their job. This result was unexpected since this mid-level manager frequently uses computer software such as excel. They felt they had gained a little more new information, but this participant also didn't like group training or e-learning. But instead, they preferred traditional lecture-based learning. Participant two, in comparison, had trained two to three times per year on their own. This participant enjoys e-learning and group learning, felt the training was excellent and learned a lot. This participant's preferred training method is collaborative, and finally, participant three did the most training on their own, more than five times per year. They enjoy group and e-learning, found the training somewhat relevant, and learned a little from the course. The participant preferred training in an e-learning method when comparing their preference towards e-learning, lecture-based or collaborative method. Below is table two, which shows the training evaluation breakdown of all three members that participated in the pilot study.

Table 2*Training Evaluation of Pilot Study Group*

| Participant | Training Frequency | Satisfaction with Training | Relevant to you | Training as Expected |
|---------------|--------------------|----------------------------|-----------------|----------------------|
| Participant 1 | 1 to 2 | Somewhat | Somewhat | No |
| Participant 2 | 2 to 3 | Extremely | Extremely | Yes |
| Participant 3 | More then five | Somewhat | Somewhat | Yes |

| Participant | Enjoy E-Learning | Learn New Information | Clear Presentation | Preferred Style |
|---------------|------------------|-----------------------|--------------------|-----------------|
| Participant 1 | No | Moderate | Very | Traditional |
| Participant 2 | Yes | A lot | Extremely | Collaborative |
| Participant 3 | Yes | A Little | Very | E-learning |

All three of these pilot study participants have extensive computer and excel training, so, unsurprisingly, all received 100% in the excel training course quiz. In addition, the two in the 55 to 64 age group received high numbers in the work and well-being survey showing high Vigor, Dedication and Absorption scores. In comparison, the 25 to 34 age group members showed slightly lower scores in absorption and dedication but a similar score to the other two in vigor. These results can be seen in table three.

Overall, the work and well-being survey scores appeared to be pretty high for all three pilot study participants. These three members are all mid to senior-level managers engaged heavily in company decisions and have a lot of say in the company's direction, which has been outlined in other studies as one determining factor of increased employee engagement. This was also shown in the study conducted by Baran and Sypniewska

(2020), which showed that the less impact or decisions an employee felt they had on a company, the less engaged they tended to be.

Table 3

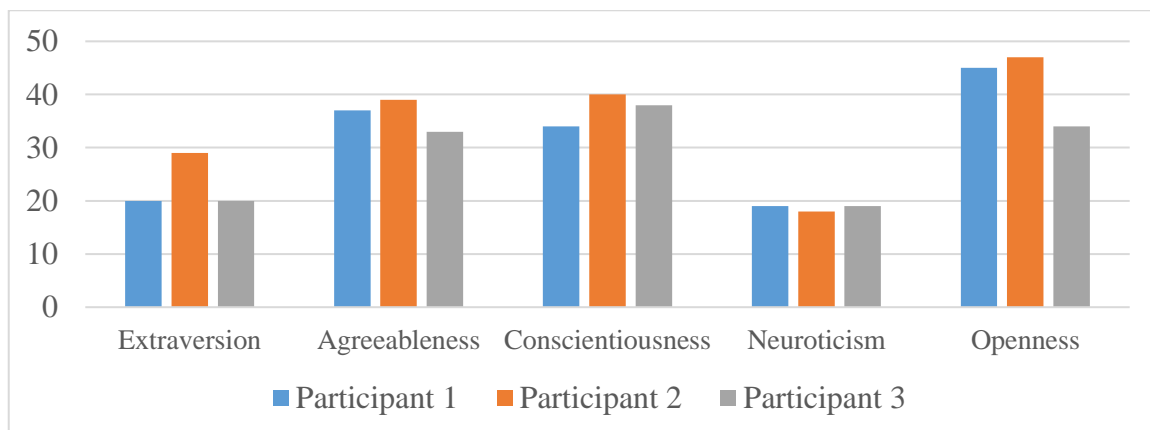
Work and Well-being of Pilot Study Group

| Participants | Vigor | Dedication | Absorption |
|---------------|-------|------------|------------|
| Participant 1 | 22 | 22 | 20 |
| Participant 2 | 27 | 23 | 29 |
| Participant 3 | 22 | 14 | 16 |

The three pilot study members' Big five-factor personality questionnaire results were all close together. However, one volunteer in the 25 to 34 age group was lower than the other two in openness to experience and agreeableness. In contrast, one of the 55 to 64 age group members was higher than the others in extraversion, conscientiousness and openness to experience. Below is figure one, which shows the personality breakdown of all three members that participated in the study.

Figure 1

Big Five-Factor Personality Inventory



In looking at the training evaluations, demographic and personality characteristics, some observations can be made, although not precise, because of the minimal participants.

Other researchers have confirmed and described some of these observations in detail, which helps with understanding and coming to these conclusions. One of those is that participants high in extraversion tend to enjoy group activities and collaborating with others. This is shown in several studies, including Moyle and Hackston's (2018) study. This is also shown in the case of participant two, who is higher than participants one and three in extraversion and stated they liked group training and preferred collaborative training. In addition, this same participant was shown to have high openness to experience, agreeableness and lower neuroticism. These personality characteristics may lead to more eager participation and enjoyment of training, which is in line with contributions brought through the studies by Toschi, Riccelli, Indovina, Terracciano and Passamonti (2017) and may be why, in this case, the member scored the training as extremely relevant and enjoyed the training.

In the case of participant two, they were lower in extraversion but high in openness to experience. This participant stated they don't like group training but rather prefer lecture-based. Still, they also said they don't like e-learning which, based on the age range of 55 to 64, could be why they may not be as into digital technology as a younger person who grew up with it and would prefer to learn instead through other methods. A similar finding on this age group can be seen in a study conducted by Mitzner, Boron, Fausset and Adams (2010), which outlined a US census showing that only about 56% of 55 to 64-year-olds reported using digital technology. This participant was also a bit higher in neuroticism which can be summarized as being higher in negativity. So that, combined with the member not preferring e-learning, could be why this participant found the training to be only somewhat relevant and beneficial, stating they didn't like the training and it wasn't as expected.

Participant three is the youngest and has trained the most frequently in the past year. Similar to participant one, they were also a bit higher in neuroticism, which could be why they felt the training was only somewhat helpful. This participant was lower on extraversion and openness, but unlike the participant one, they enjoyed group learning and were often involved in training independently. As well, potentially similar to participant one, this member's age may impact why they preferred e-learning as this participant was in the 25 to 34 age group, which grew up with digital technology. This data and insight are interesting and do build some conclusions. Still, it could be random as the data set is tiny, but it gives a small foundation to build on and investigate when doing the primary study.

With that being said, the primary purpose of the pilot study was to find any potential errors in the tools being used and gain feedback on how the participants in the pilot study found the process so that corrections could be made before the primary research. The pilot study was successful as the members pointed out some minor details they noticed in the surveys, such as corrections and descriptions on the surveys, as well as feedback on items which could help the member ease of use. This process included identifying missing questions on the Big five-factor personality survey and that the length of excel training ran a bit too long, all of which was corrected.

4.4 Summary

Although this pilot study group was tiny, the benefits from the group were very helpful in cleaning up the tools before the primary study group received them, receiving great feedback on the length of the training session, and good feedback on the delivery method used. The feedback on the length was significant to ensure members could finish the training and limit time away from their daily job. All the pilot study group feedback was taken, and changes were made. The pilot study also was beneficial in managing the

participant's data and strategizing how to best deal with this, which would have been much more difficult for the primary study group with significantly more data points. So, in conclusion, the pilot study group was very beneficial in the same ways mentioned in the research by Lackey et al. (1997).

The pilot study for this research was very beneficial. However, it had limitations due to its size, such as being unable to test the descriptive and inferential statistics models effectively. Therefore, a suggestion to other researchers is to work to have a minimum of eight pilot study participants. This number would allow you to test statistical analysis models more effectively, but only if this doesn't impact the primary study group by reducing potential participants, as mentioned in work by Lackey et al. (1997). Therefore following Lackey et al. (1997) recommendation, it was more beneficial to keep available members in the primary study group instead of pulling them over to the pilot group.

4.5 Foodservice Distribution Group

The total Foodservice Distribution population was 108 members. After removing those who were unavailable, those for English was not their primary language or those that didn't have at least moderate computer skills, and the population dropped to 48 members. When running the population calculation using 90% confidence, a 5% margin of error and a 10% buffer, the total was 47. So, instead of running a lottery and only reaching out to 47 members, the total remaining 48 were reached out to see who was interested in volunteering to participate in the research study. Eighteen members reached back with interest which was 38% of the population. After the first training session, four more members dropped out of the study due to time constraints, bringing the population down to fourteen members, which is 29% of the total original available population. Then two more

members dropped out after the first training session dropping the research participant sample size to twelve, 25% of the total population.

As described in the methodology section, the study used a mixed-method approach. Participant members were electronically given the demographic, Big-Five factor and Utrecht Work and well-being questionnaires. The first training was the lecture-based traceability course, where the participants completed a course evaluation and end-of-course quiz. During this training, observations were noted, and at its completion, informal interviews were conducted. Next, the members were given the e-learning course in which the topic was Microsoft Excel and received a course evaluation and an end-of-course examination. Finally, the last course the participants took was the Collaborative/Integrative training on food safety, followed by a course evaluation and end-of-course quiz. Like the lecture-based course, participant observations were noted during the training, and informal interviews were conducted afterward. A week later, these questionnaires and tests were followed by another Utrecht Work and well-being questionnaire and a long-answer training preference questionnaire. Also, as mentioned, unstructured questions, observations, and unstructured and informal meetings were conducted during and between each course. The total time from start to finish for the participant's involvement in the study was four weeks, with one week between each of the three courses and one week between the last course and the final questionnaires.

4.6 Findings From Foodservice Distribution Group

The participants from the Foodservice Distribution group had a mix of educational backgrounds. The breakdown of each participant starting with participant one was a female between the ages of eighteen to twenty-four, was caucasian, had graduated from high school and was single. Participant two was a married caucasian male between forty-

five to fifty-four and had completed two years of college. Participant three was an Asian female in a relationship with a graduate degree between the ages of twenty-five and thirty-four. Participant four was a single caucasian male between the ages of eighteen and twenty-four and had completed two years of college. Participant five was a married Asian male who had an undergraduate degree and was between the ages of fifty-five to sixty-four. Another participant was a Hispanic married male with an undergraduate degree between thirty-five and forty-four. Participant seven was a middle eastern female between the ages of fifty-five and sixty-four with a graduate degree and was married. The next participant was an Asian female who was common-law, had completed two years of college and was between the ages of twenty-five to thirty-four. The next volunteer was a married caucasian male. This participant was between the ages of forty-five and fifty-four and had completed some college. Volunteer ten was a middle eastern married male with a high school diploma between thirty-five and forty-four. While participant eleven was a married Caucasian male between the ages of forty-five and fifty-four and had an undergraduate degree. The last participant was a married caucasian male between the ages of thirty-five to forty-four and had completed one or two years of college.

The participants as a group consisted of four females and eight males, with two participants between 18 to 24, two between 25 to 34, three between 35 to 44, three between 45 to 54 and two between 55 to 64. Of those participants, eight were married, two were single, and two were in a relationship or common law. The ethnicity breakdown of the participants was as follows; two middle eastern, one Hispanic or Latino, three Asian and six Caucasian. Below are the participant education level graph, age group graph, demographic graph, relationship status graph and participant ethnicity graph, which show the breakdown of all twelve members that participated in the study.

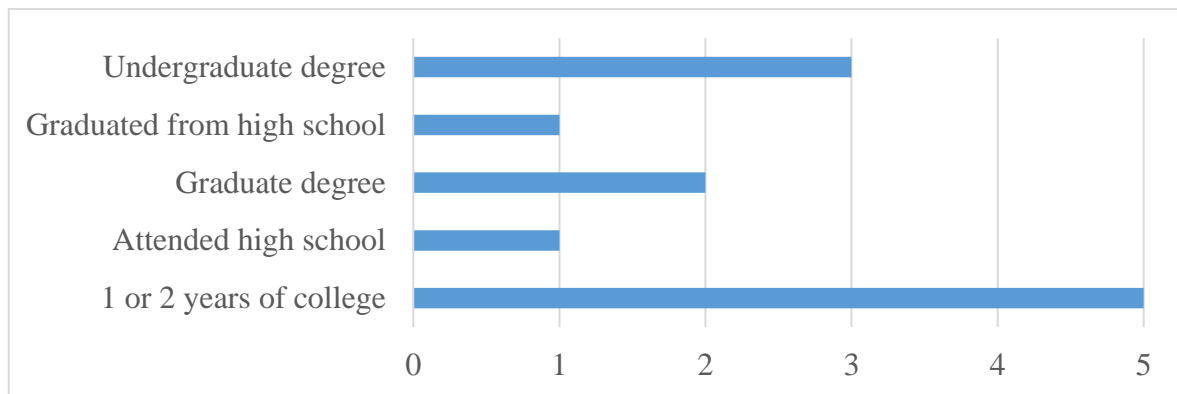
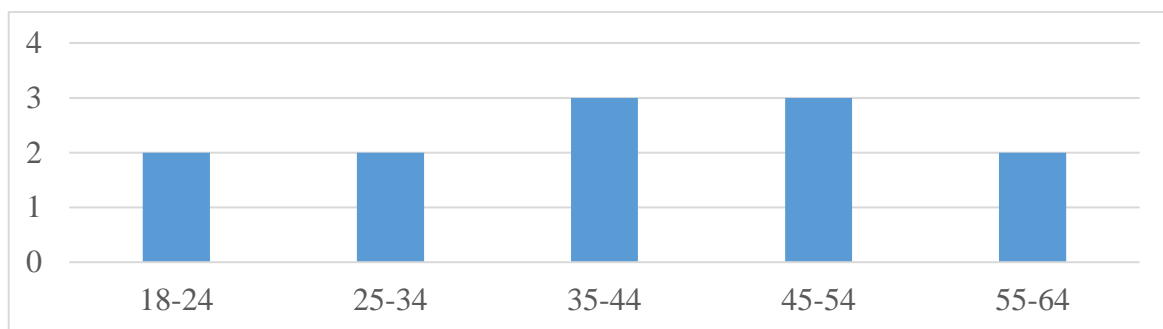
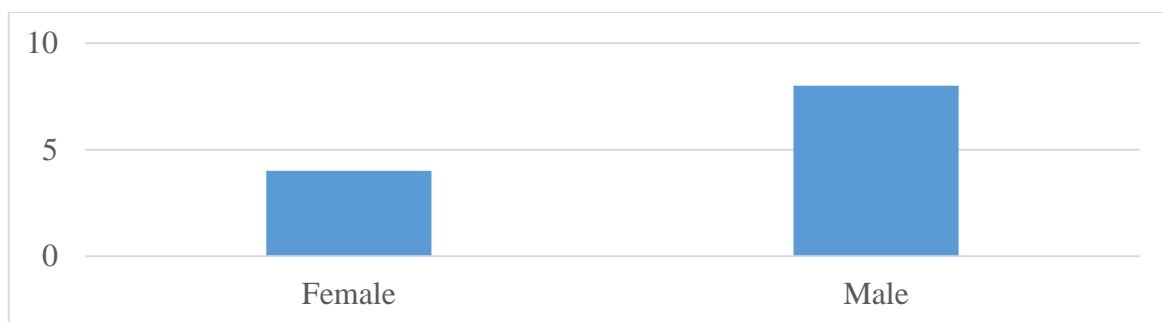
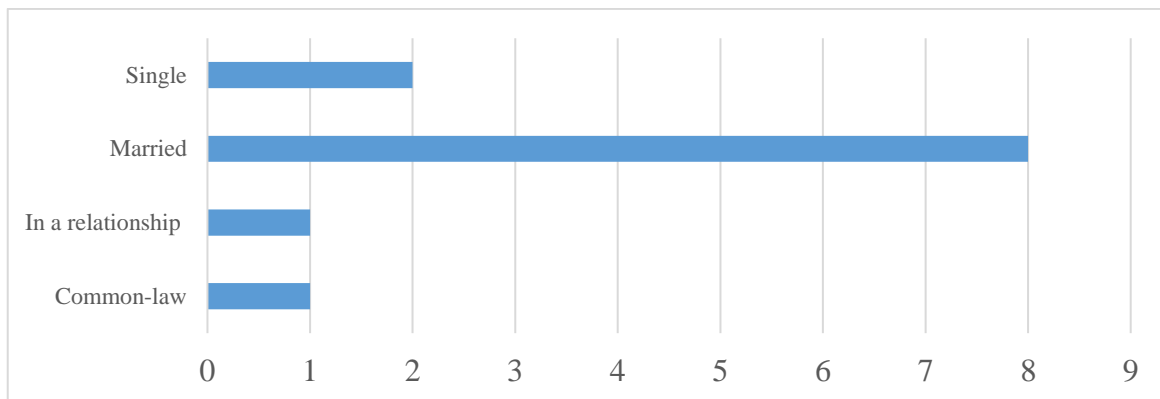
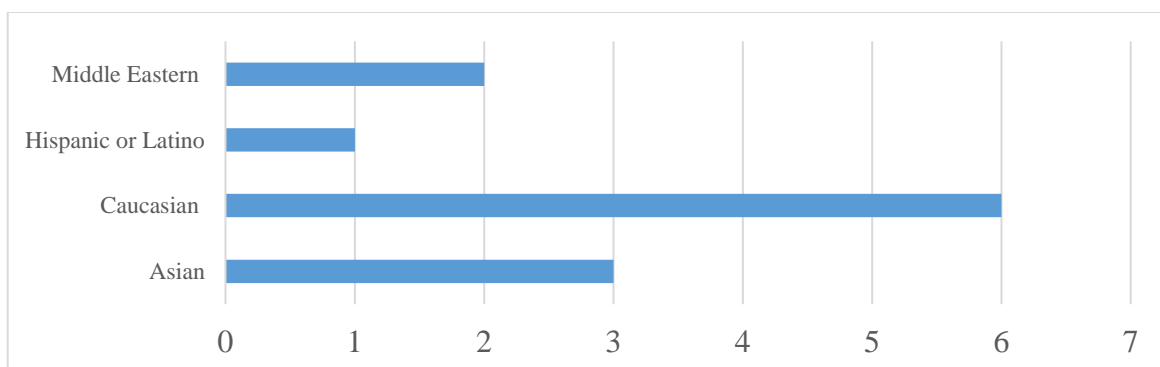
Figure 2*Education Level***Figure 3***Participants Age Groups***Figure 4***Participants Gender Count*

Figure 5*Participants Relationship Status***Figure 6***Participants Ethnicity*

All twelve of these study participants have moderate to extensive computer skills, and all have at least used Excel, so they had a good understanding of the program before the training; they also all had a basic knowledge of traceability and food safety.

Unsurprisingly, the participants did reasonably well on the three end-of-course knowledge tests. Breaking down the results from each course by participant shows that participant one got 100% on the traceability course while receiving an 82% on the food safety quiz and a score of 75% on the excel course. Participant two received a 78% on traceability, 82% on food safety and 100% on the excel course. While volunteer member three scored 78% on traceability, 73% on food safety and 100% on the excel course. The marks for participant four were 100% on traceability, 82% on food safety and 75% on the excel training course.

The results for participant five were 100% on the collaborative training, 73% in the lecture-based and 100% in the e-learning delivered course. Participant six received a 100% on the collaborative, 82% on the lecture-based and 88% on the e-learning course.

In comparison, participant seven got a 100% mark on traceability, 82% on food safety and 50% on e-learning. The eighth volunteer received 89% on the collaborative delivered training, 55% on the lecture-based training and 67% on the excel training.

Finally, looking at the marks for the last four volunteers, we see participant nine received 100% on the collaborative, 82% on the lecture-based and 100% on the e-learning programs. Participant ten received 78% on the traceability course, 55% on the food safety, 75% on the excel training course, 89% on the collaborative, 82% on the lecture-based and 75% on the e-learning. Finally, the last participant received a 78% on traceability, 100% on food safety and another 100% on the e-learning courses.

The average for all the results was pretty close to each other, which can be seen through the descriptive statistics that were conducted. In the food safety course, which was lecture-based, the participant frequency distribution is broken down with the median being 0.82, mode of 0.82 and mean of 0.775. The maximum participant result was 100%, the minimum % was 55%, and the standard deviation was 0.124. They showed an overall very close effect among the participants. The frequency distribution for the participant results after the traceability course quiz, which was done through a collaborative method, showed a median of 0.945, a mode of 1.0 and a mean of 0.908. At the same time, the maximum participant score was 100%, the minimum was 78%, and the standard deviation was 0.103. Again, very similar results overall.

When comparing the collaborative course and lecture-based course, the overall marks were higher in the lecture-based as well the swing between the lowest and highest marks was the biggest in the collaborative course. At the same time, the e-learning excel

course test frequency distribution was a median of 0.855, mode 1.0 and a mean of 0.838.

The highest test result for this course was again 100%, while the minimum was 50%, and the standard deviation was 0.172. This course showed the most prominent swing between

the highest and lowest marks and the highest standard deviation among all three classes.

The results of each quiz were graphically represented and shown below in figures seven, eight and nine.

Figure 7

Participant's Food Safety Quiz (Collaborative Method)

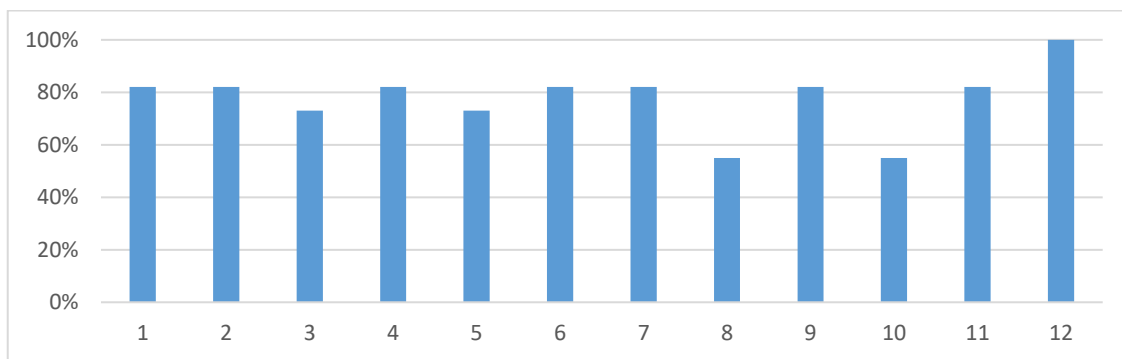


Figure 8

Participant's Traceability Quiz (Lecture Based)

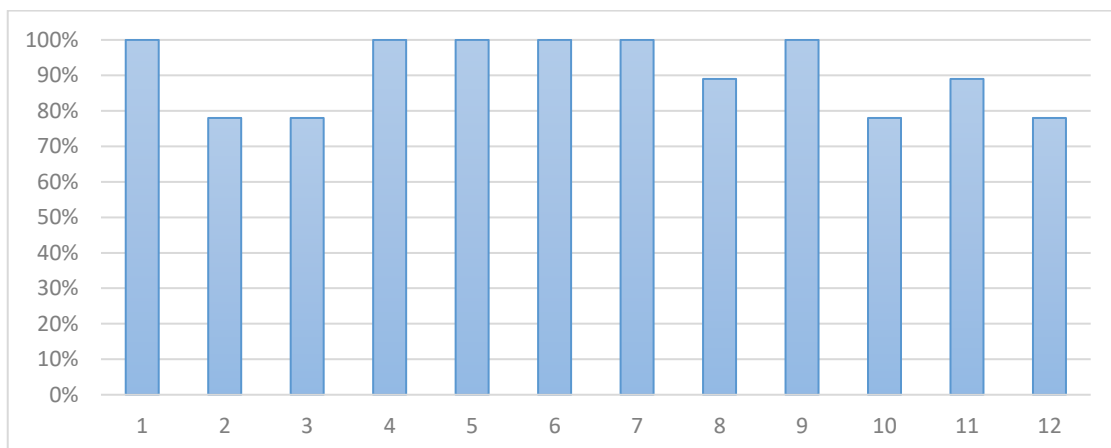
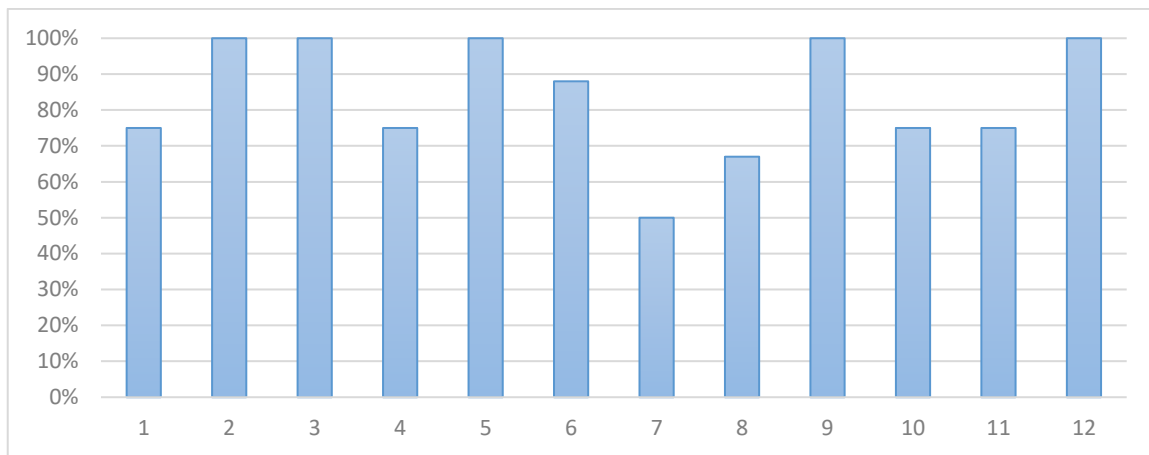


Figure 9*Participant's Excel Quiz (E-Learning)*

On average, the volunteer participant results from the Big five-factor personality questionnaire across all five personality traits deviated only by 5.103. Hence, the expected outcome of having some members low on specific characteristics while being high on others was expected. Still, overall they were all around the middle of the five traits, and to get this midpoint is simply adding up the total possible points for each attribute and then dividing in half. This point system is possible because the questionnaires are based on the five-point Likert system, which is categorized by the extent to which you agree with the statement and is broken down as 1– Disagree Strongly, 2-Disagree a little, 3- Neither agree nor disagree, 4-Agree a little and 5-Agree strongly. As mentioned earlier in the study report, the Big five-factor personality questionnaire that this study follows was established by John & Srivastava (1999). The midpoint results from this questionnaire put extraversion at roughly 20, agreeableness at 22.5, conscientiousness at 22.5, neuroticism at 20 and openness at 25. The Big Five-factor questionnaire used in this study can be seen in the appendix.

Once the data was gathered from the participants using the Big Five-factor inventory questionnaire, the internal consistency was checked using Cronbach Alpha (α).

The internal consistency was $(\alpha) = 0.73$, which is >0.70 and is considered good, following the general recommendations of Gliem and Gliem (2003).

In describing the results found in the Big Five-factor personality model and comparing that to the group median and the halfway point mark described earlier, we can see that participant one was above the midway point of 20 but below the median of 22 in extraversion. This member was also above the midpoint of 22.5 in agreeableness but below the median of 36. At the middle was 22.5, in conscientiousness which was significantly below the median of 36. As for neuroticism, they were significantly above the midpoint of 20 and the median of 24. Finally, for openness, this participant was above the middle of 25 while just under the median of 33.5. Participant two was significantly above the midpoint of 20 and median of 22 in extraversion, above the median of 36 for agreeableness, and significantly above the middle of 22.5. For conscientiousness, this participant was at the median of 36 and significantly above the midpoint of 22.5. A similar result is an openness, which is above the median of 33.5 and significantly above the middle of 25. At the same time, for neuroticism, this member is significantly below the median of 24 and the midpoint of 20. Participant four received a score of 22 for extraversion, which is equal to the median and above the middle of 20. For agreeableness, they received a score of 36 which is again similar to the median and significantly above the midpoint of 22.5. They scored 41, which is a very high score in conscientiousness and is significantly above the median, 36 and the mean, 22.5. They also received a high score of 34 in openness, slightly above the median of 33.5 and the midpoint of 25.

In contrast, similar to the previous participant, this member scored a 13 on neuroticism, significantly below the median and midpoint. Participant four was higher than the mid-point on all traits but was at or below the median for extraversion, agreeableness, conscientiousness and openness. In contrast, they were above the median of

24 for neuroticism. For participant five, they received a score of 23 for extraversion, 39 for agreeableness, 41 for conscientiousness, 13 for neuroticism and 35 for openness. This member is above the median in all traits except for neuroticism which is below the midpoint and median. Finally, volunteer number six received 25 for extraversion, 26 for agreeableness, 36 for conscientiousness, 22 for neuroticism and 34 for openness. These results are above both the median and midpoint for extraversion, below the median but above the mean in agreeableness and at the median of conscientiousness. For neuroticism, they were below the median but above the midpoint and the middle and median in openness.

Looking at extraversion, agreeableness, conscientiousness, neuroticism and openness for participant seven, we see scores of 22, 33, 38, 22 and 33. The score for participant eight received a very high score in agreeableness of 43 and a score of 22 for extraversion, 33 for conscientiousness, 26 for neuroticism and 29 for openness. Participant nine was above the median and midpoint on all the traits except for neuroticism. The score for extraversion was 32, agreeableness was 39, conscientiousness was 37, neuroticism was 22, and openness was the highest of all the members at 44. When looking at the marks for participant ten, all are above the median and midpoint of all five of the traits. The score for extraversion was 24, and agreeableness was 41, the highest of all members.

Conscientiousness was another high score for this member, where they received a score of 40. The result for neuroticism was 28, again one of the highest, and the member scored 34 for openness. The last two participants in this group received the same score on extraversion of 17. While participant eleven scored 32 on agreeableness, 26 on conscientiousness, 28 on neuroticism and 30 on openness. Participant twelve received 29 on agreeableness, a high score of 35 on conscientiousness, another very high score of 30 on neuroticism and 25 for openness.

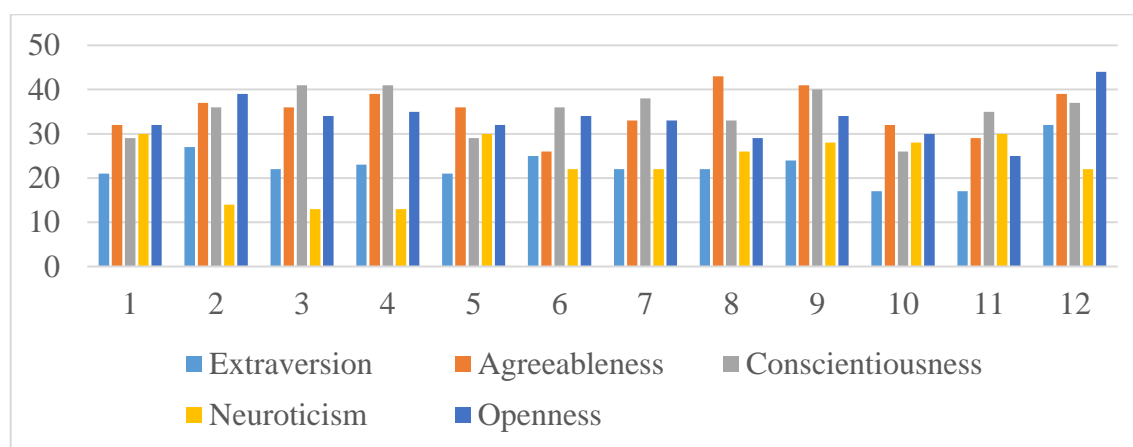
Looking at the graphical representation and descriptive statistics found from the Big Five-factor questionnaire, openness, agreeableness and conscientiousness on average are above the mid-point on all participants in the study, while neuroticism and extraversion on average are just slightly above the midpoint across the twelve participants and neuroticism seems to be slightly higher than extraversion on average. These findings are not all that surprising as most people have a varying blend of the different traits, with some having more robust or weaker attributes associated with these traits. This study will look at all the personality traits within the big-five personality model but will focus on Laguna and Purc's (2016) findings. Laguna and Purc described conscientiousness and openness to experience as significant in training action planning and training motivation, as openness to experience was positively associated with training intention and training action initiation. In contrast, neuroticism, defined by the Britannica (2022) definition as negativity, anxiety, tension and withdrawal, would likely result in reduced participation. Similarly, as Laguna and Purc (2016) illustrated, extraversion is not tied to engagement in training either. However, it would make sense that it be linked to a training method preference such as collaboration which is a more group-involved training method that extraverts prefer.

After conducting descriptive statistics on the member's personality model, it shows the frequency distribution for extraversion as having a median of 22, a mode of 22, and a mean of 22.75, with a standard deviation of 4.09. The agreeableness median was 36, the mode was 32, and the mean was 35.25. The standard deviation for agreeableness was 5.01. For conscientiousness, the median was 36, the mode was 29, and the mean was 35.08, with a standard deviation of 4.94. For the personality trait of neuroticism, the frequency distribution had a median of 24, a mode of 30, and a mean of 23.16, while the standard deviation was 6.67. The standard deviation for neuroticism had the most significant

variation between all five traits. Finally, the openness to experience median was 33.5, the mode was 34, and the mean was 33.41, with a standard deviation of 4.79. Below in figure ten is a graphical representation of the five personality traits of the twelve Foodservice Distribution company members.

Figure 10

Big Five-factor Personality Model



The Utrecht work and well-being survey was administered at the start before any training course commencing and again a week after the final training course was complete. Both questionnaires were tested using Cronbach Alpha (α) and following Gliem and Gliem's (2003) general recommendations. The Cronbach Alpha (α) results of the work and well-being questionnaire that was first conducted were (α) = 0.81 and the second was (α) = 0.89, which are both excellent results as they are >0.80, which according to Gliem and Gliem (2003), is considered a good result. The Utrecht work and well-being survey used in this study was constructed by Schaufeli and Bakker (2003) and used a 5-point Likert system. Still, unlike the big-five personality questionnaire, the starting point was zero on this questionnaire instead of starting with one like the Big five-factor questionnaire. The questionnaire asked participants how frequently they feel a certain way based on 17 statements, and they then scaled them as 0 – Never, 1 – Rarely, 2 – Sometimes, 3 – Often, 4 – Very Often or 5 – Always. Next, the midpoint for the three traits, vigor, dedication and

absorption, according to Schaufeli and Bakker (2003), was established. The results for these three traits were vigor at 15 points, dedication at 12.5 and absorption being 15. Finally, to get the total engagement number, the results for each of the three traits were added up and then to get the midpoint, this result was divided in half to reach the center for engagement, which was 42.5.

Breaking down and describing each participant's results for the first administered Utrecht Work and well-being survey, we find that participant one had a score of 15 for vigor which is in the middle and below the median result, which was 19.5. For dedication, the score was nine, below the median and midpoint. Absorption was 12, again below the middle score of 15, the median of 18 and the total initial engagement was 36, below the middle score of 42.5 and the group median of 51. Comparing those results to the second Utrecht work and well-being administered after all the training, this participant slightly increased engagement. The score for vigor was 15, the dedication was 12, absorption was 13, and total engagement was 40. However, this result was still below the middle and group median on all the traits. Participant two had a result of 21 on vigor, 12 on dedication, 21 on absorption and a total engagement score of 54.

Unlike the previous participant, this participant reduced engagement after all the training showing a total engagement score of 50. The results for vigor was 19, dedication showed an increase to 14, and absorption was 17. Participant three, like participant one, increased total engagement by comparing the first questionnaire results before training to the final questionnaire after training. For vigor, this participant went from 17 to 18, dedication went from 16 to 18, absorption went from 17 to 20, and total engagement went from 50 to 56. This same increase in engagement was seen for participant three but was more significant. This participant went from a total engagement score of 51 to 65, with gains across the board in all the characteristics. Vigor started at 22 and went to 27, while

dedication was initially 14, increased to 19, and absorption was at 15 and went to 19. Similar results were found for participant five, with a significant increase across the board in all traits and total engagement. Vigor started with a score of 22 and rose to 24, the dedication was 14 and went to 20, absorption began at 15 and increased to 20, and finally, total engagement went from 51 and increased to 64. This participant's results were also above the median in all traits. The following two participants also increased total engagement from before and after training. Participant six vigor was initially 18, the dedication was 22, absorption was 26, and total engagement was 66, and the final results showed vigor at 22, dedication at 23, absorption at 22 and engagement at 67.

In comparison, participant seven's initial results were vigor at 16 prior and 20 after, dedication at 15 prior and 19 after, absorption at 19 to start and 22 after and finally, total engagement initially at 50 and ended with 61. Volunteer number eight showed a significant decrease in total engagement, with an initial score of 21 for vigor, 17 for dedication, 19 for absorption and 57 for engagement. This participant's final result was 18 for vigor, 15 for dedication, 15 for absorption and 48 for total engagement. Again participant nine showed a decrease in total engagement from before training to after training, although it was not near as significant as participant eight. For vigor, initially, participant nine was 24, which stayed the same in the second questionnaire. Then, however, there was an increase in dedication from 15 to 18 and a decrease in absorption from 29 to 25. So total engagement went from 68 before training to 67 after training. Participant ten's overall engagement showed no change from the first questionnaire to the second, with a score of 61, but there were slight differences in vigor, dedication and absorption. Vigor went from 23 to 26, dedication went from 17 to 18, and absorption dropped from 21 to 17.

Interestingly, participant eleven showed no change from before to after training and received the same results across the board. With vigor being very low at 8, significantly below the median of 20, dedication was also very low at seven when the median after training was 18. For absorption, this participant scored 11, which was below the second questionnaire median of 18. Finally, the total engagement for this participant was 26, significantly below the second questionnaire median of 58.5. In comparison, participant twelve again, like most other participants in this group, showed an increase in total engagement from before to after training. The result of vigor was 17 and increased to 20, a dedication started at 16 and went to 19, absorption decreased from 17 to 15, and total engagement increased from 50 to 54.

When analyzing the first Utrecht Work and well-being questionnaire data results and the results found through the descriptive statistics, it shows that the median was 51, and the mode was 50. The mean was 51.66, while the standard deviation for the engagement questionnaire was 11.70. On the other hand, the second Utrecht Work and well-being questionnaire had a frequency distribution with a median of 58.5, a mode of 67, and a mean of 54.91. The standard deviation on the second Utrecht Work and well-being questionnaire was 12.36. From this, you can see the standard deviation didn't have much of a change. Still, a positive increase in engagement was seen from the first questionnaire to the second questionnaire of 13%, looking at each median, a 25% increase looking at the mode and a 6% increase in the mean, which will be discussed in more detail in chapter five.

The frequency distribution for vigor, dedication and absorption for the first engagement level questionnaire starting with vigor showed a median of 19.5, mode of 21, mean of 18.66 and a standard deviation of 4.47. Dedication had a median of 15 mode of 16, and the mean was 14.5. The standard deviation for the trait dedication was 3.89. The

absorption median was 18, the mode was 21, and the mean was 18.5, while the standard deviation was 5.28.

In the second Utrecht Work and well-being questionnaire starting with vigor, the median was 20, the mode was 20, and the mean was 20.08, with a standard deviation showing 5.21. Next, the dedication median was 18, the mode was 19, and the mean was 16.83, with the standard deviation being 4.23. Finally, for absorption, the median was 18, the mode was 15, the mean was 18, and the standard deviation was 4.08. Similar to the overall engagement level median, which showed a positive increase, there is an increase in vigor of 3%, and dedication shows the most significant increase of 16%. Still, it shows no absorption increase when comparing the median results between the two questionnaires. Below shown in table four, are the results of the descriptive statistics from the initial work and well-being questionnaire, with figure eleven graphically representing the participant's results. Next is table four, which shows the descriptive statistics collected from the second work and well-being questionnaire. Similarly, these are followed by figure twelve, representing the graphical representation of the participant's results.

Table 4

Descriptive Statistics Work and Well-being Survey One

| Vigor | | Dedication | | Absorption | |
|--------------------|---------|--------------------|---------|--------------------|---------|
| Mean | 18.667 | Mean | 14.500 | Mean | 18.500 |
| Standard Error | 1.293 | Standard Error | 1.125 | Standard Error | 1.525 |
| Median | 19.500 | Median | 15.000 | Median | 18.000 |
| Mode | 21.000 | Mode | 16.000 | Mode | 21.000 |
| Standard Deviation | 4.479 | Standard Deviation | 3.896 | Standard Deviation | 5.283 |
| Sample Variance | 20.061 | Sample Variance | 15.182 | Sample Variance | 27.909 |
| Kurtosis | 1.707 | Kurtosis | 1.006 | Kurtosis | 0.146 |
| Skewness | -1.164 | Skewness | -0.266 | Skewness | 0.608 |
| Range | 16.000 | Range | 15.000 | Range | 18.000 |
| Minimum | 8.000 | Minimum | 7.000 | Minimum | 11.000 |
| Maximum | 24.000 | Maximum | 22.000 | Maximum | 29.000 |
| Sum | 224.000 | Sum | 174.000 | Sum | 222.000 |

Count 12.000 Count 12.000 Count 12.000

Figure 11

Work and Well-being Survey One

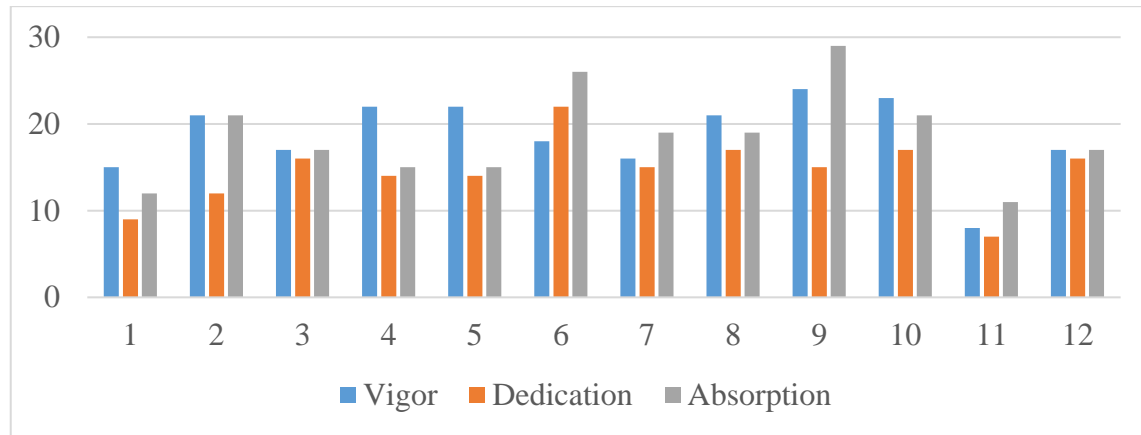


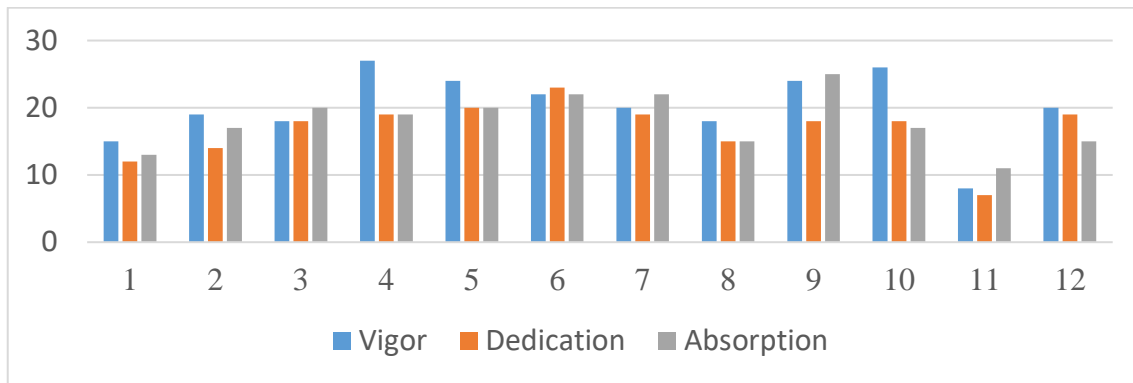
Table 5

Descriptive Statistics Work and Well-being Survey Two

| Vigor | | Dedication | | Absorption | |
|--------------------|---------|--------------------|---------|--------------------|---------|
| Mean | 20.083 | Mean | 16.833 | Mean | 18.000 |
| Standard Error | 1.505 | Standard Error | 1.224 | Standard Error | 1.181 |
| Median | 20.000 | Median | 18.000 | Median | 18.000 |
| Mode | 20.000 | Mode | 19.000 | Mode | 15.000 |
| Standard Deviation | 5.213 | Standard Deviation | 4.239 | Standard Deviation | 4.090 |
| Sample Variance | 27.174 | Sample Variance | 17.970 | Sample Variance | 16.727 |
| Kurtosis | 1.520 | Kurtosis | 1.622 | Kurtosis | -0.578 |
| Skewness | -0.962 | Skewness | -1.133 | Skewness | -0.057 |
| Range | 19.000 | Range | 16.000 | Range | 14.000 |
| Minimum | 8.000 | Minimum | 7.000 | Minimum | 11.000 |
| Maximum | 27.000 | Maximum | 23.000 | Maximum | 25.000 |
| Sum | 241.000 | Sum | 202.000 | Sum | 216.000 |
| Count | 12.000 | Count | 12.000 | Count | 12.000 |

Figure 12

Work and Well-being Survey Two



Along with the descriptive statistics done after the Utrecht work and well-being questionnaires were complete, a Pearson's correlation coefficient (r) was also completed. This Pearson's correlation coefficient (r) used the total engagement level for each of the two questionnaires and then compared the relationship between engagement and the five personality traits used in the Big-five factor personality questionnaire. This comparison used the recommendations from Hemphill (2003), who stated that a result of 0.10 to 0.25 + or - was a small correlation, 0.26 to 0.45 + or - was a medium correlation, and ± 0.46 was a large correlation.

For the first Utrecht work and well-being engagement level questionnaire, when comparing engagement level to extraversion, the correlation coefficient was (r) = 0.74, which is > then 0.46, so it would be a large positive correlation. Comparing engagement to agreeableness showed a result of (r) = 0.27, which is > 0.25, which is a medium positive correlation. Conscientiousness showed a correlation coefficient of (r) = 0.62 > 0.46, indicating a large positive correlation. The results for neuroticism were (r) = -0.25, which is > than -0.10, so it is a small negative correlation. Finally, the results for openness were (r) = 0.49, which is a large positive correlation similar to extraversion. The results of all five personality traits showed a relationship, with neuroticism being the only one showing a negative correlation. Of all five personality traits, openness and extraversion showed the most significant relationship.

Pearson's correlation coefficient (r) on the second Utrecht work and well-being questionnaire showed notable changes. This time, the results of engagement and extraversion showed a correlation coefficient of $(r) = 0.55$, which is > 0.46 , so it has moved down but is still a large positive correlation. For agreeableness, the results showed a result of $(r) = 0.12$, which is $<$ the previous 0.27 and would move down to a small correlation. Observing the results when running the correlation coefficient on conscientiousness showed a correlation of $(r) = 0.66$, which would be a large correlation. Neuroticism showed an effect of $(r) = -0.29$, which is a medium negative correlation; finally, looking at openness, the results showed $(r) = 0.41$, which is a medium correlation. Similar to the prior correlation coefficient results on the first Utrecht work and well-being questionnaire, extraversion, agreeableness, conscientiousness and openness showed a positive relationship, while neuroticism showed a negative relationship.

Finally, the results from both Pearson's correlation coefficient models were compared, looking for a result of $(r) > 5\%$, which would indicate a significant negative or positive change for this research following the recommendations of Frick (1996) on setting a criterion. Extraversion showed a substantial decrease of 19% , while agreeableness significantly decreased by 15% . Openness to experience decreased by 8% , and conscientiousness increased by 4% . Similarly, neuroticism had a negative growth of only 4% , so all the traits, except neuroticism and Openness, showed a significant change, with extraversion having a substantial decrease from the first to the second Utrecht work and well-being questionnaire, as did agreeableness.

The final tools used to gather the participant's data were course evaluations filled out by the participant at the end of each of the three courses and a long answer questionnaire which consisted of three questions and was given one week after the final course was completed. For the e-learning Excel course evaluation, 100% of the

participants felt satisfied with the training, which was as expected. In comparison, 67% felt the information was presented clearly, and 33% thought it to be extremely clearly presented. Furthermore, when asked how relevant the training was to their role, 9% felt it was somewhat relevant, 58% thought it was very relevant, and 33% felt it to be extremely relevant. Similarly, when asked how much new information they learned, 33% said a moderate amount, 50% a lot and 17% a great deal.

For the traceability course, which was taught in a traditional lecture-based method, 100% stated the course was as expected. However, while 25% were extremely satisfied with the training, 8% were unsatisfied, and the remaining 67% were satisfied with the traceability class. The 8% unsatisfied were also the highest in extraversion and stated the collaborative method with a mix of e-learning was their preferred method, so it makes sense why they didn't prefer the lecture-based method. Also, out of the three courses, they received the lowest marks in this course. Although in comparison, only 25% of the other participants similarly scored highest in the method they prefer the most, with 75% having their highest marks in one of the other two training methods outside of their preferred training style.

The participant was also asked how clear the course information was, and 42% felt it to be extremely clear, 50% very clear, and 8% not very clear, with the same 8% from the traceability course stating it was not very clear. On this questionnaire, the participants were also asked a few additional questions not asked in the other course evaluations about their preferred training method. Of these, 50% preferred collaborative, 33% chose e-learning, and 17% preferred lecture style. Of the 33% that prefer e-learning majority were at the midpoint or below on extraversion and were above the center in neuroticism. The fact that these members choose to work independently makes sense since those high in extraversion, according to Moyle and Hackston (2018), work well in groups and thrive off

being around others. While those high in neuroticism, as described by Barlow et al. (2014), tend to react negatively in response to stress and feel unable to manage or cope with challenging events. Since group participation can be stressful, they like to do things independently.

In comparison, those that preferred collaborative training tended to be middle to high on extraversion., moderate to high on openness and a mix of the other traits with no discernible trend among them. The final two questions asked on this course evaluation survey were if they enjoy working in groups to brainstorm, with 8% not enjoying it and 92% stating they do appreciate this. The last question asked how often they had engaged in personal development training in the past twelve months. Of the participant's 25% said they had engaged three times or more, 9% had engaged two to three times, 33% had engaged in personal development training one to two times, and 33% had not been involved in the past twelve months. Those who stated they participated more than three times looked middle to high in agreeableness and moderate to high in openness. This result aligns with the study conducted by Laguna and Purc (2016), who stated that openness to experience is significant in training action planning and training motivation, while agreeableness is also positively linked to training initiation.

On the food safety course, which used a collaborative method, 100% felt the training was as expected. While 50% learned a lot of new information, 50% thought they had retained a moderate amount of further information. When asked how relevant and satisfied they were with the training, 17% stated they were extremely satisfied with the training course, and 83% said they were very satisfied. In comparison, 50% felt the material was relevant to them, 33% thought it was somewhat relevant, and 17% felt it was very relevant. With how much new information they had learned, they were split 50% thought they had learned a lot, while 50% felt they had retained a moderate amount.

The long answer questions asked which of the three training sessions the participants liked and why, which they liked the least and why, and if the training was conducted in their preferred training style, would they enjoy the course more and why. For the first question, 27% preferred the course, which was completed collaboratively. One member stated, “It is easier for me to learn when I can be engaged in discussion and hear what other people are thinking.” On the other hand, surprisingly, 36% preferred the course delivered through the lecture-based method. As stated by one of the members, the primary reason was “it was well structured, had a lot of content and was on a topic that I needed to gain more information.” This statement could then justify why they preferred this method.

Regarding the course delivered through e-learning, 36% preferred it because of the amount of new information learned and, as one member stated, “was able to practice what I was learning while I took the course and could do it at my own pace.” The second question, which asked what method they liked the least, was all pretty mixed, some based on already knowing content, delivery and flow, but there were no discernable trends among the participants. The participant’s comments to the final question were all unanimous. They commented that they would prefer to take courses or training if delivered in their preferred method. One participant commented, “Yes, I would feel more inclined to attend/participate in training that appeals to my learning style because it makes it easier for me to consume the information if it aligns with my learning preference.”

In addition, there were also observations taken during each of the in-person training courses. There were also unstructured, informal meetings with participants from the study to gain insights into their thoughts on the training methods, content and structure. For example, for the e-learning course where the topic was Excel, the feedback gained was a mix of comments. Some said it was excellent, and they learned some new techniques that could be used. Others said it was good, but it was a lot of information, and

they would prefer a more face-to-face collaborative method so they could ask more questions and learn from others, which would help them learn. Of course, this result is expected since members preferred different ways of absorbing the content being delivered, shown through questionnaires that the participants filled out before this.

In the traditional lecture-based course, where the topic was traceability, the feedback was also a mix of feedback. Some noted the course was good but didn't allow them to interact with others in the class. Others stated they would prefer this to be done through e-learning as it would allow more flexibility on when they could take the course and at what speed they wanted to go. However, the observations taken during this course were that most participants started to disengage after about twenty minutes of lecturing. You could see some getting tired, some on their phones and losing interest, which got worse the longer the lecture continued, with only about 1/3 seeming to be engaged past thirty minutes. This observation also aligns with the findings and comments by Norman Eng (2017), who stated that people's engagement level peaks at twenty minutes and then decline after that. It was also noticed that due to the content being done through PowerPoint, members were not really listening to the lecturer but just taking notes from the PowerPoint slides.

With the final course, which was done in a collaborative method and covered food safety, the participants said they enjoyed the training. The majority felt the visuals and involvement in the activity were what they enjoyed and thought it was easy to follow along. These comments were evident in that most members seemed to be engaged for the entire forty minutes of the course. Although it was also mentioned by a number of the participants that they felt the course was not detailed enough and was a bit too easy.

Overall, the participants participating in these courses felt all the training was good. The remote workers said they liked that the training was also done through

Microsoft Teams as they felt included. They also stated it was a significant benefit as they felt part of the team and didn't need to be in the office to take the courses. They thought they had learned some essential skills that could be used in their regular job, and that effort was taken to include as many as possible using Microsoft Teams. These comments align with other researchers' findings, such as Kahn (1990), who stated that three conditions promote and are linked to personal engagement: meaningfulness, psychological safety and psychological availability. This finding is reiterated by Little and Little (2000), who stated engagement is a psychological state where employees feel satisfied, involved, empowered and committed.

4.7 Emergency Services Group

The total Emergency Service population was thirty-five members. After removing those unavailable or conducting the training, the population dropped to twenty-six. The total was twenty-eight when running the population calculation using 90% confidence, a 5% margin of error, and a 10% buffer. So similar to the Foodservice Distribution group, the remaining twenty-six population was used, and they were reached out to see who was interested in volunteering to participate in the research study. Of the twenty-six, seventeen members were interested in volunteering to participate in the study, which was 65% of the general population.

The study used a mixed-method approach as described for the previous group and in the methodology section. Participant members were electronically given the demographic, Big-Five factor and Utrecht Work and well-being questionnaires. The first course was the Collaborative/Integrative training on hypothermia, followed by a course evaluation and end-of-course quiz. Next, the members were given the e-learning course in which the topic was swift water training and received a course evaluation and an end-of-

course examination. Finally, the last course the participants took was lecture-based, delivered by the British Columbia Emergency Health Services and was on air ambulance safety operations. A week after the previous course, another Utrecht Work and well-being questionnaire were sent out to the participants, and a long-answer training preference questionnaire was also sent. Again, following the same procedures conducted on the FoodService Distribution group, unstructured questions, observations, and unstructured and informal meetings were conducted during and between each course. The total time from start to finish for the participant's involvement in the study was four weeks, with one week between each of the three courses and one week between the last course and the final questionnaires.

4.8 Findings From Emergency Services Group

The participants from the Emergency Service group, similarly to the Foodservice Distribution group, had a mix of educational backgrounds. But, all members had graduated from high school. Also, except for three participants, all others had attended college or trade school, with two having a trade school degree, three having participated in some college, five having an undergraduate degree, and four having obtained a graduate degree.

The participants comprised five females and twelve males, with two participants between 18 to 24, five between 25 to 34, three between 35 to 44, six between 45 to 54 and one between 65 to 74. Of those participants, ten were married, two were single, two were in a relationship, two were common law, and one was separated. The ethnicity of the members of this group who participated in the study were all Caucasian.

Describing the findings individually, starting with the demographic, we see that participant one is a male between the ages of forty-five and fifty-four who was married and has an undergraduate degree. Participant two was a single male between twenty-five

and thirty-four who had graduated from high school. At the same time, participant three was a married female between thirty-five to forty-four who also had graduated from high school but didn't pursue any further education. Volunteer four was a thirty-five to forty-four married male with an undergraduate degree. Participant five was a male between the ages of twenty-five and thirty-four with an undergraduate degree and was in a relationship. Participant six was a married female who had attended one to two years of collage and was between the ages of eighteen and twenty-four. Participant seven was also a female, and this participant was in a relationship, had an undergraduate degree and was between the ages of twenty-five and thirty-four. Participant eight was a married male between sixty-five and seventy-four with a graduate degree. Participant ten was also a married male between thirty-five to forty-four and had graduated from high school. Finally, both participants, eleven and twelve, were males who had a graduate degree.

Participant eleven was between the ages of twenty-five and thirty-four, while participant twelve was between forty-five and fifty-four. The next volunteer in this group had attended trades school and was a married male between forty-five and fifty-four. While participant fourteen was a single female who had an undergraduate degree and was between the ages of twenty-five and thirty-four. The next participant, similar to participant thirteen, had attended trade school and was a married male between forty-five and fifty-four. Participants sixteen and seventeen were both common-law. Participant sixteen was a female between the ages of forty-five and fifty-four with a graduate degree. At the same time, participant seventeen was a male who had attended one to two years of college and was between the ages of forty-five and fifty-four.

Below are the participant age group graph, gender graph and relationship status graph, which show the breakdown of all seventeen emergency service members who participated in the study.

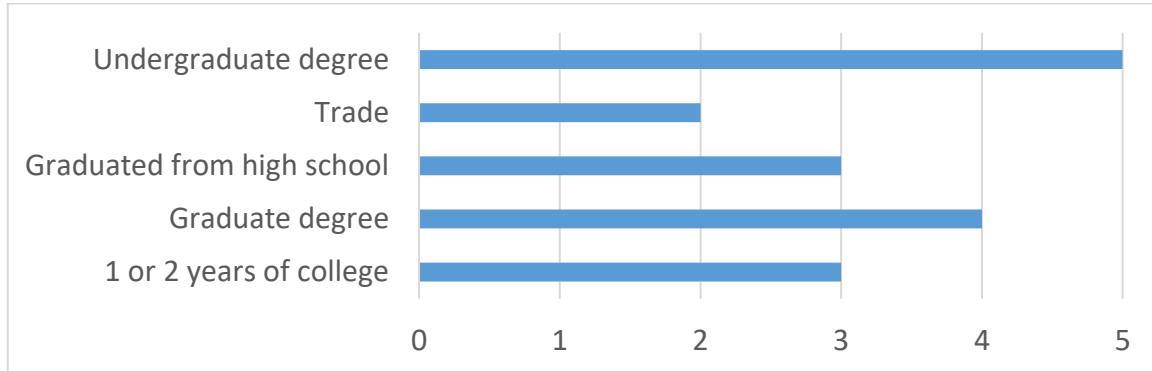
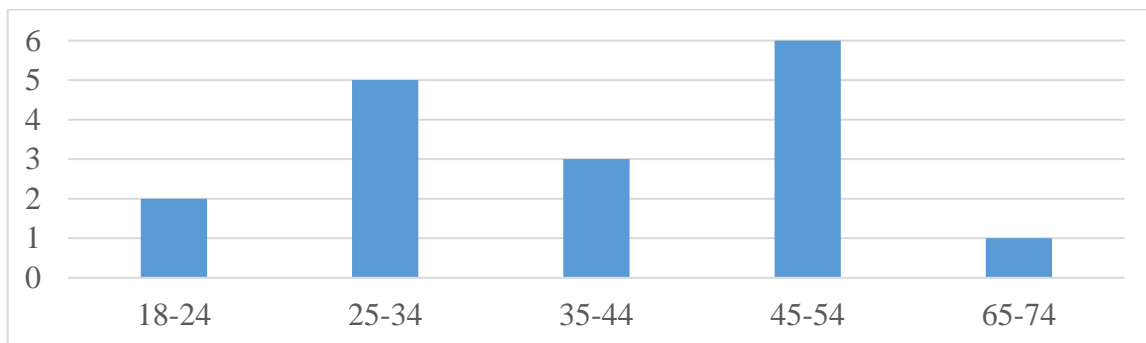
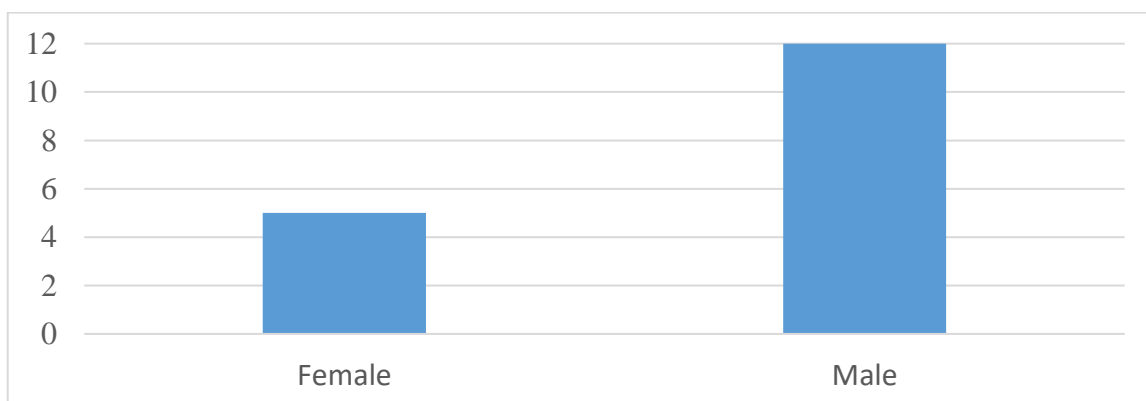
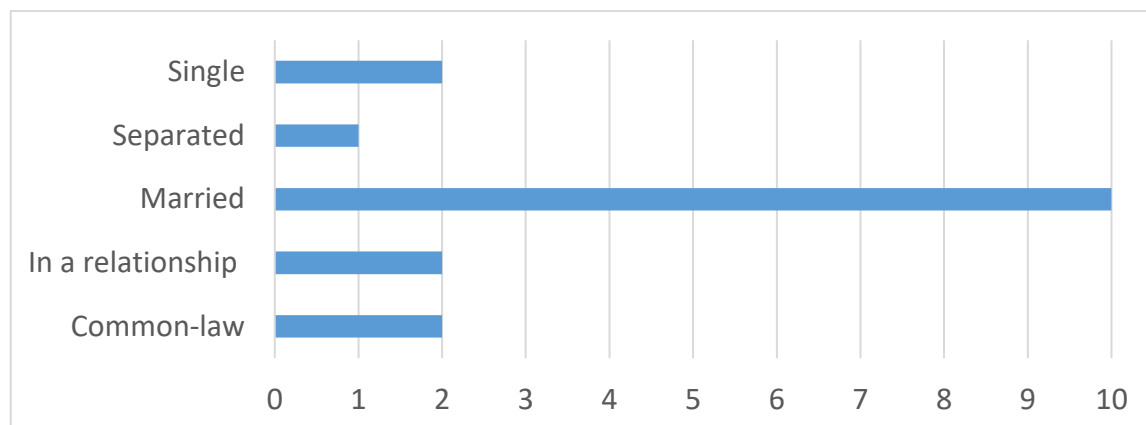
Figure 13*Education Level***Figure 14***Participants Age Groups***Figure 15***Participants Gender Count*

Figure 16*Participants Relationship Status*

All seventeen of these study participants have taken these training courses in the past to some extent, some more advanced, so they had a good understanding of the training courses before the training. Unsurprisingly, most participants did well on the three end-of-course knowledge tests, with very few dropping below 80%.

Looking at and comparing the results from each end-of-course quiz, we see participant one received 90% on the lecture-based course and 100% on both the e-learning and collaborative courses. Participant two received 80% on the lecture-based course, 95% on the e-learning and 100% on the collaborative. In comparison, participant three scored 40% on the lecture-based and 100% on e-learning and collaborative. Marks for participant four were 80% on lecture-based, 95% on e-learning, and 100% on collaborative and participant five received 90% on lecture-based and 100% on e-learning and collaborative. The following two participants, participants six and seven, received the same marks on all the end-of-course exams 90% on the lecture-based and 100% on the e-learning and collaborative-based course. On the other hand, Participant eight received 100% on all three ends of the course quizzes. Participants nine and ten received 80% on the lecture-based quiz, while participant nine received 100% on the e-learning and 63% on the collaborative method. Participant ten received 95% on the e-learning and 50% on the

collaborative approach. Participants eleven and twelve scored well on all three end-of-course quizzes and received 100%. Participant thirteen received the lowest part of the group in the lecture-based course, receiving 40% while attaining a score of 100% in the e-learning and 88% in the collaborative method. The result of participant fourteen on the air ambulance quiz, which was delivered in a lecture-based approach, was 100% which was the same result they received in the swift water course, which was lecture-based. In comparison, participants received 88% in the hypothermia course, which was delivered in a collaborative method. Participant fifteen received 80% in the lecture-based, 95% in the e-learning and 50% in the collaborative. Participant sixteen received 90% in lecture-based, 100% in e-learning and 75% in collaborative, while participant seventeen received 100% in all three ends of-course quizzes.

The average for all the results was pretty close to each other, which can be seen through the descriptive statistics that were conducted. In the hypothermia course, performed in a collaborative method, the participant frequency distribution is broken down as the median being 1.0, mode of 1.0 and mean of 0.889. The maximum participant result was 100%, the minimum % was 50%, and the standard deviation was 0.181. They showed an overall very close effect among the participants, with only six of the seventeen participants being below 100%. The frequency distribution for the participant results after the air ambulance quiz, done through a lecture method, showed a median of 0.9, a mode of 0.9 and a mean of 0.858. At the same time, the maximum participant score was 100%, the minimum was 40%, and the standard deviation was 0.141. A little more variance in results between the participants, with one scoring low and, out of the three courses, had the most significant swing between marks. Still, except for one participant, the score was 80% or more.

When comparing the e-learning course to the other two courses, the overall marks were higher in the e-learning course, and the most significant swing between the lowest and highest marks was in the lecture-based course. At the same time, the e-learning swift water quiz had a frequency distribution with a median of 1.0, mode 1.0 and a mean of 0.991. The highest test result for this course was again 100%, while the minimum was also very high at 95%, and the standard deviation was the least among all the classes at 0.019. This course also showed the least prominent swing between the highest and lowest marks. The results of each quiz were graphically represented and shown below in figures seventeen, eighteen and nineteen.

Figure 17

Participant's Hypothermia Quiz (Collaborative Method)

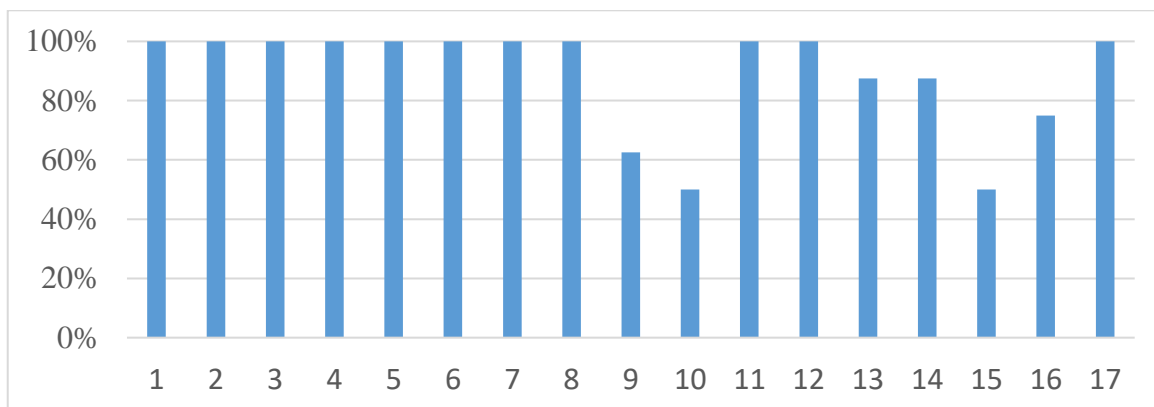


Figure 18

Participant's Air Ambulance Quiz (Lecture Based)

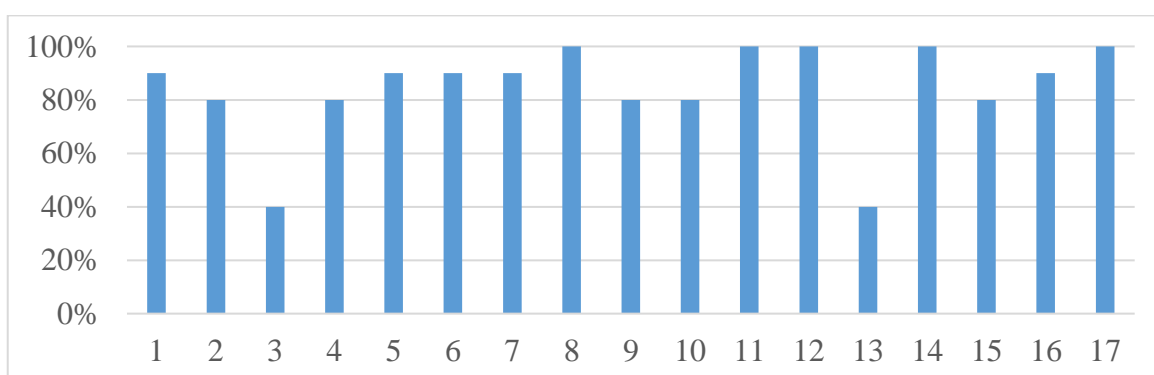
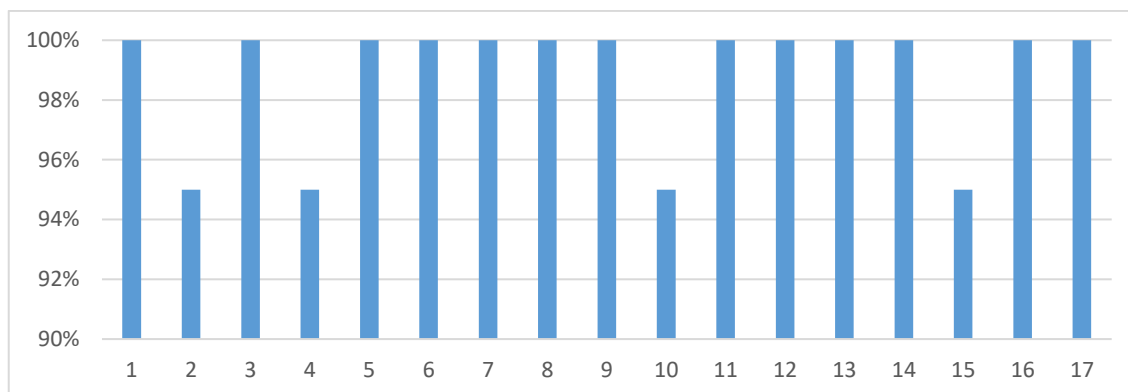


Figure 19*Participant's Swift Water Quiz (E-Learning)*

On average, the volunteer participant results from the Big five-factor personality questionnaire across all five personality traits, similarly to the Foodservice Distribution group, only had a slight deviation which in this group is only by 4.987. Again it was expected that some members would be low on specific characteristics while being high on others. Still, in the case of this group, they were closer together, as can be seen by the lower standard deviation and tended to range in the middle of the five traits.

Once the data was gathered from the participants using the Big Five-factor inventory questionnaire, the internal consistency was checked using Cronbach Alpha (α). The internal consistency was (α) = 0.63, which is >0.60 and is considered acceptable following the general recommendation chart this study follows. After conducting a descriptive statistic analysis and looking at the graphical representation found from the Big Five-factor questionnaire, agreeableness, conscientiousness, and openness are all above the mid-point for the majority of the participants in the study, with openness being the highest. Like the other group in the study, neuroticism and extraversion are at or just slightly above the midpoint across the seventeen participants. However, in this group, neuroticism seems slightly lower than extraversion on average. These findings are not all that surprising as most people have a varying blend of the different traits, with some having more robust or weaker attributes associated with these traits.

Describing each participant's personality characteristics, we find that participant one is just below the group median, having a result of 21 while being 32 for agreeableness, 30 for conscientiousness, 20 for neuroticism and 39 for openness to experience.

Participant two was 20 for extraversion, 39 for agreeableness, 29 for conscientiousness, 20 for neuroticism and 40 for openness, while participant three was 33 for extraversion, 39 for agreeableness, 42 for conscientiousness, a low score of 10 for neuroticism and 36 for openness. Participant four in extraversion, agreeableness, conscientiousness, neuroticism and openness had scores of 23, 27, 27, 27, and 28, and participant five had a score of 22 for extraversion, 34 for agreeableness, 32 for conscientiousness, 18 for neuroticism and finally a score of 36 for openness. The personality results for participant six were 30 for extraversion and 38 for agreeableness and conscientiousness. The results for neuroticism were 20, and openness to experience was 33. Participant seven was high in all personality characteristics, including neuroticism.

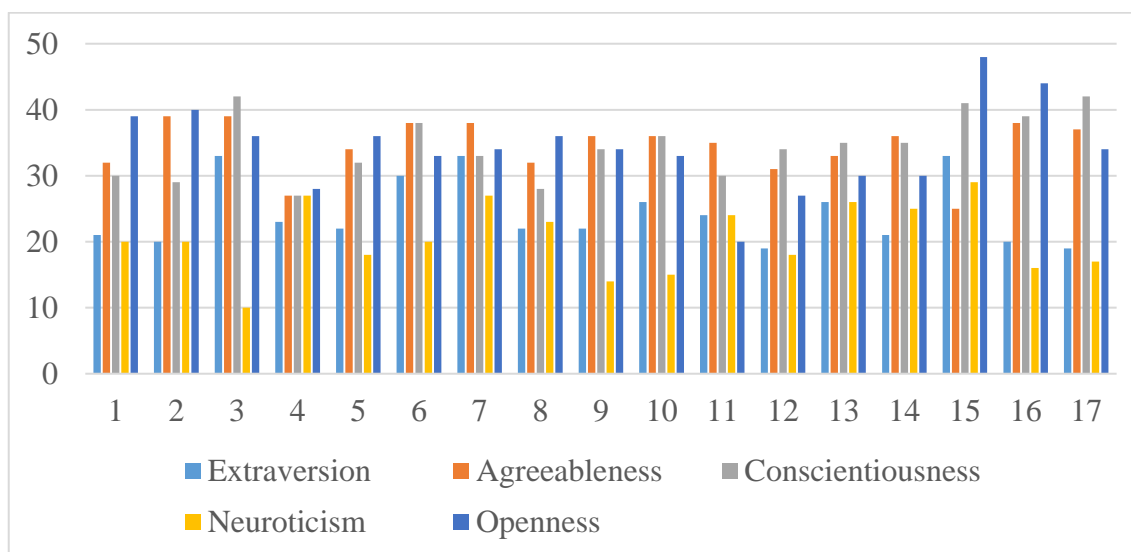
The results for each characteristic were 33 for extraversion, 38 for agreeableness, 33 for conscientiousness, 27 for neuroticism and 34 for openness. Participant eight was another person higher than the median in neuroticism. This participant was 22 in extraversion, 32 in agreeableness, 28 in conscientiousness, 23 in neuroticism and 36 in openness. The volunteer participant nine was 22 for extraversion, 36 for agreeableness, 34 for conscientiousness, 14 for neuroticism, significantly below the median of 20, and 34 for openness. Participant ten was 26 in extraversion, 36 in agreeableness and conscientiousness, 15 in neuroticism and 33 in openness. Participant eleven was 24 for extraversion, 35 for agreeableness, 30 for conscientiousness, 24 for neuroticism, and 20 for openness to experience. Participant twelve was 19 in extraversion, 31 for agreeableness, 34 for conscientiousness, 18 for neuroticism and 27 for openness. While participant thirteen was at 26 in extraversion, 33 in agreeableness, 35 in conscientiousness,

26 in neuroticism and 30 in openness. Participant fourteen had the same characteristic results as participant thirteen in openness and conscientiousness, while extraversion was at 21, agreeableness was at 36, and neuroticism was at 25. The next participant was significantly above the median of 34 in conscientiousness, with a result of 41. Again significantly above the median of 34 in openness, being at 48. For extraversion, they were 33, agreeableness was 25, and finally, neuroticism was 29. The second to last participant was 20 in extraversion, 38 in agreeableness, 39 in conscientiousness, 16 in neuroticism and 44 in openness, significantly above the median of 34. The final participant was 19 in extraversion, 37 in agreeableness, and 42 in conscientiousness, significantly above the median of 34, while 17 in neuroticism and 34 in openness.

After conducting descriptive statistics on the member's personality model as a group, it shows the frequency distribution for extraversion as having a median of 22, a mode of 33, and a mean of 24.35, with a standard deviation of 4.98. The agreeableness median was 36, the mode was 38, and the mean was 34.47. The standard deviation for agreeableness was 4.06. For conscientiousness, the median was 34, the mode was 30, and the mean was 34.41, with a standard deviation of 4.79. For the personality trait of neuroticism, the frequency distribution had a median of 20, a mode of 20, and a mean of 20.52, while the standard deviation was 5.32. Finally, the openness to experience median was 34, the mode was 36, and the mean was 34.23, with a standard deviation of 6.53. The standard deviation for openness had the most significant variation between all five traits. Below in figure twenty is a graphical representation of the five personality traits of the seventeen Emergency Service members.

Figure 20

Big Five-factor Personality Model



Following the same process as what was done with the Foodservice Distribution group, the Utrecht Work and well-being survey was administered at the start before any training course commenced and again a week after the final training course was complete. Both questionnaires were tested using Cronbach Alpha (α) and following the general recommendations. The Cronbach Alpha (α) results of the Utrecht Work and well-being questionnaire that was first conducted were (α) = 0.74, which is > 0.70, so it is considered good. The second was (α) = 0.67, which is > 0.60, so it is considered acceptable following the guideline explained earlier.

Again following the same process, each participant's engagement level and characteristics within the Utrecht Work and well-being survey will be described starting with participant one. Participant one was at 22 for vigor, 19 in dedication, 18 in absorption and had a total engagement level of 59. The final scores in the second questionnaire were 23 in vigor, 20 in dedication, 18 in absorption and a slight increase to 61 in total engagement. Participant two's results from the first engagement questionnaire were 14 for vigor and 8 for dedication, which was far below the group median of 16. They received 15 for absorption and a score of 37 for total engagement. Their results after training were 15

for vigor, increased to 12 in dedication, 16 in absorption and an increase in total engagement to 43.

On the other hand, Participant three slightly decreased total engagement from before to after training. In the first assessment, vigor was 20, dedication was 14, absorption was 15, and engagement was 49. In the second assessment, all but vigor, which was still 20, dropped slightly, with dedication being 13, absorption at 14 and total engagement at 47. Participant four showed an overall increase in engagement, with the first results being 14 for vigor, 16 for dedication, 15 for absorption and 45 for engagement. The second results were 15 for vigor, 15 for dedication, 17 for absorption and an increase to 47 in engagement. Like participant four, participant five also slightly increased total engagement after training. The results on the first questionnaire were 22 in vigor, 21 in dedication, 18 in absorption and 61 in engagement. The second questionnaire conducted after training showed 22 in vigor, 21 in dedication, 19 in absorption and a slight increase to 62 in engagement. While participant six showed no change in total engagement from before training to after training and received a mark of 50. In the first assessment, vigor was 18, the same as in the second assessment. Dedication in the first was 18 and had decreased to 17 in the second. Absorption went from 14 in the initial evaluation to 15 in the second.

The following two participants showed a slight increase from before and after training. Participant seven initially had 21 for vigor, 18 for dedication, 17 for absorption and 56 for engagement. In comparison, the second survey results were again 21 in vigor, 18 in dedication and a slight increase to 20 in absorption and 59 in total engagement. For participant eight, initially, vigor was 16, dedication and absorption were below the median at 13, and total engagement was below the median at 42. In the second survey, vigor decreased to 15, dedication increased to 14, absorption increased to 16, and total

engagement increased to 45. The next participant fell in overall engagement in the second survey. The results in the first questionnaire were 22 in vigor, 19 in dedication, 17 in absorption and 58 in engagement, while the second questionnaire results were 20 in vigor, 19 in dedication, 17 in absorption and a slight decrease to 56 in engagement. The following four participants showed no total engagement change from before to after training. Participant ten initially had 17 in vigor, 14 in dedication, 12 in absorption and 43 in engagement, and in the second survey, 17 in vigor, 14 in dedication, 12 in absorption and 43 in engagement. Participant eleven initially was 19 in vigor, 18 in dedication, 21 in absorption and 58 in engagement. The final assessment was the same in all characteristics. Participant twelve was 20 in vigor, 20 in dedication, 22 in absorption and 62 in total engagement, which was the same result after training. For participant thirteen, initially, vigor was 17, dedication was 14, absorption was 14, and engagement was 45. Comparing that to the second questionnaire, they received a slight decrease to 16 in vigor, an increase to 16 in dedication, another drop to 13 in absorption and the total engagement remained at 45.

Participants fourteen and fifteen slightly decreased engagement from before the training assessment to the after-training evaluation. Participant fourteen initially was at 21 in vigor, 16 in dedication, 16 in absorption and 53 in engagement. On the second assessment, vigor was 17, dedication was 14, absorption was 17, and engagement dropped to 48. For participant fifteen, who also decreased in engagement after training, the initial results were 21 in vigor, 12 in dedication, 22 in absorption and 55 in engagement compared to 22 in vigor, which was a slight increase, 11 in dedication and 19 in absorption which was both decreases and a total engagement which dropped to 52. Participant sixteen showed no change in the characteristics or total engagement comparing

the training assessment for the after-training evaluation. The results were 18 in vigor, 11 in dedication, 16 in absorption and 45 in engagement.

In comparison, the last participant showed an increase in total engagement after training, with the initial results before training being 14 in vigor, 14 in dedication, 16 in absorption and 44 in total engagement. After training, the result was 15 in vigor, a slight increase, and 12 in dedication, which decreased. Finally, the participant received 21 in absorption, showing substantial growth and 48 total engagement after training.

When analyzing the first Utrecht Work and well-being questionnaire group data results and the results found through the descriptive statistics, it shows that the median was 50, and the mode was 45. The mean was 50.70, while the standard deviation for the engagement questionnaire was 7.62, which showed these participants to be much closer than the Foodservice Distribution group. On the other hand, the second engagement level questionnaire had a frequency distribution with a median of 48, a mode of 45, and a mean of 51.23. The second Utrecht Work and well-being questionnaire's standard deviation was even closer at 6.92. From this, you can see the standard deviation got closer. Also, in this group, there was a slight decrease in engagement median comparing the first questionnaire to the second questionnaire of 4%, with no difference when looking at the mode and a 1% increase in the mean, which will be discussed in more detail in chapter five.

The frequency distribution for vigor, dedication and absorption for the first engagement level questionnaire starting with vigor showed a median of 19, mode of 22, mean of 18.58 and a standard deviation of 2.87. Dedication had a median of 16 mode of 14, and the mean was 15.58. The standard deviation for the trait dedication was 3.51. The absorption median was 16, the mode was 15, and the mean was 16.52, while the standard deviation was 2.93. Again the results for the standard deviation were very close compared

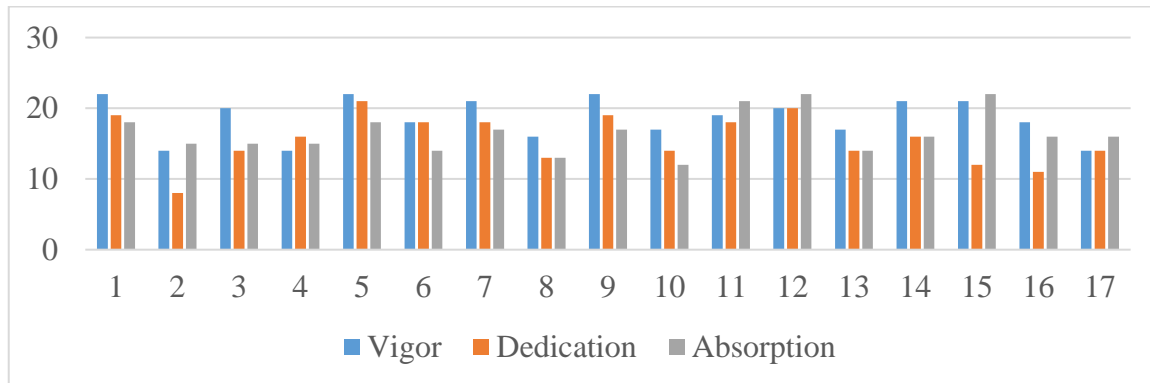
to the other group. Still, this group also had a lower overall mean, median and mode than the Foodservice Distribution group.

In the second Utrecht Work and well-being questionnaire starting with vigor, the median was 18, the mode was 15, and the mean was 18.41, with a standard deviation showing 2.71. The dedication median was 15, the mode was 14, and the mean was 15.58, with the standard deviation being 3.31. Finally, for absorption, the median was 17, the mode was 16, the mean was 17.23, and the standard deviation was 2.86. Similar to the overall engagement level median, which showed a minimal decrease, there is a decrease in vigor, dedication and a slight increase in absorption, all around 1%. Below shown in table six, are the results of the descriptive statistics from the initial Utrecht Work and well-being questionnaire, with figure twenty-one graphically representing the participant's results. Next is table six shows the descriptive statistics collected from the second Utrecht Work and well-being questionnaire. Similarly, these are followed by figure twenty-two, representing the graphical representation of the participant's results.

Table 6

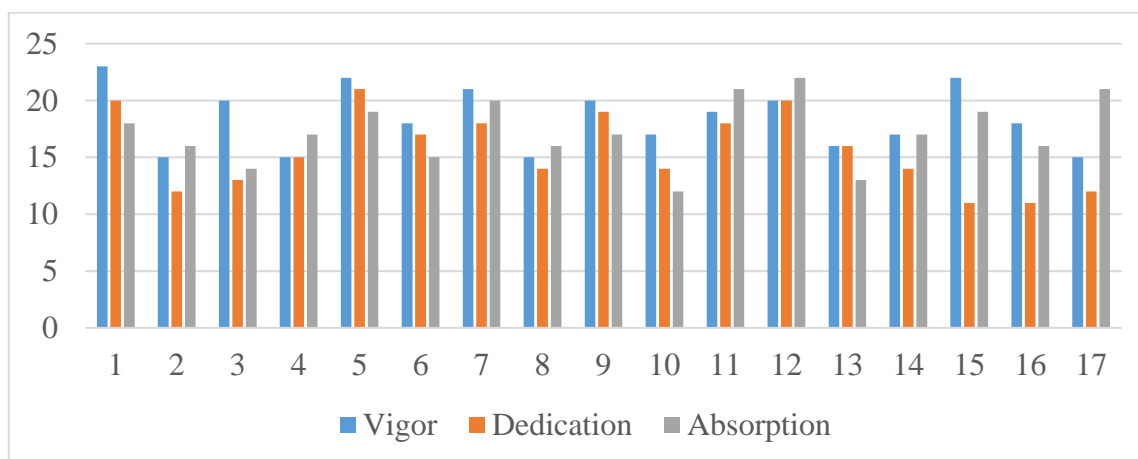
Descriptive Statistics Work and Well-being Survey One

| Vigor | | Dedication | | Absorption | |
|--------------------|----------|--------------------|----------|--------------------|----------|
| Mean | 18.58824 | Mean | 15.58824 | Mean | 16.52941 |
| Standard Error | 0.696941 | Standard Error | 0.853448 | Standard Error | 0.712894 |
| Median | 19 | Median | 16 | Median | 16 |
| Mode | 22 | Mode | 14 | Mode | 15 |
| Standard Deviation | 2.873561 | Standard Deviation | 3.518857 | Standard Deviation | 2.939338 |
| Sample Variance | 8.257353 | Sample Variance | 12.38235 | Sample Variance | 8.639706 |
| Kurtosis | -1.1149 | Kurtosis | -0.32844 | Kurtosis | -0.14973 |
| Skewness | -0.44363 | Skewness | -0.40167 | Skewness | 0.677588 |
| Range | 8 | Range | 13 | Range | 10 |
| Minimum | 14 | Minimum | 8 | Minimum | 12 |
| Maximum | 22 | Maximum | 21 | Maximum | 22 |
| Sum | 316 | Sum | 265 | Sum | 281 |
| Count | 17 | Count | 17 | Count | 17 |

Figure 21*Work and Well-being Survey One***Table 7***Descriptive Statistics Work and Well-being Survey Two*

| Vigor | | Dedication | | Absorption | |
|--------------------|----------|--------------------|----------|--------------------|----------|
| Mean | 18.41176 | Mean | 15.58824 | Mean | 17.23529 |
| Standard Error | 0.658981 | Standard Error | 0.804668 | Standard Error | 0.694143 |
| Median | 18 | Median | 15 | Median | 17 |
| Mode | 15 | Mode | 14 | Mode | 16 |
| Standard Deviation | 2.717049 | Standard Deviation | 3.317733 | Standard Deviation | 2.862023 |
| Sample Variance | 7.382353 | Sample Variance | 11.00735 | Sample Variance | 8.191176 |
| Kurtosis | -1.27984 | Kurtosis | -1.32359 | Kurtosis | -0.65767 |
| Skewness | 0.140913 | Skewness | 0.166309 | Skewness | -0.06869 |
| Range | 8 | Range | 10 | Range | 10 |
| Minimum | 15 | Minimum | 11 | Minimum | 12 |
| Maximum | 23 | Maximum | 21 | Maximum | 22 |
| Sum | 313 | Sum | 265 | Sum | 293 |
| Count | 17 | Count | 17 | Count | 17 |

Figure 22*Work and Well-being Survey Two*



Again ensuring that this group followed the same process, a Pearson's correlation coefficient (r) was also completed. This Pearson's correlation coefficient (r) used the total engagement level for each of the two questionnaires and then compared the relationship between engagement and the five personality traits used in the Big-five factor personality questionnaire. This comparison used the same recommendations from Hemphill (2003) that were followed for the Foodservice Distribution group.

For the first Utrecht Work and well-being engagement level questionnaire, when comparing engagement level to extraversion, the correlation coefficient was (r) = 0.08, which is < 0.10 , so it would show no correlation. Comparing engagement to agreeableness showed a result of (r) = -0.24, which is > 0.10 , which is a small negative correlation. Conscientiousness showed a correlation coefficient of (r) = -0.03, which is < 0.10 , so it shows no correlation. The results for neuroticism were (r) = 0.04, which again is < 0.10 , so there is no correlation. Finally, the results for openness were (r) = -0.20, which is a small negative correlation similar to agreeableness. Only the results from agreeableness and openness showed a relationship; both were small, which was quite different from the other group's findings.

Pearson's correlation coefficient (r) on the second Utrecht Work and well-being questionnaire showed noticeable changes. This time, the results of engagement and extraversion showed a correlation coefficient of (r) = -0.02, which is < 0.10 , so again no

correlation. For agreeableness, the results showed a result of $(r) = -0.20$, which is $>$ the previous -0.10 and would be a small correlation. Observing the results when running the correlation coefficient on conscientiousness showed a correlation of $(r) = -0.20$, which would be a small correlation. Neuroticism showed an effect of $(r) = -0.06$, which is no correlation; finally, looking at openness, the results showed $(r) = -0.21$, which is a small correlation. In this correlation coefficient, all but neuroticism had a relationship. Although different than the first group, they were all negative relationships.

Finally, similar to the other group, the results from both Pearson's correlation coefficient models were compared, looking for a result of $(r) > 5\%$, which would indicate a significant negative or positive change for this research following the recommendations of Frick (1996) on setting a criterion. Only looking at the personality traits, which showed a correlation, we have agreeableness with a 17% increase, while conscientiousness showed the most significant at 87%. At the same time, Openness to experience showed a slight increase of 1%.

Next was the analysis captured from the course evaluations filled out by the participant at the end of each of the three courses and the long answer questionnaire. For example, for the e-learning swift water course evaluation, 76% of the participants felt very satisfied with the training, 24% felt somewhat satisfied, and 100% felt the training was as expected. In comparison, 18% felt the information was extremely relevant to their role, 47% thought it was very relevant, and 35% felt it was somewhat relevant. Similarly, when asked how much new information they learned, 12% said a great deal, 18% a lot and 29% a moderate amount and 24% stated they didn't learn anything, which, since most had done this course in the past, is not surprising.

For the air ambulance safety course, which was taught in a traditional lecture-based method, 94% stated the course was as expected, and 6% said it was not as expected.

However, while 12% were extremely satisfied with the training, 12% were somewhat satisfied, and the remaining 76% were satisfied with the air ambulance class. Also, out of the three courses, they received the lowest marks in this course.

The participants were also asked how clear the course information was; 41% thought it was extremely clear, and 59% thought it was very clear. On this questionnaire, the participants were also asked a few additional questions not asked in the other course evaluations about their preferred training method. Of these, 82% preferred collaborative and 18% preferred lecture style. In contrast, none of the participants preferred e-learning, which could be because all the members in this study are above midline on extraversion. Also, the fact that a large portion of these volunteers has post-secondary education could be why a large amount preferred a lecture-based method.

The final two questions asked on this course evaluation survey were if they enjoy working in groups to brainstorm, with a low 6% not enjoying it and 94% stating they like working in groups. The last question asked how often they had engaged in personal development training in the past twelve months. These participants showed a significant increase in personal development compared to the Foodservice Distribution group, with 58% being engaged five or more per year, 24% engaged two to three times per year, and 6% engaged in personal development training one to two times per year. Only 12% had not been involved in the past twelve months. This result could be partly attributed because most of these members ranked middle high in agreeableness and middle to high in openness which aligns with the study conducted by Laguna and Purc (2016).

On the hypothermia course, which used a collaborative method, 100% felt the training course was as expected. While 76% learned a moderate amount of new information, 24% thought they had learned little. When asked how relevant and satisfied they were with the training, 24% said they were extremely satisfied with the training

course, 65% said they were very satisfied, and 18% were somewhat satisfied. This information is interesting since 100% of the participants preferred this training over all the other training methods and topics. In comparison, 65% felt the material was extremely relevant to them, 29% thought it was very relevant, and 6% felt it was somewhat relevant. With how clear the information was presented, 12% stated it was extremely clear, 76% said it was very clear, and 12% stated it was somewhat clear.

Following the same procedures with the same tools as was done with the other group, the Emergency Service group also was given a long answer questionnaire which asked which of the three training sessions the participants liked and why, which they liked the least and why, and if the training was conducted in their preferred training style, would they enjoy the course more and why. For the first question, 82% preferred the course, which was completed collaboratively. One member stated, "I tend to stay more focused and engaged when learning with hands-on practice. Another member had a similar comment but added, " I would still like to get a paper copy of the learning material for future reference." On the other hand, 18% preferred the course that was delivered through the lecture-based method. As stated by one of the members, the primary reason was "an outside source presented it, and it was easy to follow along, with lots of information that was relevant." This 18% finding aligns with the previous results that asked which was the member's preferred style which also had an 18% selection rate.

Regarding the course delivered through e-learning, no one selected this as their preferred course out of the three, which aligns with the question that asked what their preferred method was and had the same result. The second question, which asked what way they liked the least, was pretty closely split between the lecture-based and e-learning, with the lecture base receiving 59% and the e-learning receiving 41%. The reason was similar: it was long and tedious with no hands-on participation. The participant's

comments to the final question were very similar, but 12% of participants stated they didn't feel tailoring training to their preferred style would be good. One of these comments stated, "it's not necessarily the training style but the content that makes it interesting." With that being said, all the remaining 88% stated they would prefer training tailored to their preference but felt a mix of other styles would also be beneficial. One of the comments was, " yes, because it fits my learning style more, and therefore I would feel more confident in my learning outcomes."

In addition, there were also observations taken during each of the in-person training courses. For the traditional lecture-based course, where the topic was air ambulance safety, the feedback was also a mix of feedback. The majority noted the course was excellent and detailed but didn't allow them to interact with others in the class or move around. The observations during this course were similar to those for the Foodservice Distribution group. It was observed that most participants started to disengage after about thirty minutes of lecturing. You could see some getting tired and restless and on their phones. As the time went on past thirty-five minutes, even those that earlier were taking notes and seemed very engaged were starting to look around and were getting pretty tired looking. At the end of the lecture, which was one hour, the presenter asked if there were any questions, and there were very few, but rather it looked like the participants just wanted to move around and be over with the course. It was also noted, which may have been part of the reason for the participants being tired, was the room was very warm, was done through zoom, so it was dark, and the presentation was very detailed. Also, it was mentioned that the graphics seemed good, which some of the volunteers noted in the long answer questionnaire.

With the final course, which was done in a collaborative method and covered hypothermia, the participants said they enjoyed the training and being hands-on. This

finding also was observed as most participants looked very engaged for the one-hour and fifty-minute course, which aligns with the similar result observed in the other study group. Although participants also mentioned that they felt the class seemed a bit rushed and thought it would have been better to have the course broken down into two training sessions rather than one. It was also noted that the members involved in this training seemed to be highly collaborative with active problem-solving and listening to each other. Because these members work in close teams regularly at work, this makes sense as they are more team focused than individual.

Overall, the participants enjoyed all the training and did well on the end-of-course quizzes. Still, it is unsurprising as this group does similar courses and training weekly. Still, observation seems to show that regular training appears to help build collaboration and problem-solving among members. It also looks to build teamwork and a positive outlook. Comparing the two groups, it was apparent that the team training and taking courses more frequently showed higher collaboration, cooperation and group cohesion.

4.9 Combined Group Results

In concluding this chapter, the results from the Big Five-factor questionnaire and the final Utrecht Work and well-being questionnaire from each group will be combined and analyzed. The objective was to run descriptive statistics on the Big Five-factor and Utrecht Work and well-being questionnaire results, then show the results graphically. Next, to run a correlation coefficient, inferential statistics will be done using the tool analysis of variance (ANOVA). Finally, with the individual group results, all of this will be used to answer the research questions.

First will be the Utrecht Work and well-being survey's descriptive statistics and graphical representation. The frequency distribution for vigor, dedication and absorption

for the combined engagement level questionnaire starting with vigor showed a median of 19, mode of 15, mean of 19.10 and a standard deviation of 3.94. Dedication had a median of 17 mode of 18, and the mean was 16.10. The standard deviation for the trait dedication was 3.70. The absorption median was 17, the mode was 17, and the mean was 17.55, while the standard deviation was 3.37. The graphical representation shows overall a very similar result among the members, with a few lower or higher but the average pretty close, which is verified by the standard deviation of each trait which is pretty close. Below is the descriptive statistic in table eight and the graph in figure twenty-three.

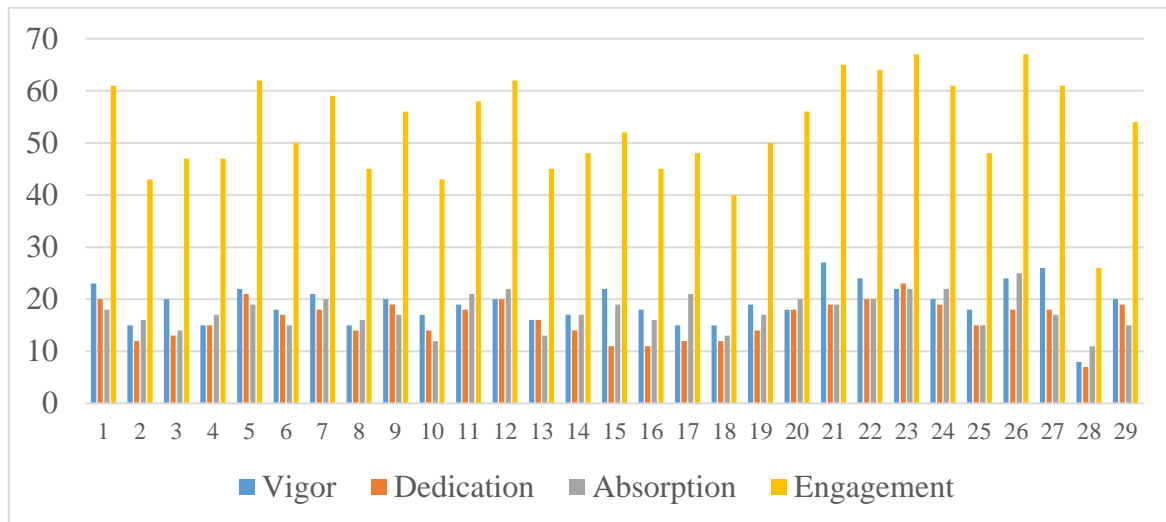
Table 8

Descriptive Statistics Work and Well-being Survey (Combined Group)

| Vigor | | Dedication | | Absorption | |
|--------------------|---------|--------------------|---------|--------------------|---------|
| Mean | 19.1034 | Mean | 16.1034 | Mean | 17.5517 |
| Standard Error | 0.73335 | Standard Error | 0.6883 | Standard Error | 0.62695 |
| Median | 19 | Median | 17 | Median | 17 |
| Mode | 15 | Mode | 18 | Mode | 17 |
| Standard Deviation | 3.94918 | Standard Deviation | 3.7066 | Standard Deviation | 3.37624 |
| Sample Variance | 15.5961 | Sample Variance | 13.7389 | Sample Variance | 11.399 |
| Kurtosis | 1.11016 | Kurtosis | 0.27284 | Kurtosis | 0.41713 |
| Skewness | 0.35535 | Skewness | 0.40858 | Skewness | 0.06463 |
| Range | 19 | Range | 16 | Range | 14 |
| Minimum | 8 | Minimum | 7 | Minimum | 11 |
| Maximum | 27 | Maximum | 23 | Maximum | 25 |
| Sum | 554 | Sum | 467 | Sum | 509 |
| Count | 29 | Count | 29 | Count | 29 |

Figure 23

Work and Well-being Survey (Combined Group)

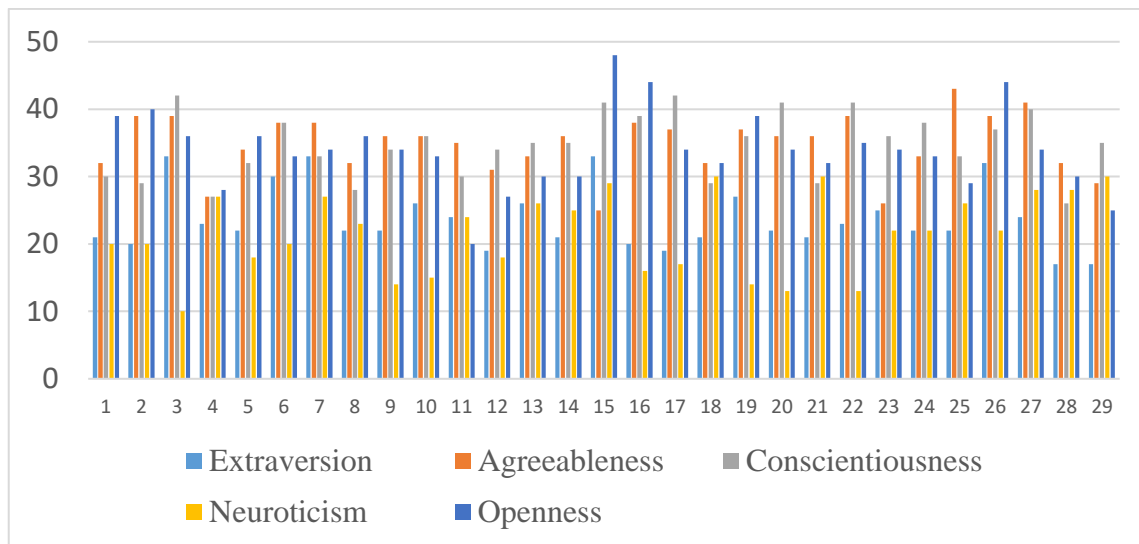


The second will be the Big Five-factor survey's descriptive statistics and graphical representation. The frequency distribution for extraversion, agreeableness, conscientiousness, neuroticism and openness for the combined Big Five-factor questionnaire starting with extraversion showed a median of 22, mode of 22, mean of 23.68 and a standard deviation of 4.62. Agreeableness had a median of 36 mode of 36, and the mean was 34.79. The standard deviation for the trait dedication was 4.41. The conscientiousness median was 35, the mode was 29, and the mean was 34.68, while the standard deviation was 4.78. Looking at the frequency distribution for neuroticism, we have a median of 22, a mode of 20, a mean of 21.62 and a standard deviation of 5.94, the most significant deviation among all the traits. Last, the median of openness is 34, and mode is 34, with a mean of 33.89 and a standard deviation of 5.79, which is also pretty significant but slightly less than what we had for neuroticism. Overall, as shown by the graphical representation, the members had a large swing among the different traits but still showed the members tended to be the highest in agreeableness, followed closely by conscientiousness and openness. The participants were lower in extraversion and the lowest in neuroticism. Below is the descriptive statistic in table nine and the graphical representation in figure twenty-four.

Table 9*Descriptive Statistics Big Five Factor Survey (Combined Group)*

| Extraversion | | Agreeableness | |
|--------------------|-----------|--------------------|------------|
| Mean | 23.68966 | Mean | 34.79310 |
| Standard Error | 0.85975 | Standard Error | 0.81908 |
| Median | 22.00000 | Median | 36.00000 |
| Mode | 22.00000 | Mode | 36.00000 |
| Standard Deviation | 4.62990 | Standard Deviation | 4.41086 |
| Sample Variance | 21.43596 | Sample Variance | 19.45567 |
| Kurtosis | -0.00999 | Kurtosis | -0.06336 |
| Skewness | 0.88769 | Skewness | -0.54606 |
| Range | 16.00000 | Range | 18.00000 |
| Minimum | 17.00000 | Minimum | 25.00000 |
| Maximum | 33.00000 | Maximum | 43.00000 |
| Sum | 687.00000 | Sum | 1009.00000 |
| Count | 29.00000 | Count | 29.00000 |

| Conscientiousness | | Neuroticism | | Openness | |
|--------------------|------------|--------------------|------------|--------------------|-----------|
| Mean | 34.68966 | Mean | 21.620690 | Mean | 33.89655 |
| Standard Error | 0.88794 | Standard Error | 1.105755 | Standard Error | 1.07633 |
| Median | 35.00000 | Median | 22.000000 | Median | 34.00000 |
| Mode | 29.00000 | Mode | 20.000000 | Mode | 34.00000 |
| Standard Deviation | 4.78169 | Standard Deviation | 5.954673 | Standard Deviation | 5.79621 |
| Sample Variance | 22.86453 | Sample Variance | 35.458128 | Sample Variance | 33.59606 |
| Kurtosis | -1.04180 | Kurtosis | -1.118127 | Kurtosis | 1.02326 |
| Skewness | -0.12002 | Skewness | -0.216133 | Skewness | 0.22831 |
| Range | 16.00000 | Range | 20.000000 | Range | 28.00000 |
| Minimum | 26.00000 | Minimum | 10.000000 | Minimum | 20.00000 |
| Maximum | 42.00000 | Maximum | 30.000000 | Maximum | 48.00000 |
| Sum | 1006.00000 | Sum | 627.000000 | Sum | 983.00000 |
| Count | 29.00000 | Count | 29.000000 | Count | 29.00000 |

Figure 24*Big Five Factor Survey (Combined Group)*

Next will be the Pearson correlation coefficient which the analysis of variance will follow. For the combined Utrecht Work and well-being engagement level questionnaire, when comparing engagement level to extraversion, the correlation coefficient was $(r) = 0.21$, which is > 0.10 , so it would show a slightly positive correlation. Comparing engagement to agreeableness showed a result of $(r) = 0.01$, which is < 0.10 , delivering no correlation. Conscientiousness showed a correlation coefficient of $(r) = 0.28$, which is $>$ then 0.25 , which signifies a positive medium correlation. The results for neuroticism were $(r) = -0.102$, which again is > 0.10 , so there is a slight negative correlation. Finally, the results for openness were $(r) = 0.06$, which is < 0.10 , so it signifies no correlation similar to agreeableness. Extraversion and conscientiousness showed a positive relationship, with conscientiousness being the most significant, while neuroticism showed a negative relationship. This seems to align with other researchers' findings and makes sense for this research. Extraverted people prefer to work in groups and, if done, would likely increase their engagement. Being alone or unable to collaborate or work with others would likely result in an unhappy and less engaged person. At the same time, conscientiousness can be

defined as someone who tends to be organized, show self-discipline, drives for achievement and prefers to plan things rather than be spontaneous. Training and courses that tend to be organized and planned would work better for them and would likely help them engage more.

Finally is the two-way analysis of variance (ANOVA), which, as stated earlier and outlined by Kaufmann and Schering (2007), is an inferential statistical tool that allows the ability to perform hypothesis tests to determine which factors being analyzed influence the outcome and then have the ability to infer the findings to the general population.

When analyzing the results of the two-way variance analysis conducted with replication, the (F) and (F) critical values will be interpreted as a tool to help determine if the data is significant to reject the null hypothesis. As in the case of the (F) value and (F) critical value, an (F) value more than the (F) critical value would show significance to reject the null hypothesis. But this alone won't be used as this could result in an error which is why the (P) value will also be used. If the (P) value is less than $(\alpha) = .05$, we would reject the null hypothesis and conclude that there is a significant statistical difference between the groups.

When looking at the combined Utrecht Work and well-being survey with the two groups, the (F) value before the courses was 0.99 and 623.69 after the training. While the (F) critical value before the course was 3.89 and after the classes were 3.04. By looking at this alone, we can see that the (F) value after training was significant $>$ the (F) critical value after training, which would then indicate the rejection of the null hypothesis. The (P) value was 0.32 before the courses and 1.78E-78 after the classes. Since 1.78E-78 is significantly $<$ $(\alpha) = .05$, we can again reject the null hypothesis and see a significant difference before and after completing the courses.

This chapter covered all the qualitative and quantitative data gathered from the two study groups. As stated earlier, the purpose of using a mixed method was to gain a broader picture and use the qualitative data to understand better the quantitative data gathered. In this chapter, multiple statistical tools were used, including descriptive, Pearson's correlation coefficient, and analysis of variance. Descriptive statistics were used to explain better and display the gathered participant data. In contrast, the two-way analysis of variance (ANOVA) was used to investigate whether training affected engagement. Where as Pearson's correlation coefficient was used to analyze the results and investigate what personality traits combined with training courses affected an individual's engagement level. All these tools were used to lay out and explore all the data gathered in this chapter which will then be used to answer the research questions in the next chapter.

CHAPTER V: DISCUSSION

5.1 Discussion of Results

The previous chapter provides an analysis of the gathered group data from two distinctly different industries and, with that, paints an overall picture of the relationships. The relationships being examined are the personality traits within the Big Five-factor inventory, training preference focused on the primary methods used in organizations today, which were lecture-based, e-learning and active collaborative learning and finally, the relationship that has on engagement. This group data was then combined, analyzed and run through inferential statistics to establish if the findings could be inferred in the general population.

A combination of qualitative and quantitative data was gathered for this mixed-method study. The tools used were unstructured interviews, observations, open-ended questions, and structured close-ended questionnaires following the 5-point Likert scale. The reason for using a mixed method, as discussed earlier, was to provide a broad complete picture of the participants and be able to use that to back up the quantitative data gathered and understand it in more detail. In this chapter, an in-depth discussion of the results along with the limitations of this study and suggested future research will be written as well as this chapter will answer and explain the research questions.

The main objective of this study is to contribute to the research and literature on organizational behaviour. This study evaluates if structuring training in Canadian Foodservice Distribution and Emergency Service businesses to employee preference based on their personality would result in increased engagement. This analysis is being accomplished using the findings and recommendations of other researchers that have

studied work place engagement and training method effectiveness, which is detailed in the literature review section. Two specific research studies are from Laguna and Purc (2016), who studied and found a link between personalities and training initiation. They showed a positive relationship between personality traits and intention to undertake training. The second study was from Kraiger and Ford (2021), who sought a primary method for enhancing training effectiveness. They found that learners will learn better if provided instruction in their preferred method.

The following five sections in this chapter will summarize the discussions based on the significant findings mentioned in the last chapter and aim to answer the research questions and explain how the sub-objectives were achieved.

5.2 Discussion of Research Question One

The first question in this research study asks, “what impact does tailored training specific to individual personality have on employee engagement in a medium and small Canadian business.” To answer this question, multiple tools were used. A Big Five-factor inventory questionnaire and two Utrecht Work and well-being questionnaires were done before any of the courses, and one after all the courses were completed. In addition, an open-ended questionnaire about training preference and personal development frequency, end-of-course evaluations and knowledge tests were completed at the end of each training course. As well unstructured interviews were conducted, and observations of participants were done while participants were involved in the lecture-based and collaborative method of training.

All the qualitative and quantitative data gathered from these tools were then analyzed. Finally, the quantitative data was run through descriptive analysis, Pearson correlation coefficient and analysis of variance (ANOVA) statistical models, all

documented in detail in the previous chapter. Interesting results were found using these statistical models and the qualitative data gathered.

Focusing on this research question, starting with the Foodservice Distribution group and using Pearson's correlation coefficient results which are looking at the Big Five-Factor questionnaire results and the results of the Utrecht Work and well-being questionnaire first, and following the recommendations from Hemphill (2003). There is a large correlation between extraversion and engagement, with similar results for conscientiousness. At the same time, there is a medium correlation between engagement and openness, a small correlation for agreeableness, and a medium negative correlation between engagement and neuroticism.

Using these correlation findings from the Foodservice Distribution group and following the recommendations from Frick (1996), who stated that criterion of $> 5\%$ needed to be set to signify significance. What is shown is that of the five personality traits that increased were conscientiousness and neuroticism. In addition, conscientiousness increased by 4%, and neuroticism also increased by 4%. So although these two are lower than the significance level set of $> 5\%$, they still show an increase close to the significance level and are something to note.

For the course delivered in a collaborative method, participants at or below the median and high in neuroticism did worse than the rest, who were higher in conscientiousness and lower in neuroticism. For the lecture-based course, those who received lower marks were either higher than the average in neuroticism, preferred a different training method, or combined both. Similar findings in the e-learning: the preference and whether someone was high or low in neuroticism seemed to determine the mark they would receive. In all three training courses, it was also noticed that when a member was high in conscientiousness and low in neuroticism, they tended to do better on

the end-of-course quiz. In combination with their training preference, this result seemed to line up, and they, on average, had the best results on these tests.

Looking at the Emergency Service group and Pearson's correlation coefficient results, we notice that agreeableness, conscientiousness and openness show a correlation with engagement. Still, in the case of this group, unlike the others, the results are all of a small correlation. Following a set criterion of $> 5\%$, the personality traits showing an increase are conscientiousness and neuroticism, similar to the findings in the other group. Conscientiousness showed a rise of 15%, while neuroticism only slightly increased by 2%. So in the case of this group, conscientiousness does meet the criterion, but neuroticism doesn't but, again, does show a slight increase which is something to note. Comparing these results to the end of the course quiz, we found the same findings in the Foodservice Distribution group. Those findings were that those high in neuroticism and at the median level or lower in conscientiousness received the lowest marks. In contrast, those high in conscientiousness and lower in neuroticism received higher marks.

For the collaborative method, it was found that those low in conscientiousness tended to receive lower marks, which was the same for those low in conscientiousness and high in neuroticism. However, those for collaborative was their preferred method tended to do better overall and receive the highest marks. In the case of collaboration, most members in this group preferred this method, and most members received a mark of 100%. With the e-learning course, we again had the same findings where those high in neuroticism and at or below the medium in conscientiousness did the worst on the course. Still, in the case of this course, this was not any of their preferences, and most did very well, but that could be attributed to the fact that they do this same course annually.

In analyzing the five personality traits, it's noticed that those higher in extraversion in both groups preferred collaborative methods and did better in these courses, which

makes sense based on the description of this trait where the main one is they like to be in groups and are higher energy. In contrast, those low in extraversion tended to prefer lecture-based or e-learning and again did better in these courses. It was also noted that both groups' median of agreeableness and openness was high, which could be why they volunteered to be involved in this research study. This finding would align with Laguna and Purc's (2016) results, who found that conscientiousness and openness to experience were significant in training action planning, and openness was also associated with training intention.

Finally, the analysis of variance (ANOVA) from the combined group's personality traits and engagement levels shows significant evidence from before and after tailored training to reject the null hypothesis. The null hypothesis, in this case, would be that the combination of personality traits and tailored training does not affect engagement level.

In conclusion, for this research question which asked, "what impact does tailored training specific to individual personality have on employee engagement in a medium and small Canadian business" we see that there are positive results that personality preference does play a part in the engagement. We can see this through the participant's stated training method preference, end-of-course test results, and statistical analysis. There is a positive result that personality does impact engagement. Still, when only looking at the Pearson correlation coefficient, the evidence isn't strong enough to express a significant increase when conducting a statistical analysis of only the quantitative data or to be able to infer this to the general population. But, combined with the qualitative data and the analysis of variance (ANOVA), the results from the quantitative analysis present a more significant effect and a complete picture signifying that engagement does seem to increase with training tailored to personality preference. Still, the participants in this study from both groups also felt some training should be delivered in various methods to keep it

interesting and thought it would produce better instruction. Since each person has different personalities and preferences, and the training for specific topics is potentially better conducted in certain methods, this would make sense to cover the broader audience and achieve the best result.

In addition to the results explained so far, this study confirms the findings of other research, specifically Laguna and Purc (2016), that certain personality traits play a significant role in training style preference and initiation. For example, this study found that extraversion and introversion were linked to the preferred method. At the same time, conscientiousness and neuroticism were related to engagement, while agreeableness and openness were linked to training initiation. This study also has shown a positive relationship between training and engagement within the Emergency Service and Foodservice Distribution sectors within British Columbia, Canada and that those findings can be inferred to the general population based on the results found in the analysis of variance (ANOVA).

5.3 Discussion of Research Question Two

The second question in this research study is broken down into two parts. The first is, “how effective is structuring training methods such as lecture style, e-learning and an integrative approach to individual personality styles and preferences?” The second part of this question asks, “are the results consistent among the two groups used in this research, and what impact does tailored training specific to individual personality have on employee engagement in a medium and small Canadian business.” These questions feed off the previous question that specifically looked at the result to show engagement and went a bit into preference and the results. To answer these questions, we need to look closer at the

qualitative data gathered from the participants in the two groups combined and separately and at the end of the course test results obtained.

In analyzing the results from the Foodservice Distribution participant personalities, it can be seen that the median of all of the traits, except for neuroticism, is significantly above what would be considered 50% when adding up the highest possible result in each questionnaire in the Big Five-factor and dividing in half. Starting with the course delivered in a collaborative format, the personality traits that play a part in higher marks are those mid to high in extraversion and those low in neuroticism. When looking at the preferences and long answer questionnaire focused on the collaborative formate, it's shown that 27% of the participants preferred the collaborative formate. Of that 27%, the majority were mid to high in extraversion, which again makes sense based on what is known about that personality trait.

Now moving focus to the Emergency Service group again, on average, they are significantly higher than what would be the 50% mark on the Five-factor personality inventory, except for neuroticism. Focusing on the personalities that seem to play a part in participant marks, we see those high in extraversion appearing to receive high marks and those high in neuroticism receiving lower marks. While it also noted that even if participants were high in extraversion, they tended to receive lower marks if they were elevated in neuroticism. For the preferences and long answer questionnaire focused on the collaborative format, 82% of the participants preferred the collaborative structure. Of that 82%, the majority were mid to high in extraversion, while those who did not choose this method were low.

Moving on to the lecture-based course for the Foodservice Distribution group, the same findings found in the collaborative approach are also seen in the lecture-based course regarding neuroticism and the lower marks. Still, extraversion doesn't seem to play as

significant a part in this group as in the others. The same finding regarding neuroticism in the Emergency Service group is not found. In this group, there seems to be no relationship between lower marks and neuroticism or higher marks and extraversion. Examining the result from the member's stated preferences and long answer questionnaire for the Foodservice Distribution group, 37% of the participants preferred a lecture-based method, and those that chose this method received higher marks. Still, as stated earlier, there was no significant trend in personality. For the Emergency Service group, only 18% preferred this instructional method, and similarly to the other group, these members tended to receive high marks in this course. Still, there didn't seem to be a relationship between the specific personality trait and marks. Still, this may have impacted the findings since all these members were mid to high in all other characteristics except neuroticism and extraversion.

In the final course, delivered through e-learning, the personality traits for the Foodservice Distribution group that seemed to play a part in participant grades were neuroticism and extraversion. Those high in neuroticism tended to receive lower marks, and those with moderate to low extraversion did better. While in the Emergency Service group, this result was negligible and likely just by chance that a couple of participants high in neuroticism scored lower while others not high also scored lower. Looking at the final preference and long answer form for the Foodservice Distribution group for e-learning, it was found that 36% preferred this method. Those who chose this method tended to be mid to low in extraversion and neuroticism. While in the last preference and long answer questionnaire for the emergency service group, unlike the former group, none of the members selected e-learning as a preferred method.

Overall, the Emergency service group was high in openness, conscientiousness, and agreeableness and low in neuroticism. This group also participated in self-

improvement courses substantially more frequently than the food service. Compared to the Foodservice group, the Emergency service group was high in conscientiousness and agreeableness but slightly lower than the other group in openness and higher in neuroticism.

Looking at the combined result from the Foodservice Distribution and Emergency Service group, we notice that those who prefer specific training delivery methods tended to perform better in those courses, as seen through the end-of-course exams. The personality traits that seem to play the most significant part are neuroticism and extraversion. The members who were higher in neuroticism, regardless of the other characteristics, tended to do worse overall in courses except for lecture-based classes. Those high in extraversion tended to be better in active learning or collaborative delivered approaches. In contrast, those low in extraversion did better in e-learning or lecture-based, where collaboration and teamwork were less. The Emergency Service group participated in self-improvement courses substantially more frequently than the members of the Foodservice Distribution group, with 59% participating in more than five self-improvement courses per year.

In comparison, only 18% had participated in two or fewer self-improvement courses per year. Like the Foodservice, which was high in conscientiousness and agreeableness, this group was also higher in those traits. Still, the Foodservice Distribution group was also slightly lower in openness and higher in neuroticism than the Emergency Service group, with 70% of those members being above average in neuroticism. A similar 67% of those members higher in neuroticism with this group also stated they had participated two times or less per year in a self-improvement course.

In concluding and answering this two-part research question starting with the first part, which asks, “how effective is structuring training methods such as lecture style, e-

learning and an integrative approach to individual personality styles and preferences.” Structuring training methods look to be effective, as shown in this study. The result seems to be improved material retention and engagement and aligns with the participant's preferences in most cases. This result also aligns with the results by Kraiger and Ford (2021), who found that learners will learn better if provided instruction in their preferred method. The findings also confirm Lee et al. (2000) research, which suggested that training tailored to characteristics would be more effective. Looking at the specific personality traits that seemed to affect the results were extraversion and neuroticism, which likely is because all members were higher in all other characteristics, which aligns with the finding of Laguna and Purc (2016), that found that conscientiousness and openness to experience were significant in training action planning. Openness was also associated with training intention, which was likely why these members volunteered for this study.

In answering the second part of the question, the results are reasonably consistent among the two groups in this research. Extraversion and neuroticism are related to performance and retention of material, and conscientiousness has the most significant impact on engagement. There was a considerable increase in engagement in the Foodservice Distribution group and a minor increase in engagement in the Emergency Service group. The results also showed that tailored training impacts engagement and can be attributed to the two industry groups in this study but also inferred to the general population based on the analysis of variance (ANOVA).

5.4 Discussion of Sub-objective One

Sub-objective one aimed to understand better the personal impact of behaviour and personality training in small and medium-sized Canadian businesses, specifically focusing

on the Foodservice Distribution and Emergency Service sectors. This sub-objective was accomplished and described in detail throughout the study. It was also linked to the previous two research questions to some extent. This study has shown that training style preference is significant for businesses to consider when designing training to ensure they get the total commitment of the trainees and for the training to accomplish the outcome successfully. This finding is because trainees are more likely to enjoy, fully engage, take on and commit to training delivered in their preferred style, as confirmed by the interviews and questionnaire feedback gathered from the participants in both groups involved in this study.

This study has also established that certain personality traits within the Big Five-factor personality inventory are shown to be more impactful to the participant's success in training and their preference towards one type of training over another. The study also established a relationship between personality, engagement, and tailored training. The most notable traits for this are openness to experience, conscientiousness, extraversion and neuroticism. Extraversion and neuroticism play a role in material retention and participant outcomes in training. Openness plays a part in participating in the activity, while higher conscientiousness results in higher engagement. In contrast, higher neuroticism seemed to decrease engagement and decrease material retention.

5.5 Discussion of Sub-objective Two

In sub-objective two, the goal was to have the ability to design, test and provide insights and recommendations about training, engagement and Big five-factor personality to industry leaders in the Canadian Foodservice Distribution and Emergency Service sector. This sub-objective was also accomplished. Although the findings were not substantial due to the study size, they were still evident that one's personality plays a role

in the training someone will take on, whether they will be engaged, and how successful the training might be. As well, through this study, information about effective training duration for the different types of delivery methods was observed, as the structure and design for the material being instructed on and what personality traits would be best for what kind of training style overall.

For example, to help maintain engagement while conducting lecture-based training, the instruction should be kept to less than thirty minutes. Time after this, the participants' attention decreases even for those that prefer this training method. This result has been studied and documented prior within academic and hospital settings, but this study brings some of those findings to the Foodservice Distribution and Emergency Service industry. While at the same time, feedback was received that participants preferred shorter, more frequent training and courses as they found it easier to absorb the information and felt it was easier to keep focused on the information being delivered. It was also noted that the best delivery might be to use a combination of training methods in one course. These findings are currently and frequently used in academics today. Typically in academics, a topic is described, students are asked to discuss it in some way, a brief lecture is done, and students are brought back to discuss and do some active learning. Then the students do readings or online portions independently before returning to class. A similar format might fit well with various personality traits and work to increase engagement, which might work well in the industry, especially for more detailed or longer courses and training requirements. This duration knowledge could even be beneficial for things like meetings. Meetings tend to be dry and in a more lecture format, so to achieve the best attention of the audience, it could be beneficial to keep these to less than twenty minutes and do more frequently if needed. This recommendation would also decrease wasted time and keep the engagement level high.

This study provided new information about personality, preference and training delivery style and how that may impact engagement. This new information could then increase the effectiveness of the training while at the same time increasing employee engagement. Still, it was also noted through feedback from the participants in this study that training should be constant throughout the year. This backs and gives rationalization to the findings of the Foodservice Distribution group, which increased engagement after training even if covering topics that had previously been trained. Also, the difference between the two groups was visually seen in the level of collaboration and teamwork. This increase is likely due to one group that commits to training twice a year compared to the other, which trains multiple times yearly. The Emergency Service group showed a substantial increase in collaboration and teamwork compared to the Foodservice Distribution group.

5.6 Discussion of Sub-objective Three

The final sub-objective of this study was to understand what specific personality traits within the Big Five-factor model used in this research are most beneficial at increasing engagement in training, resulting in a positive outcome, thus helping training practices be more effective. The specific finding of the personality traits was discussed in the past two sub-objective and research questions. The personality traits most beneficial to engagement are high conscientiousness and low neuroticism. Still, it also has to be noted that openness is essential for the initiation of training and extraversion for the specific style of training being conducted. As everyone has different mixes of personality traits, it would be beneficial to businesses to find out what personality traits their members possess and what their baseline engagement level is to start with before courses or training. It would also be beneficial to get feedback on what type of training method the participants

prefer. Then the activity could be tailored more in favour of the preference and in line with the personality trait. Then after the training, have the participants do training evaluations and, throughout the year, do more engagement questionnaires to see if the activity is helping to increase engagement.

Also, following the research from Dweck (2006) on the growth mindset mentioned in this study, it is noted that one can change and improve themselves, and Dweck (2006) states that personality is one of the traits that could change, even if it's a small amount. This growth mindset would mean that it might be beneficial to conduct personality trait evaluations annually to evaluate the members' characteristics so that training can be targeted toward those traits. It also should be noted that certain personality traits, such as someone high in neuroticism, tend to reduce engagement. If that characteristic could be slightly reduced for those high in neuroticism through training, among other initiatives, the likely result would be more engaged members.

CHAPTER VI: SUMMARY, IMPLICATIONS, AND RECOMMENDATIONS

6.1 Summary

The survival of companies depends on maximizing profits. According to Osborne and Hammoud (2017), finding ways to engage employees is vital to help reduce turnover, increase retention, help employees feel appreciated and improve overall employee performance. Training is one of those primary areas to help increase engagement and help employees feel valued and involved, as stated by el Hajjar and Alkhanaizi (2018). Training is not only a significant factor in attaining the goals and objectives of an organization but has also been shown effective in improving the performance of employees. This finding is because it increases competence and engagement, and without employee engagement and effectiveness, the result is retention issues and performance issues resulting in profit loss. For example, in 2021, the US food service sector recorded a retention loss of more than 40% of its workforce (Serenko, 2022). Preventing retention loss and keeping employees satisfied is why it's so vital that business leaders look at ways to increase engagement. One primary way is through training, but training is expensive, so it's crucial that training is effective and achieves the desired outcome. Research conducted by Lee et al. (2000) indicated that employee personality characteristics are essential in deciding training success and suggested that training tailored to those characteristics would be more effective.

This research confirms the finding from Lee et al. (2000) that training based on individual preferences and characteristics helps improve engagement, material retention, and training initiation. In addition, the participants in this study unanimously stated they would prefer more focused training and would be more likely to enjoy and engage in the

activity. This results in increased effectiveness of the training being conducted, increased job satisfaction, and improved feeling of being involved, which participants in the study also noted. This finding is part of the complete package shown to increase engagement and performance, as outlined in the research conducted by Kahn (1990).

6.2 Implications

Personality plays a significant role in our daily interactions, as documented by Ma (2005). So it only makes sense that employee personality should be considered when implementing training initiatives to have the most effective training. If training is conducted more frequently and employees enjoy it, they will be more willing to take on the activity, engage in it, and will retain more information. Therefore, this training initiative will result in a more engaged, satisfied workforce trained effectively to do their jobs. This result leads to higher performance, increased profits and decreased retention issues, which helps businesses reduce rehiring costs. In addition, employee engagement helps the company stay profitable and provides employee job satisfaction, which increases their family's quality of life, and directly impacts the local economy in which the business is located.

A qualitative study on the manifestation of engagement was done by Bakker (2008), who concluded that organizational behaviour approaches must be included in the pursuit of employee happiness, health, and engagement and that there was a positive relationship between engagement and performance. In contrast, disengagement has been reported in the USA as being upwards of \$350 billion annually, as written by Osborne and Hammoud (2017). However, this can be counteracted through leadership focusing on employee engagement, as shown by McLaughlan et al. (2011), to increase employee satisfaction, commitment, effort, and retention by 14 to 39%. This finding was backed up

by the research conducted by Antony (2018), who found that organizations with engaged employees tend to perform better, resulting in increased productivity, retention, loyalty, positive attitude, and reduced absenteeism.

The research results in this study provide small and medium businesses with the data and techniques needed to help increase employee engagement and job satisfaction, which is shown to increase profitability and reduce hiring costs. While the study is focused on a small Emergency Service business in British Columbia, Canada and a medium Foodservice Distribution business in British Columbia and Alberta, Canada, the results could be generalized to other companies within Canada and North America. The results also build on the literature focused on engagement, training and personality and create a robust beneficial foundation for a business to use to increase employee job satisfaction and success.

The results of this study provide strong evidence and tools that business leaders could use to help ensure training is effective and to help increase employee engagement. The results also encourage them to recognize personality's value and impact on our daily lives and decisions. Therefore, using and considering employee engagement strategies and training initiatives is beneficial and vital. However, it also noted that these tools are not a 'One and Done' scenario. Leaders must be committed to their continual implementation for them to be influential.

This study aimed to provide tools business leaders could use to help increase employee engagement. While at the same time, the tools aim to help increase job satisfaction, increase training effectiveness and result in helping to increase business potential success.

6.3 Recommendations for Future Research

Further research with a broader population and larger sample size would be recommended. It would also be beneficial for the study to be conducted across North America and other nations to gain insight into different nationalities and see if the findings are similar. It would also be interesting to see what the discovery would be if the timeline of the study was increased and the number of courses conducted on each group was also increased.

This study focused on a small Emergency Service business and a medium Foodservice Distribution company, and it would be recommended to conduct this study on industries outside these two. Also would be recommended for future research on large and mega-corporations were the potential impact would be even more significant.

The businesses included in this study have been informed that the findings will be distributed to them and presented with recommendations based on the results. The research in this study also intends to link this study on social media and publish this study for others to utilize.

6.4 Limitations of the Study

This study aims to provide evidence and tools that can be utilized in all businesses, but as with any study, it has limitations. One of the primary limitations is the sample size of twenty-nine participants from two businesses which were located in British Columbia and Alberta, Canada, one being a small business and the other a medium-sized business. The result of the small sample size of this research is shown to be generalizable using the analysis of variance (ANOVA), but due to the small sample size may not be very generalizable to the broader business context, and the sample size is something to take into account as a primary limitation. The second limitation that contributes to reduced generalizability is that those included in this research study were volunteers. This result

may have impacted who signed up for the study. Those that chose to volunteer were also elevated in openness to experience. Based on Laguna and Purc's (2016) findings, training intention is influenced by those higher in openness to experience. So this study has the potential for not being a good representation of the general public who have varied personality characteristics. However, this limitation was taken into account, and through the use of a mixed-method approach, the study gained a broader insight into the findings that would otherwise not have been known had only quantitative data been collected.

This study took into account the importance that is obtained from using a mixed-method approach. A mixed method approach increases the strength and reduces the research's weaknesses which can happen if using just a qualitative or quantitative approach. But in doing so, it added a limitation: the significantly increased time required and the limitation to broaden the research participants pool without substantially increasing the time needed and more sophisticated analysis tools necessary to analyze the collected data effectively.

Another limitation is that the study didn't include more qualitative data, such as data that could have been gained from formal interviews. Research that uses a good blend of quantitative and qualitative methods could contain richer data because the quantitative analysis does not explain why or how something happens, which can be gained from qualitative research (Lazar, Faciu, Mata & Lazar, 2016). While this is a limitation with no other study looking at this particular area and the risk of adding too much, resulting in poor or incomplete research, it is felt this is the best way to accomplish this research effectively.

This study also excluded non-English speaking members of the company's population because the researcher and surveys are only in English, which could limit some of the study's generalizability while limiting the study size and available participants. In

addition, the data analysis software used is based on availability and cost as the researcher entirely funds this study. Furthermore, this self-funding and driven research limits the ability to include other businesses, which could have increased the generalizability of the study. Still, with that being said, the findings are significant and, based on other studies on engagement, personality, and training, add to the generalizability of this study.

This research also worked around the availability of the participants while at work and the time limits of the study, which limits the time that can be taken for research data gathering and training. Of course, this is a limitation, but ensuring ethical standards and that all participants participate voluntarily is of the utmost importance in ensuring this study is conducted effectively and ethically, as this is the most critical part of almost any study.

The timeline for this study, continued repetitive training, and being a leader in each of these companies were also research limitations. The study could be run over an extended period with multiple courses to gain the best results. This way, the study produces the best results to show if training focused on characteristics increases engagement over time. This study used a different course topic on each of the three training methods, and to help reduce the study's limitations, a second business in another industry was also included. The limitation caused by being a leader in these businesses was that participants may have hesitated to communicate full feedback on the training methods, delivery, or work as their authentic selves for fear that information may be reported back to leadership. While this was a limitation being a member of these companies and a leader also had advantages. The benefits were the ability to gain better insight, understand industry-specific terms, and the ability and opportunity to approach participants to gain feedback which would likely be more difficult for someone they felt was a stranger or not part of the industry.

Finally, there is a lack of previous research in the specific area of this research paper. Typically prior studies provide a foundation for the research being investigated, and further research is used to build upon that primary research. Still, that lack of previous research is why this research is essential. Due to the lack of foundational studies, this research focused on the highly studied areas tightly linked to this topic: training, engagement, personality, and performance. This lack of foundational studies is also why this research study uses quantitative and qualitative data to gain the most data and participant insight, providing a solid base for further research. As mentioned in the literature review, other researchers acknowledged the research gap and recommended further studies, and this research paper will be the first step in filling that gap. Still, it's also highly recommended that further research be also done.

6.5 Conclusion

While many factors affect someone's engagement level, some primary ones have been identified as having the most influence. These are clear and open communication, diversity, honesty, transparency, a learning culture, fair pay, recognition, and the tools and skills to complete the task and challenging tasks. Further work and continual concentration must be applied to maintain and improve engagement. This study better explains how personality characteristics and training influence engagement.

This study was conducted with a mixed method approach to provide the best in-depth understanding of the research findings while also having the ability to gain personal insights from the participants used in this research study. Insight was also acquired from being a leader in both companies and having worked in the Emergency Service business for over five years and the Foodservice Distribution company for over fifteen years. This tenure and experience provided in-depth industry and company-specific knowledge and

trust with the participants in this research, giving the ability to provide the best possible results. In addition, both of these businesses in this research are continually and actively working on improving and are open to new ideas, as they understand their longevity and success depend on this.

This research found that management needs to focus on their workforce's individual characteristics, personalities and preferences when implementing training programs because these characteristics influence all actions people make. Human resources within businesses have used personality characteristics for highering and promotion initiatives for years, but this study also shows the importance of adding them to training implementation. This study found that training outcomes, job satisfaction and engagement were all influenced by personality traits and that business personnel would enjoy and be more involved in training focused on their preferences. This focus also showed an increase in engagement level. So this study adds to the knowledge base but also helps to provide business leaders with another tool that can be used to help increase job satisfaction and engagement. It was also noted that business leaders must consider their members' attention span when conducting training courses during meetings. It was recorded and observed that the average attention span for lecture-based and presented the information was thirty minutes or less. So to ensure training effectiveness and engagement, this is another factor that should be considered.

A workforce that are satisfied with their job, have the tools and skills to accomplish it, and are engaged are shown through many studies, some of which are in this study to have high performance and low retention issues. This study does not aim to provide a 'golden key' to increase engagement. A 'golden key' likely doesn't exist because people are complex, and no one person is the same as another, so specific tools may work better on one person than what they do on another. Still, this study provides one

more key area that business leaders should focus on along with the other engagement initiatives they already use.

While this research concentrated on small and medium Canadian businesses, the results fit and add to the current global literature. As well this study also adds to the current research studies that show an increase in job satisfaction, and engagement will increase revenue through higher performance and decrease expenses through having a higher output and lower retention issues. Still, for this positive trend to continue, business leaders must commit to continual improvement and implementation of engagement initiatives, which this study provides another area to focus on. This commitment to engagement initiatives would provide a satisfied, hard-working workforce and a successful business that feeds the local economy.

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APPENDIX A

PARTICIPANT INTRODUCTORY LETTERS

Emergency Service Team Members,

Many of you likely know me, my name is Lee Roberts, and I was previously a team member. I am currently working on completing a doctoral degree, and as part of that, one of the companies I reached out to and was graciously given the ok to research by the Executive team is _____. The project is focused on increasing training effectiveness; specifically, the research title is Behaviour Targeted Training: Improving Employee Engagement in a Small and Medium Canadian Business.

Your participation would be greatly appreciated, but it is entirely voluntary. This research study aims to gather data through questionnaires and quizzes conducted before and after three training sessions. The Team would organize the training on what they felt was most beneficial but will be structured around three primary training styles: traditional lecture, collaborative/integrative and e-learning. Your involvement would include participating in the regular Tuesday night training, filling out a few simple questionnaires and completing a quiz after each training session. The questionnaires are simple multiple-choice format and should take only five to 10 minutes to fill out, and instructions on how to fill them out will be on the top of each of the four questionnaires and explained by myself.

The surveys you will be asked to fill out are a demographic, engagement level, personality and training evaluation survey. After each training session, you will fill out a training evaluation survey and complete a quiz. Once you have completed all three training sessions, you will be asked to do another engagement level questionnaire. The data collected will then be analyzed and graphically represented to show if there is an

increase in engagement based on training method preference. I appreciate your time and the teams and aim to make the process as easy as possible.

This research must follow strict ethics and confidentiality standards the ethics board sets. As part of this, I am putting steps in place to help prevent information from leading back to any of the participants involved. This includes, excluding the team name and specific location, using your team number, not your name (and adding a digit to each). Also, the data displayed in the research paper will accumulate multiple participants' data, not one specific participant. In addition, the personal info is held by myself, password protected and encrypted, and no other person will be given access to this information. Finally, as well as part of the ethics I must follow, I will not be discussing your personal data that is gathered with anyone.

Once the training and research are complete, I will present and explain the overall results to the Executive Team. (Again, no personal individual information will be shared)

I will be available to answer questions in person at the AGM meeting and throughout the training sessions, but please feel free to reach out to me with any urgent personal questions or concerns you may have, and I will reach out to you as quickly as I can. (Please reach out to me using my email address robertslee6679@gmail.com)

Thank you for your help and support in being involved in this research project

Regards,

Lee Roberts

Food Service Team Members,

As communicated by the CEO a few weeks ago, I am currently working on completing a doctoral degree. As part of that, one of the companies I reached out to and was graciously given the ok by the CEO to research is _____. The project is focused on increasing training effectiveness; specifically, the research title is Behaviour Targeted Training: Improving Employee Engagement in a Small and Medium Canadian Business. This letter introduces you to the overall concept, the participant's part in the research and the ethical and confidential practices. Your participation would be greatly appreciated, but it is entirely voluntary.

This research study aims to gather data through questionnaires and quizzes conducted before and after three training sessions. First, I will select the trainers and subjects and give the trainer a delivery method. The training will consist of Excel training, traceability, and food safety training, which are imperative to the company's day-to-day operations. The three primary training styles to deliver the training will be traditional lecture, collaborative/integrative and e-learning. Your involvement would include participating in the training, filling out a few simple questionnaires and completing a quiz after each training session. The questionnaires are simple multiple-choice format and should take only five to 10 minutes to fill out, and instructions on how to fill them out will be on the top of each of the four questionnaires and explained by myself.

The surveys you will be asked to fill out are a demographic, engagement level, personality and training evaluation survey. After each training session, you will fill out a training evaluation survey and complete a quiz. Once you have completed all three training sessions, you will be asked to do another engagement level questionnaire. The data collected will then be statistically analyzed and graphically represented to show if there is an increase in engagement and training material retention based on training

method preference. I appreciate your time and aim to make the process as easy as possible.

This research must follow strict ethics and confidentiality standards the ethics board sets. As part of this, I am putting steps in place to help prevent information from leading back to any of the participants involved. This includes, excluding the companies name and specific location, using your employee number, not your name (and adding a digit to the employee number). Also, the data displayed in the research paper will accumulate multiple participants' data, not one specific participant. In addition, the personal info is held by myself, password protected and encrypted, and no other person will be given access to this information. Finally, as well as part of the ethics I must follow, I will not be discussing your personal data that is gathered with anyone.

Once the training and research are complete, I will present and explain the overall results to the Leadership Team. (Again, no personal individual information will be shared)

Please let me know if you are not interested in volunteering to be part of this study. My next communication will include the training dates and times, and I will be available to answer questions in person during the two in-person training sessions, but please feel free to contact me with any urgent personal questions or concerns you may have, which can be done in person or through email. (Please reach out to me using my email address robertslee6679@gmail.com)

Thank you for your help and support in being involved in this research project

Regards,

Lee Roberts

APPENDIX B
SURVEY COVER LETTER

Behaviour Targeted Training: Improving Employee Engagement in a Small and
Medium Canadian Business

Dear Participant,

This research study aims to gather data through questionnaires before and after the three training sessions. This data collected will then be analyzed and graphically represented to show if there is an increase in engagement based on training method preference.

I would appreciate your time in completing these questionnaires. They are a simple multiple-choice format and should take only five to 10 minutes to fill out, and instructions on how to fill them out will be on the top of each of the four questionnaires. After completing the three training seminars, you will be asked to fill in two of the four a second time.

(Your identity is completely confidential)

Thank you for your help and support in being involved in this research project

Regards,

Lee Roberts

Doctoral Student

Contact number: 604 – 861 – 5134

Email: robertslee6679@gmail.com

APPENDIX C
INFORMED CONSENT

Informed Consent Form

Research project title:

Behaviour Targeted Training: Improving Employee Engagement in a Small and
Medium Canadian Business

Research investigator:

Lee Roberts

Participant:

Your participation in this research and filling out the questionnaires is voluntary. We don't anticipate that there are any risks associated with your participation, but you have the right to stop or withdraw from the research at any time.

Thank you for agreeing to be a part of the above research project and participate in the questionnaires. This consent form is necessary for us to ensure that you understand the purpose of your involvement and that you agree to the conditions of your participation. Would you therefore read the accompanying information sheet and then sign this form to certify that you approve the following:

- the results of the questionnaires will be analysed by (Lee Roberts) as research investigator

- access to the filled in questionnaire will be limited to (Lee Roberts) and academic colleagues and researchers with whom he might collaborate as part of the research process
- any summary made available through academic publication or other academic outlets will be anonymized so that you cannot be identified, and care will be taken
- to ensure that other information that could identify yourself is not revealed
- any variation of the conditions above will only occur with your further explicit approval

All or part of the content may be used;

- In academic papers, policy papers or news articles
- On our website and in other media that we may produce such as spoken presentations
- On other feedback events
- In an archive of the project as noted above

By signing this form I agree that;

1. I am voluntarily taking part in this project. I understand that I don't have to take part, and I can stop the interview at any time;
2. I have read the Information sheet;
3. I don't expect to receive any benefit or payment for my participation;
4. I have been able to ask any questions I might have, and I understand that I am free to contact the researcher with any questions I may have in the future.

Contact Information

- Researcher: Lee Roberts
- Address: 3519 Bassano Terrace Abbotsford B.C Canada Tel:604-861-5134
- Email: robertslee6679@gmail.com

If you are worried about this research, or if you are concerned about how it is being conducted, you can contact SSBM by email at contact@ssbm.ch

APPENDIX D
QUESTIONNAIRES

Training Session Preference Questions (Long Answer)

- 1) Which of the three training sessions did you like the most, and why?

- 2) Which of the three training sessions did you like the least, and why?

- 3) Do you feel if training were conducted in your preferred style, that you would enjoy the training more? Why?

Training Evaluation Survey

Team member or employee number _____

Date _____

- 1) How many times in the past 12 months have you engaged in personal development training?
 - a) 1 to 2 times
 - b) 2 to 3 times
 - c) More than three times
 - d) More than five times
 - e) None

- 2) Do you enjoy working in groups to brainstorm and learn together?
 - a) Yes
 - b) No

- 3) How satisfied are you with the training?
 - a) Very satisfied
 - b) Satisfied
 - c) Somewhat satisfied
 - d) Neither satisfied nor dissatisfied
 - e) Somewhat dissatisfied
 - f) Dissatisfied
 - g) Very dissatisfied

- 4) How relevant was the training material to your role?

- a) Extremely relevant
 - b) Very relevant
 - c) Somewhat relevant
 - d) Not so relevant
 - e) Not at all relevant
- 5) Did the training deliver what you were expecting?
- a) Yes
 - b) No
- 6) Do you like taking courses online?
- a) Yes
 - b) No
- 7) How much new information did you learn?
- a) A great deal
 - b) A lot
 - c) A moderate amount
 - d) A little
 - e) None at all
- 8) How clear was the information presented?
- a) Extremely clear
 - b) Very clear
 - c) Moderately clear
 - d) Slightly clear

- e) Not at all clear
- 9) What training style do you prefer of these three?
- a) Traditional lecture style
 - b) E-learning
 - c) Collaborative group learning

The Big Five Inventory (BFI)

Here are several characteristics that may or may not apply to you. Please write a number 1-5 to the left of each statement to indicate the extent to which you agree or disagree with that statement.

| Disagree Strongly 1 | Disagree a little 2 | Neither agree nor disagree 3 | Agree a little 4 | Agree strongly 5 |
|---------------------------|---------------------------|------------------------------------|------------------------|------------------------|
|---------------------------|---------------------------|------------------------------------|------------------------|------------------------|

I see Myself as Someone Who...

- | | |
|------------------------------------------------|-------------------------------------------------------|
| ___ 1. Is talkative | ___ 23. Tends to be lazy |
| ___ 2. Tends to find fault with others | ___ 24. Is emotionally stable, not easily upset |
| ___ 3. Does a thorough job | ___ 25. Is inventive |
| ___ 4. Is depressed, blue | ___ 26. Has an assertive personality |
| ___ 5. Is original, comes up with new ideas | ___ 27. Can be cold and aloof |
| ___ 6. Is reserved | ___ 28. Perseveres until the task is finished |
| ___ 7. Is helpful and unselfish with others | ___ 29. Can be moody |
| ___ 8. Can be somewhat careless | ___ 30. Values artistic, aesthetic experiences |
| ___ 9. Is relaxed, handles stress well | ___ 31. Is sometimes shy, inhibited |
| ___ 10. Is curious about many different things | ___ 32. Is considerate and kind to almost everyone |

- | | |
|---------------------------------------|---------------------------------------------------------|
| ___ 11. Is full of energy | ___ 33. Does things efficiently |
| ___ 12. Starts quarrels with others | ___ 34. Remains calm in tense situations |
| ___ 13. Is a reliable worker | ___ 35. Prefers work that is routine |
| ___ 14. Can be tense | ___ 36. Is outgoing, sociable |
| ___ 15. Is ingenious, a deep thinker | ___ 37. Is sometimes rude to others |
| ___ 16. Generates a lot of enthusiasm | ___ 38. Makes plans and follows through with them |
| ___ 17. Has a forgiving nature | ___ 39. Gets nervous easily |
| ___ 18. Tends to be disorganized | ___ 40. Likes to reflect, play with ideas |
| ___ 19. Worries a lot | ___ 41. Has few artistic interests |
| ___ 20. Has an active imagination | ___ 42. Likes to cooperate with others |
| ___ 21. Tends to be quiet | ___ 43. Is easily distracted |
| ___ 22. Is generally trusting | ___ 44. Is sophisticated in art, music or literature |

Scoring: BFI scale scoring (“R” denotes reverse-scored items):

Extraversion: 1, 6R, 11, 16, 21R, 26, 31R, 36

Agreeableness: 2R, 7, 12R, 17, 22, 27R, 32, 37R, 42

Conscientiousness: 3, 8R, 13, 18R, 23R, 28, 33, 38, 43R

Neuroticism: 4, 9R, 14, 19, 24R, 29, 34R, 39

Openness: 5, 10, 15, 20, 25, 30, 35R, 40, 41R, 44

Work & Well-being Survey (UWES)

The following 17 statements are about how you feel at work. Please read each statement carefully and decide if you ever feel this way about your job. If you have never had this feeling, put the '0' (zero) in the space before the statement. If you have had this feeling, indicate how often you feel it by placing the number (from 1 to 5) that best describes how frequently you feel that way.

| | Rarely | Sometimes | Often | Very Often | Always |
|-------|-------------------------|----------------------|-------------|-----------------------|-----------|
| 0 | 1 | 2 | 3 | 4 | 5 |
| Never | Once a month or less | A few times month | Once a week | A few times a week | Every day |

1. _____ At my work, I feel bursting with energy (VI1)
2. _____ I find the work that I do full of meaning and purpose (DE1)
3. _____ Time flies when I'm working (AB1)
4. _____ At my job, I feel strong and vigorous (VI2)
5. _____ I am enthusiastic about my job (DE2)
6. _____ When I am working, I forget everything else around me (AB2)
7. _____ My job inspires me (DE3)
8. _____ When I get up in the morning, I feel like going to work (VI3)
9. _____ I feel happy when I am working intensely (AB3)
10. _____ I am proud on the work that I do (DE4)
11. _____ I am immersed in my work (AB4)

12. _____ I can continue working for very long periods at a time (VI4)
13. _____ To me, my job is challenging (DE5)
14. _____ I get carried away when I'm working (AB5)
15. _____ At my job, I am very resilient mentally (VI5)
16. _____ It is difficult to detach myself from my job (AB6)
17. _____ At my work, I always persevere, even when things do not go well (VI6)

VI= vigor; DE = dedication; AB = absorption

(Bakker & Schaufeli, 2003)

Demographic Survey

Team member or employee number _____

Date _____

- 1) What is your gender
 - a) Female
 - b) Male
 - c) Transgender male
 - d) Transgender female
 - e) Prefer not to answer

- 2) What is your age?
 - a) 18 to 24
 - b) 25 to 34
 - c) 35 to 44
 - d) 45 to 54
 - e) 55 to 64
 - f) 65 to 74
 - g) 75 or older

- 3) What is your race or ethnicity?
 - a) Asian
 - b) Black or African American
 - c) Hispanic or Latino

- d) Middle Eastern
 - e) Native American
 - f) White
 - g) Other non listed
- 4) What is the highest level of education you have completed?
- a) Did not attend school
 - b) Attended high school
 - c) Graduated from high school
 - d) 1 or 2 years of college
 - e) Undergraduate degree
 - f) Graduate degree
 - g) Trade
- 5) Which of the following best describes your current relationship status?
- a) Married
 - b) Widowed
 - c) Divorced
 - d) Separated
 - e) Common-law
 - f) In a relationship
 - g) Single