

ELIMINATING SKILL GAPS BY OFFERING CUSTOMIZED TRAINING &
DEVELOPMENT PROGRAMS

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ELIMINATING SKILL GAPS BY OFFERING CUSTOMIZED TRAINING &
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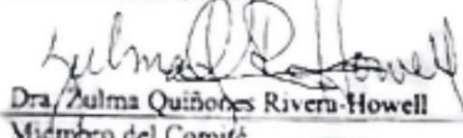
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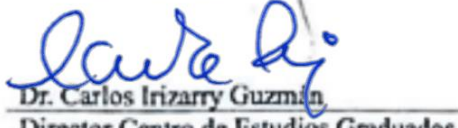
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Chapter I: Introduction

The skills gap is not only a national challenge, but also a global one. Across the world, employers are struggling to find workers with the right competencies and qualifications for the jobs they offer. According to the World Economic Forum (2020), by 2022, at least 54% of all employees will require significant reskilling and upskilling. Moreover, the COVID-19 pandemic has accelerated the pace of change and disruption in the labor market, creating new demands and uncertainties for workers and employers alike. Therefore, it is imperative to understand the causes, consequences, and solutions of the skills gap at a global level. This background section will provide an overview of the main trends, challenges, and opportunities that shape the skills gap phenomenon around the world and the importance of training and development in closing the gap.

I. Background

The United States is facing a growing skills gap that threatens the nation's long-term economic prosperity. The workforce simply does not have enough workers and skilled candidates to fill an ever-increasing number of high-skill jobs (SHRM, n.d.). As the future of work continues to evolve, more jobs become automated while others are rendered obsolete. Nonetheless, this also opens opportunities for new skills and professions. Thus, teaching employees' new skills while also elevating existent skills can help address the skills gap within organizations.

A skills gap or shortage describes a fundamental mismatch between the skills that employers rely upon in their employees, and the skills that job seekers possess. This mismatch makes it difficult for individuals to find jobs and for employers to find appropriately trained workers. (Levesque, 2019). In other words, a skills gap occurs when the existent workforce's

skillset does not line up with the skills necessary for their jobs. Companies tend to focus on hard skills primarily, but employees may be lacking on both hard and soft skills. Therefore, employers must identify and signal the skills they need, as well as develop mechanisms to recruit, train, and retain employees (Levesque, 2019).

Training refers to a planned effort by a company to facilitate employees' learning of job-related competencies (Noe, 2019). Mainly organizations go for training programs to improve productivity and quality, to increase organizational and employee morale, to motivate employees, to achieve financial gains, for prevention from industrial accidents, to provide wider awareness to employees that leads them to enhance their personal growth, to reduce employees' turnover intentions, for enhancement of company's image through conducting ethics training and for updating employees skills to align them with company's goals and objectives (McDougall & Beattie, 1998). Thus, understanding which skills the employees are lacking and effectively training the workforce in these skills can help shrink the skills gap. Through Andragogy techniques and by targeting their type of intelligence, employees would be given a better opportunity to effectively learn new skills.

Accenture (2018; 2021), McKinsey & Company (2017; 2020), Wiley University Services (2022), and OECD (2019) in recent studies explore the need for employee reskilling, the crippling skills gap, and the skills necessary for their success. From their studies they have found that companies believe there to be a skills gap and a need for reskilling their employees. Moreover, there is a healthy and growing body of research on the challenges and potential solutions related to the skills gap (Levesque, 2019). Therefore, companies are aware of the increasing crippling skill gap and the need to reskill or upskill their employees. OECD (2019) emphasizes the need for skills by stating that the future of work will bring about substantial

changes in skill requirements. Because of this, they insist that better access to adult learning opportunities will be crucial for workers to benefit from these changes. Even though the need for skills is crucial and training is essential for their development, OECD (2019) state that many adults today do not participate in training and training programs available are not always relevant and useful, so there is a need to improve training quality and make adult learning systems more aligned to changing skills needs. This is quite alarming because if nothing is done to prevent this, the skill gap will continue to widen as the years pass by.

II. Problem or Opportunity

The rapid pace of technological change and the increasing demand for new skills pose a significant challenge for employers and employees alike. For this study, we recognized that the skills gap poses a problem as hiring and filling jobs is stricter as applicants lack the necessary skills for the position. Therefore, by analyzing the skills gap, companies can gain insights on their employees' skills set and enhance their development and performance. Furthermore, offering employee development can serve as a competitive advantage for companies.

III. Justification

In terms of this study's justification, we understood that as technology advances, companies are finding themselves needing a new set of skills to thrive and effectively grow. A 2017 study by the McKinsey Global Institute, found that as many as 375 million workers globally might have to change occupations in the next decade to meet companies' needs and that automation could free employees to spend as much as 30 percent of their time on new work. Fast forward three years and in a new study, McKinsey (2020) found that nine in ten executives and managers say their organizations either face skill gaps already or expect gaps to develop within

the next five years. Furthermore, from this recent study, McKinsey (2020) found that 87 percent of respondents say they either are experiencing gaps now or expect them within a few years.

Additionally, a post-pandemic influx of people into the market does not lessen the challenge of recruiting the right candidate with the right skills for the right job. As companies regroup and reinvent, the skills deficit is projected to intensify (Accenture, 2021). Moreover, as intelligent systems and machines reshape the nature of work, people will need entirely new skillsets. However, the very skills that are growing in importance are not taught in classrooms. They are acquired through practice and experience, often over long periods of time. Some large corporations are experimenting with new lifelong learning methods, but traditional education and learning systems are ineffective and inappropriate for the new skills challenge. Smaller organizations are most at risk if they cannot apply new learning techniques (Accenture, 2018).

Also, Wiley University Services (2022) recent study found that most business leaders agree that to better meet their goals, they need their teams to acquire new skills. From their study, they found that fifty-five percent of respondents believe there is a skills gap within their organization. Not only that, but also, fifty-seven percent of respondents believe that upskilling or reskilling their employees is the best way to close employee skills gaps (Wiley University Services, 2022).

Aside from these studies on the skill gap crisis, OECD (2019) explains that the skills required to enter and progress in the labor market are undergoing profound changes because of megatrends such as technological progress, new trade patterns and population ageing. This process is driven by shifts not only in the occupational structure of employment but also in changing skill requirements within each occupation. OECD (2019) further explains that skill demands have been gradually, but consistently, shifting towards a more intensive use of

cognitive and interpersonal skills under the combined forces of technology and globalization. Nonetheless, they express that most adult training systems are ill equipped for this challenge and participation in training varies widely, but what is common across all OECD countries is that those who need training the most train the least. These groups include the low skilled, older adults, displaced workers, those whose jobs are most at risk from automation, as well as non-standard workers. In addition, training is not always of good quality and aligned to the needs of the labor market (OECD, 2019). Because of the increasing skill demand, there is an urgent need to scale up and strengthen training opportunities for adults to keep their skills up to date or acquire new ones over longer working lives.

Due to these studies' results on the crippling skill gap, this study aims to determine the benefits of closing the skills gap within a large company in the outsourcing industry. In addition to this aim, the purpose of this study is to determine which skills the employees consider necessary for their success. Aside from determining the lacking skills, this study seeks to determine the correlation of lack of skills with employee retention, productivity, motivation, and satisfaction.

The results from this study aid in better understanding the cause of the skill gap within the employees, what type of training is more effective and which skills the employees are mostly lacking. Furthermore, using the analyzed results, training centered on the lacking skills can be developed to boost the employees' learning and development. Through the results, we are able to understand which type of intelligences were prominent and thus, prepare the training materials catered to these types of intelligences. By doing so, the company can give human resources the chance to experience training in a whole new perspective where they can learn depending on their type of intelligence while also rendering positive results. This, in turn, can prepare and aid

them in their job in a stress-free way while also elevating their satisfaction, motivation, performance and/or productivity.

IV. Objectives

The objective of the study was to determine if by closing the skills gap can employee retention, motivation, satisfaction, and/or performance/productivity be improved. And the following:

1. To determine the cause of the skill gap within the employees.
2. To determine if employees are aware of the skills gap.
3. To determine if employees are self-motivated to improve their skills.
4. To determine which skills the employees consider they lack necessary for their success.
5. To determine with the type of training is most effective.
6. To determine the correlation of lack of skills with employee retention, performance/productivity, motivation, and/or satisfaction.

V. Research Questions

The general overall question was to determine by closing the skills gap can employee retention, motivation, satisfaction, and/or performance/productivity be improved?

1. What is the cause of the skill gap within the organization?
2. Are employees aware of the skills gap?
3. Are employees self-motivated to improve their skills?
4. What are the skills the employees feel they are lacking necessary for their job success?
5. What is the best training method for employees?
6. What is the correlation of lack of skills with employee retention, performance/productivity, motivation, and/or satisfaction?

VI. Hypothesis

The general hypothesis of this study was:

H0: Closing the skills gap does improve employee retention, motivation, satisfaction, and/or performance/productivity.

Ha: Closing the skills gap does not improve employee retention, motivation, satisfaction, and/or performance/productivity.

Additional hypotheses of this study were:

H0¹: Employees believe the company offers opportunities for reskilling.

Ha¹: Employees believe the company does not offer opportunities for reskilling.

H0²: Employees are aware of the skills gap.

Ha²: Employees are not aware of the skills gap.

H0³: Employees are self-motivated to improve their skills and participate in available training opportunities.

Ha³: Employees are not self-motivated to improve their skills and participate in available training opportunities.

H0⁴: Employees feel the skills they are lacking are mostly soft skills.

Ha⁴: Employees feel the skills they are lacking are mostly hard skills.

H0⁵: Employees prefer training given in traditional strategies or methods.

Ha⁵: Employees prefer training given in non-traditional strategies or methods.

H0⁶: There is a positive correlation between closing the skills gap with employee retention, performance/productivity, motivation, and/or satisfaction.

Ha⁶: There is a negative correlation between closing the skills gap with employee retention, performance/productivity, motivation, and/or satisfaction.

VII. Research Variables

Independent Variables: Employees

Dependent Variables:

- Employee motivation
- Employee productivity
- Employee satisfaction
- Employee retention
- Skills employees feel they are lacking (Soft vs Hard Skills)
- Type of Training (Traditional vs Non-Traditional)
- Available Training Opportunities

Factors to be Considered:

- Employees' desire and self-motivation to learn and gain new skills.

VIII. Theoretical Framework

For this research, three theoretical frameworks were chosen. The first framework was the Kirkpatrick Model which is a model developed by Donald Kirkpatrick. The model focuses on a series of four (4) levels for evaluating training programs. The four levels are: (1) reaction, (2) learning, (3) behavior, and (4) results (Kirkpatrick, 1998). The first level, reaction, refers to the degree to which participants find the training favorable, engaging, and relevant to their jobs. The second, learning, is the degree to which participants acquire the intended knowledge, skills, attitude, confidence, and commitment based on their participation in the training. Next, the third, behavior, is the degree to which participants apply what they learned during training when they

are back on the job. Following the third is Kirkpatrick's last and fourth level, results, which is the degree to which targeted outcomes occur because of the training and the support and accountability package (Kirkpatrick Partners, 2009).

The second framework was the Multiple Intelligence Theory which was penned by Howard Gardner in 1993. Howard Gardner initially formulated a list of seven intelligences. His listing was provisional. The first two have been typically valued in schools; the next three are usually associated with the arts; and the final two are what Howard Gardner called 'personal intelligences' (Gardner 1999). Gardner (2003) elaborates on eight (8) distinct forms or types of intelligence, these being: (1) verbal-linguistic, (2) logical-mathematical, (3) musical-rhythmic, (4) visual-spatial, (5) interpersonal, (6) intrapersonal, (7) kinesthetic, and (8) naturalist. Gardner (2003) explains that verbal-linguistic refers to the ability to use words in thought, language, or writing; this can be known as word smart. On the other hand, logical-mathematical is the ability to think logically, solve problems, calculate, determine relationships, find patterns, hypothesize, and work with abstract symbols; this can also be known as reasoning or number smart.

Following these comes musical-rhythmic which is the ability to musical elements such as, but not limited to, timbre, rhythm, pitch, because of this it is also known as music smart. The fourth intelligence is visual-spatial which relates to the ability to recreate visual experiences and orient in the world, thus also known as picture smart. Next comes interpersonal and intrapersonal, the first is the ability to communicate and relate to others, hence why it is also known as people smart, while the second is the ability to look within oneself and be aware of one's thoughts and feelings, which is why it is also known as self-smart. The seventh intelligence is kinesthetic, also known as body smart, which is the ability to coordinate the body and mind in an agile fashion.

Lastly, naturalist, or nature smart, is the ability to make distinctions in the physical world and relate more to nature.

The third framework was the Andragogy or Adult Learning Theory by Malcolm Knowles. Knowles (1980) popularized the concept of andragogy (“the art and science of helping adults learn”), contrasting it with pedagogy (“the art and science of teaching children”). His theory consists of six assumptions of adult learner characteristics and principles of andragogy. In 1980, Knowles penned the first four assumptions then four years later in 1984, he added the last assumption, as well as the principles that are applied to andragogy. The five assumptions of adult learners are (1) the need to know, (2) self-concept, (3) adult learner experience, (4) readiness to learn, (5) orientation to learning, and (6) motivation to learn. First, the need to know, Knowles (1984) explains that adults must be involved in the planning and evaluation of the learning; they need to understand why they need to learn the material before taking time to learn it. Knowles (1990) explains (1) self-concept as when a person matures their self-concept moves from dependency to increasing self-directness towards their personal learning. Next, (2) adult learner experience relates to a person’s accumulated growing reservoir of experience they can leverage as a resource for learning. On the other hand, for (3) readiness to learn, Knowles (1990) explains that as people mature their readiness to learn becomes correlated to their social and life related roles. Subsequently, (4) orientation to learning occurs when a person matures, they embrace a problem-centered approach towards learning and opt for immediate application. Lastly, (5) motivation to learn implies that as people mature, they are motivated to learn by internal factors.

IX. Conceptual Model

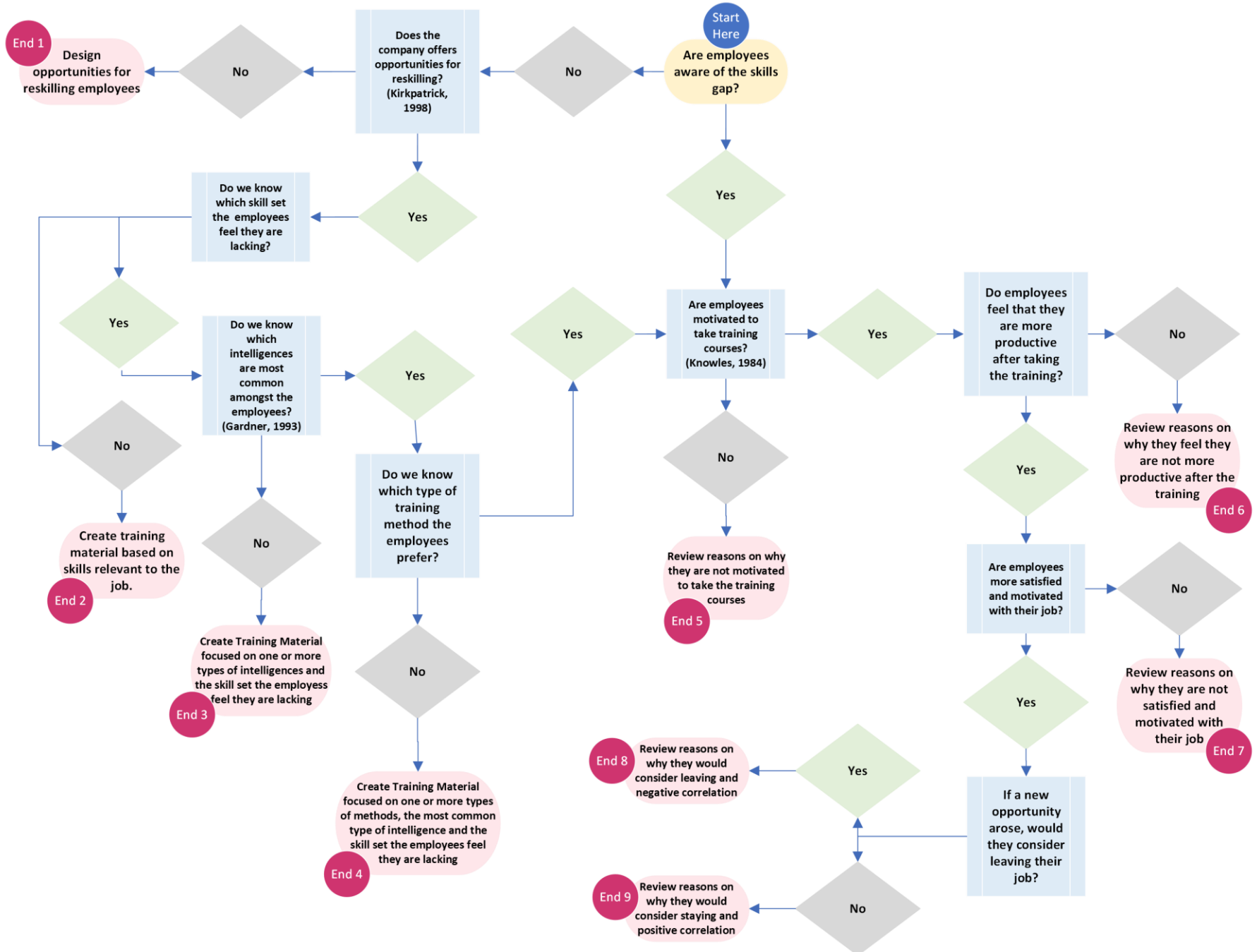
The conceptual model below describes how the different variables of the study interact with each other. It begins by questioning if the employees are aware of the skill gap. Depending on

the result would be where it branches out. In the case that they are not, the model would proceed to the next step and question if the organization offers opportunities for reskilling. This step aligns with one of the theoretical frameworks of the study, Kirkpatrick Model which is a model developed by Donald Kirkpatrick in 1998. If the company does not offer such opportunities, the model would reach its first (1) end which is to design opportunities for reskilling employees. In the case that the company offers opportunities for reskilling, the model goes on to question if we would know which skills set the employees are lacking. If we do not know, we would reach the second (2) end of the model is met which would be to create training material based on skills relevant to the job. However, if we do know the skill set the employees are lacking, the model would go on to the next step which would be to question if we know which intelligences are most common amongst the employees. This step aligns with one of the theoretical frameworks of the study, Multiple Intelligence Theory which was penned by Howard Gardner in 1993. In the case that we do not know the types of intelligences, we would reach the third (3) end of the model which is to create training material focused on one or more types of intelligences and the skill sets the employees feel they are lacking. On the other hand, if we do know their types of intelligence, then the model would proceed to the next step and question if we know which type of training method the employees prefer. In the case that we do not know, we would reach the fourth (4) end of the model which is to create training material focused on one or more types of methods, the most common type of intelligence and the skill set the employees feel they are lacking.

Nonetheless, if we do know which type of training they prefer, we would proceed to the following step and question if the employees are motivated to take training courses. This step aligns with one of the theoretical frameworks of the study, Andragogy or Adult Learning Theory

by Malcolm Knowles (1980, 1984). If employees are not motivated, we would have reached the fifth (5) end of the model which is to review the reasons as to why they are not motivated to take the training courses. If the employees are motivated to take the training courses, the model continues to the next step and questions if they feel more productive after taking the training. If they do not, we would reach the sixth (6) end and review why they do not feel productive after the training. Nevertheless, if they do feel more productive, the model would advance to the following step and question if the employee is more satisfied and motivated with their job. In the case that they are not, we would reach the sixth (6) end and review why they are not satisfied and motivated with their job. However, if they are more satisfied and motivated, the model would continue to the next step and question if they would consider leaving the organization if a new opportunity appeared. If they leave, the eight (8) end would be met, and we would review the reasons they would consider leaving along with the negative correlation of closing skills gap and the improvement of productivity, satisfaction, motivation, and retention. On the other hand, if they would stay, we reach the ninth (9) end of the model and review their reasons for staying and the positive correlation of the closing skills gap and the improvement of productivity, satisfaction, motivation, and retention.

However, in the case that the employees are aware of the skills gap and the company offers opportunities for reskilling, the model would advance to question if the employees are motivated to take training courses. This step unites both branches and depending on the outcome would be the ends met as explained previously.



X. Alignment Table

Objectives	Research Questions	Hypothesis	Variable
To determine if by closing the skills gap can employee retention, motivation, satisfaction, and/or performance/productivity be improved.	By closing the skills gap can employee retention, motivation, satisfaction and/or performance/productivity be improved?	H0: Closing the skills gap does improve employee retention, motivation, satisfaction, and/or performance/productivity. Ha: Closing the skills gap does not improve employee retention, motivation, satisfaction, and/or performance/productivity.	Employees Employee motivation Employee performance/productivity Employee satisfaction Employee retention
To determine the cause of the skill gap within the employees.	What is the cause of the skill gap within the organization?	H01: Employees believe the company offers opportunities for reskilling. Ha1: Employees believe the company does not offer opportunities for reskilling.	Employees Available Training Opportunities
To determine if employees are aware of the skills gap	Are employees aware of the skills gap?	H02: Employees are aware of the skills gap. Ha2: Employees are not aware of the skills gap.	Employees Skills employees feel they are lacking (Soft vs Hard Skills)
To determine if employees are self-motivated to improve their skills	Are employees self-motivated to improve their skills?	H03: Employees are self-motivated to improve their skills and participate in available training opportunities. Ha3: Employees are not self-motivated to improve their skills and participate in available training opportunities.	Employees Employees' desire and self-motivation to learn and gain new skills Available Training Opportunities
To determine which skills the employees consider they are lacking	What are the skills the employees feel they are lacking necessary for their job success?	H04: Employees feel the skills they are lacking are mostly soft skills. Ha4: Employees feel the skills they are lacking are mostly hard skills.	Employees Skills employees feel they are lacking (Soft vs Hard Skills)

necessary for their success.			
To determine with type of training is most effective.	What is the best training method for employees?	H05: Employees prefer training given in traditional strategies or methods. Ha5: Employees prefer training given in non-traditional strategies or methods.	Employees Type of Training (Traditional vs Non-Traditional)
To determine the correlation of lack of skills with employee retention, productivity, motivation, and/or satisfaction.	What is the correlation of lack of skills with employee retention, productivity, motivation, and/or satisfaction?	H06: There is a positive correlation between closing the skills gap with employee retention, performance/productivity, motivation, and/or satisfaction. Ha6: There is a negative correlation between closing the skills gap with employee retention, performance/productivity, motivation, and/or satisfaction.	Employees Employee motivation Employee performance/productivity Employee satisfaction Employee retention

XI. Delimitations

The study was delimited to the employees of a large company in the Outsourcing industry.

XII. Term Definitions

- Employee motivation: Employee motivation is defined as commitment, the energy levels, and the creativity that the employees bring to their job. Even though employees' motivation doesn't directly influence an organization's growth, it is like a necessary precondition because lack of motivation among the employees can have a detrimental effect on their performance. Motivation can be defined as the inherent enthusiasm and driving force to accomplish a task. It can be used in directing employees' behavior and actions for a constructive vision or goal. Proper motivation turns an employee into a loyal asset and helps in maintaining the retention rate (Ramyasri & Ch, 2020).
- Employee performance: the level of success of employees in carrying out their duties and responsibilities. Employee performance is key in determining the achievement of organizational goals; therefore, organizations look for ways to motivate their employees to give their best performance on the job (Tamunomiebi & Oyibo, 2020).
- Employee productivity: Employee productivity is an assessment or evaluation of the efficiency of a worker or group of workers. Employee productivity is the driving force behind an organization's growth and productivity. Employee productivity is so essential to an organization, to the extent that it is capable of determining the level of profit and loss of that company. Employee productivity directly affects a company's profit (Jamiu, 2019).

- Human Resources: The department or support systems responsible for personnel sourcing and hiring, applicant tracking, skills development and tracking, benefits administration, and compliance with associated government regulations (Entrepreneur, n.d.)
- Traditional training: can be defined as training that is conducted in person and attended in person (WizIQ+, 2018). Some of these methods are, but not limited to, coaching, instructor-led, mentoring & apprenticeship, on the job training, and shadowing.
- Non-Traditional training: focus more on computer-based training, hands-on and interactive training that is done outside of the classroom and sometimes without the need for an instructor. Some of these methods are, but not limited to, augmented reality, e-learning, interactive, gamification, hands-on, virtual reality, and webinars.
- Skills gap: A skill gap, or skills gap, is the difference between an employee's skills and the skills your company requires for a specific role (Herrity, 2023).
- Training: refers to a planned effort by a company to facilitate employees' learning of job-related competencies. These competencies include knowledge, skills, or behaviors that are critical for successful job performance. The goal of training is for employees to master the knowledge, skill, learning, and behaviors emphasized in training programs and to apply them to their day-to-day activities. (Noe, 2019).
- Self-directed learning (SDL): process in which individuals take the initiative, without the help of others in planning, carrying out, and evaluating their own learning experiences (Knowles, 1975).

Summary

This chapter has provided an overview of the issues that have contributed to the skills gap within organizations. This chapter also discussed the theoretical frameworks established for the study. Furthermore, it set the foundation for the study detailing the study's objectives, research questions and variables, along with the hypotheses.

Next, Chapter II will set to describe the concept of training, types of training methods, influences on training, skills gap among other concepts relevant to the study. Furthermore, the chapter reviews (a) the effects of training on employee satisfaction, motivation, productivity, performance, and retention and (b) the recent research around the skills gap. This chapter illustrates the findings of previous researchers to support the present study.

Chapter II: Literature Review

The purpose of this chapter is to acquaint the reader with the subject matter related to the study. Concepts such as training, influences on training, positive effects of training, negative effects of lack of training, reasons for lack of training, and types of training methods and strategies will be explored. Additionally, the literature review will explain further about the skills gap and the types of skills sets.

Training

Training refers to a planned effort by a company to facilitate employees' learning of job-related competencies. These competencies include knowledge, skills, or behaviors that are critical for successful job performance. The goal of training is for employees to master the knowledge, skill, learning, and behaviors emphasized in training programs and to apply them to their day-to-day activities. (Noe, 2019). In addition, according to A. Khan et al. (2016), training helps the workforce adapt flawlessly to new technology thereby increasing the efficiency and productivity of individuals and organizations. Reynolds (2004) elaborates on the topic of training and states that it has a complementary role to play in accelerating. Also, he further elaborates that it should be reserved for situations that justify a more directed, expert-led approach rather than viewing it as a comprehensive and all-pervasive people development solution. In addition, he points out that the that the conventional training model tends to emphasize subject-specific knowledge, rather than trying to build core learning abilities.

Because of this, training and development interventions are among the oldest strategies for organizational change. They provide new or existing organization members with the skills and knowledge they need to perform work. The focus of training interventions has broadened from classroom methods aimed at hourly workers to varied methods, including simulations,

action learning, computer-based or online training, and case studies, intended for all levels and types of organization members. (Cummings & Worley, & Donovan, 2020). However, the war for talent, the changing nature of the workforce, shifting social expectations about work and family, and increasingly knowledge-based strategies have pressured organizations to rethink their role in managing careers and developing their human capital (Whitmore, 2017). As Chovarda (2020) explains “investing in employee development will potentially enhance an organization’s chances of retaining its people as it may increase employees’ perceived cost of leaving the organization even though developing and increasing employees’ competency may enable them to find better jobs elsewhere”. Therefore, by further developing the employees’ skills and knowledge, the company can also improve their overall performance and retention rate.

Due to this, many companies have adopted this broader perspective, which is known as high-leverage training. High-leverage training is linked to strategic business goals and objectives, uses an instructional design process to ensure that training is effective, and compares or benchmarks the company’s training programs against training programs in other companies. High-leverage training practices also help to create working conditions that encourage continuous learning. (Noe, 2023). Continuous learning requires employees to understand the entire work system, including the relationships among their jobs, their work units, and the company (Sessa, 2015). Employees are expected to acquire new skills and knowledge, apply them on the job, and share this information with other employees. By doing so, they can further cultivate the company’s intellectual capital which can serve as a competitive advantage in the long run.

Nonetheless, training can seem to be remote from reality and the skills and knowledge acquired can appear to be irrelevant. Transfer of learning problems often occur after management

or supervisory training, but even the manual skills learnt in a training center can be difficult to transfer (Armstrong, 2020). To prevent these transfer problems from occurring, Armstrong (2020) recommends that training is designed as relevant and realistic as possible, anticipating and dealing with any potential transfer difficulties. He suggests training to be to be either systematic or just-in-time to prevent transfer problems. Armstrong (2020) defines systematic training as a training that is specifically designed, planned, and implemented to meet defined needs. He explains that this type of training is created by people who know how to train and hence, the impact of this training is carefully evaluated. On the other hand, just-in-time training is training that is closely linked to the pressing and relevant needs of people by its association with immediate or imminent work activities. The training will be based on an identification of the latest requirements, priorities and plans of the participants, who will be briefed on the live situations in which their learning has to be applied. (Armstrong, 2020).

Aside from systematic and just-in-time training, Armstrong (2020) elaborates on bite-sized training which involves the provision of opportunities to acquire a specific skill or a particular piece of knowledge in a short training session focused on one activity, such as using a particular piece of software, giving feedback, or handling an enquiry about a product or service of the company. He explains that it usually carried out through e-learning and can be useful for skill development through a concentrated session or activity without diversions but weak in expanding individuals' intellectual capacity and holistic understanding of the business and too restrictive due to its dependability of line managers. Because of this, it is best for training employees in straightforward techniques that they can use immediately in their work or to complement, not replace, longer courses or developmental processes (Armstrong, 2020).

Influences on Training

There is both a direct and indirect link between training and business strategy and goals. To contribute to a company's success, training activities should help the company achieve its business strategy (Noe, 2019). A business strategy is a plan that integrates the company's goals, policies, and actions. Also, the business strategy tends to influence how the company uses physical, human, and financial capital and thus, helps direct the company's activities for it to reach its goals. Noe elaborates on what these goals are and explains that they are what the company hopes to achieve in the medium and long-term future. Most companies' goals include financial goals, such as to maximize shareholder wealth. But companies have other goals related to employee satisfaction, industry position, and community service (Noe, 2019).

Not only does business strategy impact a company's goals, but also it has a major impact on the type and amount of training that occurs and whether resources (money, trainers' time, and program development) should be devoted to training. Also, the business strategy influences the type, level, and mix of skills needed in the company (Noe, 2019). Aside from the business strategy, another training influencer is management. Management heavily influences the conditions under which parallel structures operate. Because of this, it controls the amount of authority that members have in making recommendations, the amount of information that is shared with them, the amount of training they receive to increase their knowledge and skills, and the number of monetary rewards for participation (Cummings & Worley, & Donovan, 2020). Due to this, they coordinate most, if not all, training programs and events and are thus, one of the pivot influences of training.

Some of the most common training programs or events are catered to skills such as, but not limited to, manual, IT, interpersonal, and personal or specific roles or procedures such as, but

not limited to, team leader or supervisory roles and organizational procedures or practices (Armstrong, 2020). Aside from training programs and events, employees can also gain skills through on-the-job training. On-the-job training, or OJT, is a program designed to help employees gain hands-on knowledge in the workplace. This type of training involves employees using the resources available for them at their workplace, and it allows them to learn while integrating into their everyday work environment. Typically, managers, HR team members, and experienced coworkers provide the internal training (Campbell, 2023).

Furthermore, and according to a study conducted by Degreed, more workers first turn to their peers (55%) second only to asking their bosses whenever they wish to learn a new skill. Peer-to-peer learning is also uniquely well suited to the way we learn. People gain new skills best in any situation that includes all four stages of what we call the “Learning Loop”: gain knowledge; practice by applying that knowledge; get feedback; and reflect on what has been learned. Peer-to-peer learning encompasses all of these (Palmer & Blake, 2018). Thus, companies can also benefit from internal employees when it comes to upskilling their teams.

Nonetheless, even if done through activities or on-the-job training, measuring, and providing enterprise-level training/learning activities can be difficult. For example, during Covid-19, results show that across OECD countries, workers’ learning opportunities could have decreased by an average of 18% in case of non-formal learning, and 25% in case of the informal learning during widespread shutdown regimes. Estimates indicate that on average, medium- and low-skilled workers experience a reduction in their informal learning opportunities that is over twice as large as for tertiary educated adults. Under the widespread shutdown scenario, every week, an average tertiary-educated worker missed just over half an hour of informal learning, while a worker with, at most, upper secondary education missed nearly 1.5 hours (OECD, 2021).

A Dutch study that developed a measure of the time during which a worker is learning at work shows that workers spend on average 35% of their working time on activities from which they learn. This is far more than the time workers spend on formal training courses: informal learning activities account for 96% of the time in which workers are engaged in activities from which they learn. Given the finding that informal learning activities account for 96% of the time that workers are involved in activities from which they learn, informal learning in the workplace is far more important for the human capital development of the working population than formal learning. However, this does not mean that participation in formal training is not important. Formal training and informal learning appear to be complementary, although this finding is probably also due to a selection effect: workers who participate in a training course spend on average five percentage points more time on informal learning in the workplace than workers who do not, and 34% of the workers who participated in formal training report that the training stimulated them to learn more at work (De Grip, 2015).

However, measured, the extent and quality of enterprise-level training varies between enterprises, both across and within industry sectors. The studies by Hayton et al. (1996) found that firms characteristically differ in: (1) their reliance upon external training; (2) their reliance upon accredited and regulated training qualifications; (3) their engagement with public competency standards and training regulation arrangements; (4) the range and variety of training methods that they adopt; and (5) the extent to which they formalize their internal training processes. Because of this, there are some internal and external factors that can influence a company's training even further. Long, Ryan, Burke, and Hopkins (1999) further elaborate on some of the aspects that can influence training and development; these are, but not limited to, (1) worker and job characteristics; (2) enterprise characteristics; and (3) sociopolitical and economic

environment. Furthermore, LaMarco (2018) explains that for a training program to be effective, it needs to have a purpose and then implement the right training methods. They list some factors influencing the effectiveness of training programs, such as but not limited to, the purpose of the program, the resources available to the company, audience of the program, and the trainers involved. All these aspects mentioned previously can affect direct or indirectly the training offered by companies, given, and taken by employees and given the effects will be the rendered results.

Positive Effects of Training

When it comes to the effects of training, research shows it can affect various areas of the organization. Areas such as employee performance, loyalty, productivity, and satisfaction, as well as business results and organization innovation can be positively affected when training is implemented. Now a days training is the most important factor in the business world because training increases the efficiency and the effectiveness of both employees and the organization. The employee performance depends on various factors. But the most important factor of employee performance is training. Training is a continuous process to improve the caliber of employees (Yimam, 2022). Because of this, it is crucial for companies to focus on training their employees, however, some waver on these effects debating if they are truly worth the cost.

As it is known, training requires substantial allocation of monetary, human and time resources. Because of this, human resources training cost/benefit efforts are not complete until the outcomes and results have been measured. A major reason to evaluate training programs is to determine whether the training programs are accomplishing their specific training objectives (Jack, 2020). The process of training evaluation has been defined by Goldstein and Ford (2011) as the “systematic collection of descriptive and judgmental information necessary to make

effective decisions related to selection, adoption, value and modification of various instructional activities” Furthermore, the evaluation of a training program is important for a number of reasons, not the least of which is to ascertain whether the organization’s investment pays off in terms of performance improvements (Goldstein & Ford, 2011). Therefore, from a cost-effective perspective, if the effects and results of the training are not up to par with what was desired then the training shall be modified and restructured to meet planned objectives and expected goals.

Nevertheless, it is true that knowledge conversion processes can be responsible for the creation of new knowledge, without any intervention from outside the organization (Nestian, 2013). In other words, training is the most basic function of human resources management. It is the systematic application of formal processes to help people to acquire the knowledge and skills necessary for them to perform their jobs satisfactorily (Armstrong, 2020). Given that employees are the most precious asset for any organization in building up or destroying its reputation and profitability (Elnaga & Imran, 2013), it is natural that these activities have become widespread human resource management practices in organizations worldwide (Hughes et al., 2019).

In today’s business world, training is the main strategy to perform institutional objectives. It helps to improve employee and employer performance (Ruttledge & Cathcart, 2019). The more training provided the more benefits for the employees, the further enhanced skills and capabilities and the more advantages reflected back to the organization (Terrana et al., 2016). Some of the factors that determine the performance of employees are training of employees, organizational policies, working situations, job satisfaction, interactions with in the organization (Aktar et al., 2012). Thus, training is one of the most effective tools to enhance the employee performance and to achieve the organizational objectives and goals effectively and efficiently (Afroz, 2018; Garavan et al., 2020).

Moreover, it is argued that training within organizations creates a resource that is more valuable than any other, that is, committed employees (Jex & Britt, 2015). Improved capabilities, knowledge and skills of the talented workforce proved to be a major source of competitive advantage in a global market. To developing the desired knowledge, skills, and abilities of the employees, to perform well on the job, requires effective training programs that may also affect employee motivation and commitment. In order to prepare their workers to do their job as desired, organizations provide training as to optimize their employee's potential. Most of the firms, by applying long term planning, invest in the building new skills by their workforce, enabling them to cope with the uncertain conditions that they may face in future, thus, improving the employee performance through superior level of motivation and commitment. When employees recognize their organization interest in them through offering training programs, they in turn apply their best efforts to achieve organizational goals, and show high performance on job (Elnaga & Imran, 2013).

In addition, feedback and support interventions can increase employee performance, satisfaction, and morale, and provide a systematic way to monitor the development of human resources in the firm, at little or no cost (Cummings & Worley, & Donovan, 2020). By doing so, companies can achieve a competitive advantage by effectively managing people and developing high performers who will be able to reach targets and meet deadlines. Employee performance has continuously gained huge attention since a few decades ago and is frequently highlighted in society. According to Silitonga and Sadeli (2020), employee performance is frequently interpreted as representative of the organization's performance and has a direct impact on the organization's image. Employee performance, achieved through training, refers to immediate

improvements in the knowledge, skills, and abilities to carry out job related work, and hence achieve more employee commitment towards the organizational goals (Elnaga & Imran, 2013). Furthermore, employee training and development programs are critical for enhancing employee performance. In fact, a 2019 report published in The International Journal of Business and Management Research indicates that 90% of employees surveyed agreed or strongly agreed that training and development programs improved their job performance (Maryville University, n.d.).

According to Wright and Geroy (2001), employee competencies change through effective training programs. However, employee performance is also affected by some environmental factors such as corporate culture, organizational structure, job design, performance appraisal systems, power and politics prevailing in the firm and the group dynamics. To make training effective and to ensure the positive effect of training on employee performance these elements should be taken into consideration (Wright & Geroy, 2001). Moreover, when employees feel valued and heard by the organization, they're inevitable feel more committed to the company as they can tell the organization is committed to them, their career and professional growth, thus, in turn increasing their performance, motivation, and satisfaction.

Reasons and Negative Effects of Lack of Training

Training is vital to the success of an organization. Attracting, developing, and retaining high-performing employees is at the core of successful companies. High-quality training programs result in irrefutable paybacks including higher productivity, lower turnover, fewer safety accidents, and job satisfaction. It's also important to understand the cost of not training employees. Neglecting to implement training essentially means neglecting all areas of your organization. An effective training program is imperative for running a successful organization (Gendron, 2022). However, and according to a study by SurveyMonkey, only 52% of employees

think their employer provides the right amount of training (Gitlin, 2022). Thus, employees wishing to grow are bound to expand their horizons elsewhere resulting in an increase in turnover for the company.

While it's the employees' obligation to perform their assigned duties, work-related tasks, maintain and protect confidential resources and knowledge, it's the employers' obligation to provide their employees with fair wages, benefits, safe work conditions and opportunities that allow the enhancement of employee development. Reciprocal formal obligations of the employment relationship are moderated by the expectations of both parties: although loyalty and citizenship were the most expected overt behaviors for employers, self-development and vocational training are inevitable expectations and motivational factors for employees at every stage of their career (Bulut & Culha, 2010). In other words, when workers are not committed, satisfied, or believe they have better chances elsewhere they will not be motivated no matter what training strategy is used.

Kasriel (2018) elaborates on this reason for lack of training stating that companies fear that employees will leave the company after they are trained, thus causing the company to lose funds. Furthermore, he states that society is better off if workers are properly trained. Trained workers mean more productive ones, which mean more productive companies and greater overall economic output. However, individual companies are better off if they leave the cost of training to their competitors. More companies these days, it seems, want a free ride (Kasriel, 2018). This, in turn, leads to several consequences since employees that are not trained cannot develop the skills that will help them become successful and therefore, end up leaving the company after a short period of time in hopes of finding one that fits them and their goals. By having the workers leave, companies will have a high turnover rate and will suffer in

performance and productivity. This is because it takes time for new workers to adjust and grasp the essence of their job and master their duties. Nonetheless, if companies spent time training employees the time needed for them to master their skills would be reduced.

Capelli (2014) emphasizes on this by stating that people believe there are good jobs out there for people who have skills, however, employers cannot find people to hire because high schools are failing, and college students are not majoring in the hard subjects where the jobs are. In other words, the economy is suffering from a skills gap. However, when investigating deeper and in detail, one can conclude that companies want workers who already possess the skills they desire for the job. Nonetheless, these soft or hard skills may not be the ones taught in the classrooms. Therefore, and as Capelli (2014) states, what employers really want are workers they do not have to train. Employers would rather hire someone who is already trained than have someone they must train with because they believe this will lower company expenses.

According to Eric Hanushek and Lodger Weissmann (2015), raising the quality of skills of a workforce can generate a substantial payoff in economic growth. Moreover, education and skills must keep pace with the growth in technological change to raise incomes and to limit economic inequality (Goldin & Katz, 2018). Often, when discussing employee's lack of skills, the conversation focuses primarily on academic skills and educational learning while employers are mainly concerned about occupational competencies and employability skills such, but not limited to, as communication, teamwork, allocating resources, problem-solving, reliability and responsibility.

Skills Gap

A skill gap, or skills gap, is the difference between an employee's skills and the skills your company requires for a specific role. Identifying gaps between staff members' actual skill

sets and the skills necessary to complete various jobs helps organizations determine how to structure training programs that support employees' skill development. Additionally, understanding the skills gap between staff members and your company's needs can help you find candidates with the necessary qualifications during recruiting and hiring activities (Herrity, 2023). Bridging the skills gap is critical to maintaining social stability around the world. And doing so will require the actions of companies and governments together (Moldoveanu, Frey, & Moritz, 2022). Many employers say they cannot find people with the skills they need, even for entry level jobs. Skills gaps are an impediment to workers getting jobs, and to companies gaining essential talent. Skills are the building blocks of human capital. Job titles can vary widely across companies and industries, so skills tend to have a stronger signal for what a job entails (Barrett, 2018).

As the market and technology trends evolve, companies can expect to see a skills gap and organization's talent needs begin to alter. On McKinsey and Company's study (2022) they found that "most respondents say their organizations are hiring employees in an attempt to prepare for potential skill gaps, and some have made efforts to build skills in their workforces: about one-third of respondents say their organizations have begun reskilling efforts". Moreover, 87 percent of respondents say they either are experiencing gaps now or expect them within a few years (McKinsey & Company, 2022). McKinsey and Company's study (2022) also highlights that respondents, whose organizations are building employees' skills, are more likely to say their organizations are prepared to address role disruptions than are respondents whose organizations address gaps through other methods, such as hiring.

There are diverse types of skills that a worker can lack such as, but not limited to, soft, hard, foundational, and job-specific skills. Depending on the type of skill gap the person

possesses should be the type of training given and taken. Because of this, it is crucial for companies to understand the skills that need improvement to be able to target them accordingly and be able to help their workers reduce the skill gap.

Soft Skills

First, soft skills are non-technical skills that relate to how you work. They include how you interact with colleagues, how you solve problems, and how you manage your work. Soft skills include interpersonal (people) skills, communication skills, listening skills, time management, problem-solving, leadership, and empathy, among others. Furthermore, soft skills include the personal attributes, personality traits, and communication abilities needed for success on the job. Soft skills characterize how a person interacts in his or her relationships with others. (Doyle, 2022).

Another definition for soft skill is the personal attributes that enhance an individual's interactions and his/her job performance. Soft skills, also known as noncognitive behaviors, add accuracy to performance prediction. Examples of soft skills include adaptability, communication skills, cooperation, discipline, and integrity (Clark, 2013). Daniel Goleman (2020) mentions that emotional intelligence represents self-awareness; self-control; managing one's own emotions; motivation; empathy; reading other people's emotions; socializing skills such as, teamwork capability, persuasiveness, listening, leadership and managing relations with other people. Soft skills are vital to the health of any organization. If you hire an employee without a combination of several soft skills, you may find it more difficult to work with that person than with others on your team. In a worst-case scenario, one employee with poor soft skills may irreparably damage your company culture and cause stellar employees to exit the company (Peek, 2020). Unlike hard skills that can be taught, such as coding, bookkeeping, or writing, soft skills are thought to be

somewhat inherent, a part of your personality, and are developed over time as experience is gained. These traits can be defined by your attitude, motivation, adaptability, and overall personality.

Hard Skills

Peek (2020) explains that unlike soft skills that are thought to be somewhat inherent, a part of your personality, and are developed over time as experience is gained, hard skills can be taught, such as coding, bookkeeping, or writing. These traits can't be defined by your attitude, motivation, adaptability, and overall personality, but rather are skills gained through knowledge and what a person knows.

As opposed to soft skills, hard skills are defined as the technical skills to carry out a job or task. In occupational therapy, this may include competencies to administer an assessment, skills to fabricate an orthosis, or the ability to document a thorough progress note in a timely manner (Deluliis & Saylor, 2021). Hard skills are the type of skills learned through school and education. These skills possess seven dimensions that form intellectual ability. These seven dimensions are: (1) intelligence figures, (2) verbal understanding, (3) quickness of perception, (4) inductive reasoning, (5) deductive reasoning, (6) spatial visualization, and (7) memory (Robbins & Judge, 2015).

Foundational Skills

Foundational skills are the fundamental, portable skills that are critical to training and workplace success. These skills are fundamental in that they serve as a basis for supporting more advanced skill development. These skills are also portable because, rather than being job-specific, they can be applied at some level across a wide variety of occupations (Clark, 2013).

Job-Specific Skills

Job-specific skills are those skills that focus on a certain aspect of the job or activity needed to be done. Clark (2013) elaborated on these and states that determining the necessary skills for successful performance of specific job duties is the focus of a large body of research in industrial and organizational psychology. Furthermore, and as research supports, measures of foundational cognitive skills, or general cognitive ability, are the best predictors of on-the-job performance (Clark, LeFebvre, Burkum, & et al., 2013).

Training strategies or methods

Training strategies or methods can be classified as traditional and non-traditional. However, they can be further classified in various ways such as, but not limited to, classroom or instructed training, interactive, hands-on, computer-based, apprenticeship, self-directed, online or e-learning.

Traditional

When it comes to traditional strategies or methods these can be defined as training that is conducted in person and attended in person. In-person training imitates the conventional classroom which has a teacher with a room full of students. Such a method of delivery has been an integral part of corporate training for decades (WizIQ+, 2018). Some of these methods are, but not limited to, coaching, instructor-led, mentoring & apprenticeship, on the job training, and shadowing.

Coaching

Coaching is the process of educating, instructing, and training subordinates. Here, an experienced worker or the trainee's supervisor trains the employee. This may involve simply observing the supervisor, or (preferably) having the supervisor or job expert show the new

employee the ropes, step by step (Dessler, 2020). The State of Coaching and Mentoring 2022 report shows that 65% of HR professionals agree or strongly agree that coaching is an important part of their organization's strategy. Yet only 39% strongly agree that their mentors do a great job at coaching (Carruthers, 2022). According to Carruthers (2022), the goal of coaching is to help people achieve their goals by providing them with the tools and knowledge they need while helping them identify their strengths and areas for improvement to achieve their goals.

Instructor-led

Instructor-led training is done in a classroom and given by an instructor, it can be any of three types of training strategies or methods such as presentation, hands-on, and team building. Instructor-led training is the traditional type of employee training that occurs in a classroom environment, with a trainer presenting the material to a group of people. Team-building training has a big and important goal: to connect a team. As such, it does not focus on trainees as individuals like the previously discussed methods; rather, this method is used to connect team members and make them more engaged in their training and work (Raynolds, 2019). This type of training can involve presentations, conferences, lectures, storytelling as well as hands-on training which is further explained in the non-traditional segment since depending on how it's done it can apply to both categories.

Mentoring & Apprenticeship

A mentor is one who teaches or provides guidance and advice to a less experienced and often younger person (Merriam-Webster, n.d.). An apprentice is an employee who works under the supervision and direction of a more experienced colleague or manager. From the company's perspective, orientation and socialization activities are necessary to help new employees get as comfortable as possible with their new jobs and co-workers so they can begin to contribute to the

company's goals (Noe, 2019). Also, when companies plan to groom people for promotion and growth, this is the best training method to use. Trainees can truly benefit from such a personalized learning structure, boost the mentor-trainee relationship, and facilitate their future career (Raynolds, 2019).

On the job training

On-the-job training enables active participation for employees by allowing them to learn in the flow of work. It's one of the most effective employee training methods to teach a new software application or process via in-app and on-screen walkthroughs and guides that help users navigate through different features and tasks within an application. The end goal of on-the-job-training is faster user adoption of new tools or newly released features. (Gupta, 2023). Some on-the-job training techniques can involve both traditional and non-traditional techniques and be from simply reading or discussing the job description and manual to hand-on training.

Shadowing

Job shadowing allows employees to follow and observe other professionals working in different job functions to gain insight into their work area. Job shadowing is also implemented to allow lesser experienced individuals to work alongside experienced professionals to sharpen their skills from those who have already mastered them. (Gupta, 2023).

Non-traditional

On the other hand, non-traditional training strategies or methods focus more on computer-based training, hands-on and interactive training that is done outside of the classroom and sometimes without the need for an instructor. Some of these methods are, but not limited to, augmented reality, e-learning, interactive, gamification, hands-on, virtual reality, and webinars.

Although webinars are part of the e-learning category, due to its popularity it has been placed separately and stand-alone.

Augmented Reality

Augmented reality (AR) is an enhanced, interactive version of a real-world environment achieved through digital visual elements, sounds, and other sensory stimuli via holographic technology. AR incorporates three features: a combination of digital and physical worlds, interactions made in real time, and accurate 3D identification of virtual and real objects. With augmented reality (AR), you'll bridge the physical and digital worlds to better guide and train employees, solve problems faster, optimize efficiencies, improve productivity and collaboration, and better prepare for the future (Microsoft, 2022).

E-learning

E-learning is described as a “teaching and learning approach that completely or partially embodies the educational paradigm employed, and that aids in accepting novel ways of understanding and establishing learning based on the use of electronic media and devices as tools for enhancing the availability of training, communication, and interaction, and that aids in accepting novel ways of understanding and establishing learning” (Alqahtani, Alamri, Sayaf, & et al., 2022) E-learning is increasingly becoming a vital tool that educational institutions and universities throughout the world are adopting (Yeh and Chu, 2018). According to Al-Rahmi et al. (2021), e-learning establishes a virtual environment where students may participate in a variety of activities. Also, it uses online videos, articles, quizzes, and courses to deliver employee training. Employees can do their training at any time, from anywhere in the world with an internet connection (Somji, 2018).

Interactive

Interactive training is a form of training, in which learners learn by doing and are, therefore, active participants in the knowledge gaining process rather than passive absorbers of information. Interactive training is not just about sitting back, watching videos or presentations, and clicking the next button. Rather it involves problem-solving, analyzing scenarios and real-life decision-making. With interactive learning, learners gain new knowledge and at the same time, sharpen their critical, analytical, and creative skills (Neendoor, 2022). Gore (2023) explains that interactive training is highly engaging and effective, which causes learners to absorb more information, retain it faster, and recall it for longer periods of time. The success of interactive training comes from being practical rather than theoretical, so, employees learn by applying knowledge in a realistic setting. Some examples of interactive training are, but not limited to, roleplaying, game-based training, simulations, case studies, and quizzes.

Gamification

Gamification focuses on training employees using games. Games have been used for many educational purposes, including training. Using games for education is affordable, competitive, and motivational, especially in the digital era, in which many applicants and employees are highly involved with technology. One of the disadvantages of this method is the inability to determine the components in a game that will contribute to the training itself. Trainers cannot really make sure that every learning concept will be accepted by the trainees through game playing (Raynolds, 2019).

Hands-on

Hands-on training is a great training method for employees using machinery or software, where they can learn through on-the-job experience. Hands-on training can help employees fit

into their upcoming or current role, while enhancing their on-the-job skills. This is a time-intensive method of employee training that is best used when there are enough resources (spare equipment, software licenses, etc.) available to support employees during the training (Somji, 2018).

Virtual Reality

Virtual Reality (VR) is the use of computer modeling and simulation that enables a person to interact with an artificial three-dimensional (3-D) visual or another sensory environment. VR applications immerse the user in a computer-generated environment that simulates reality through the use of interactive devices, which send and receive information and are worn as goggles, headsets, gloves, or body suits (Lowood, 2023). In other words, is an interactive simulated experience that creates a virtual environment which can be like or different from the real-world environment. VR is achieved with the use of a headset and sometimes even sensors to enhance the experience.

Webinars

A webinar is a live, online broadcast that companies present to their audience around the world. A webinar is also sometimes called a webcast or web seminar. They allow the hosts of companies to share videos, presentations, web pages or other media to their audience in a condensed, interactive broadcast. Furthermore, webinars help companies grow, understand, and advertise to their audience. These live online events provide valuable feedback to companies seeking to improve while also engaging the audience in real time. (Birt, 2022).

Impact of the Pandemic: COVID-19

COVID-19 radically changed the way we work and interact with one another. Even as restrictions continue to lift and we move toward a “new normal,” the workplace trends the pandemic has accelerated will shape the workplace for years to come. Alongside changes such as the shift to hybrid and flexible work, COVID-19 has exacerbated skills gaps and highlighted inequalities in the workforce. In fact, McKinsey & Company found that 87% of companies are either experiencing a skills gap in their workforce or anticipating one within the next few years (Hastings, 2022).

Skill shortages and skill gaps have a cyclical and a structural component and the same should hold for training investments, although firms’ training decisions are more likely to involve systematic planning (Brunello & Wruuck, 2020; McGuinness et al., 2018). An economic upturn and tightening labor markets should induce corporate investment in human capital via several channels, notably by making training more important to retain and attract staff as opposed to reliance on external talent recruitment. Firms’ increasing profitability, capital investments and a more positive business outlook would also support training decisions. However, greater staff turnover and poaching externalities could diminish incentives for general training investments in times of buoyant job markets (Pouliakas & Wruuck, 2022).

Understanding cyclical and structural patterns in corporate training, including the effects of the large-scale economic shock related to the coronavirus pandemic, is of key relevance for designing effective skills policies to accommodate recovery and adaptation to a post-Covid-19 economy. On the one hand, the pandemic has clearly accelerated digitalization, increasing demand for digital skillsets related to the massive shift to remote work arrangements and e-

commerce (Sostero & Wruuck, 2021; van Loo et al.,2021). In a quest to survive the creative destruction process fostered by the coronavirus health shock, many firms have sought to enhance their investments in a digital marketing and sales strategy. Short-time work arrangements, furlough and remote work schemes may have also provided opportunities for (online) training, given overall financial support and time availability (Pouliakas & Wruuck, 2022).

Even before the pandemic, only two out of ten low-educated adults took part in formal or on-the-job training, compared to six out of ten high-educated adults. Participation in adult learning also differs greatly across countries: fewer than 25% of adults in Greece, Italy, Mexico, and Turkey report participating in adult learning, compared to over 55% in Denmark, Finland, New Zealand, Norway, and Sweden (OECD, 2021). Therefore, adapting employees' skills and roles to the post-pandemic ways of working will be crucial to building operating-model resilience. This is because organizations face a critical shortage of talent and skills. Investing in people can create a virtuous cycle that improves the ability to attract, advance, and retain talent. The talent shortage is a critical problem that is only getting worse. Organizations already face a severe shortage of key talent, and 90 percent say they will have a meaningful skills gap in the coming years. At the same time, digitalization and automation of work activities are leading to further skill shifts, with about 40 percent of Americans and 34 percent of Western Europeans potentially needing to switch occupational groups by 2030. And with 40 percent of workers planning to leave their jobs, attrition is making it harder to retain skills within organizations (Durth, Komm, Pollner, & et al., 2023).

The future of work was shifting even before COVID-19 upended lives and livelihoods. But the pandemic accelerated three broad trends that will continue to reshape work as the effects

of the crisis recede: remote work and virtual meetings, e-commerce, and digital technologies. Moreover, COVID-19's spread flattened the cultural and technological barriers standing in the way of remote work (McKinsey & Company, 2023). Recent McKinsey & Company analysis of the potential for remote work to persist looked at 2,000 tasks used in roughly 800 jobs in eight focus countries. It showed that 20 to 25 percent of workforces in advanced economies could work from home in the range of three to five days a week—which is four to five times more remote work than pre-COVID-19 (2023). The expansion of remote work and digitalization also broadens the horizon of opportunities for diverse training and upskilling methods as well as types of businesses and employment.

A study by PWC found that COVID-19 has a profound impact on workers, and their survey of 32,500 workers in nineteen countries expressed a mix of hopes and fears regarding the near- and long-term future of employment - from the traditional corporate environment to the informal gig economy and entrepreneurship. Specifically, 52% of youth (18-24 years old) either agreed or strongly agreed that traditional employment will not be around in the future, as they will promote their own personal brands and sell skills on a short-term basis to those who need them. Additionally, 62% of youth either agreed or strongly agreed that automation would put many people's jobs at risk (Moritz & Frey, 2022).

Evidently, the pandemic created a before and after for workers across the globe, the techniques used to train employees and the opportunities for work, thus, enabling a new future of work as humanity copes with the changes and possibilities of growth and progress. With regards to the pandemics' impact on employee satisfaction, motivation and retention, the situation is a serious challenge for employees, as they have had to work from home or were furloughed or laid

off. Other employees in life-sustaining positions such as medical staff had to work under often difficult conditions (Kniffin et al., 2021). Nonetheless, the need for employees to work from home due to the COVID-19 pandemic has been facilitated by the ground-breaking development of communication technologies (Kniffin et al., 2021), which offered a new ray of hope for those that had been let go from their jobs. Aside from higher turnover, the COVID pandemic caused most employers to resort to cutting down of remuneration and facilities which heavily affected the level of employee satisfaction (ICA, 2021) and motivation.

An increased level of fear of Covid-19 was associated with decreased job satisfaction, increased psychological distress, and increased organizational and professional turnover intentions (Rn et al., 2020). In this pandemic of Covid-19, organizations know that engaged employees are the key to success in this tough time. In this tough time, companies must keep their personnel satisfied and motivated during pandemic circumstances (Chanana & Sangeeta, 2020). The highly stressful work environment resulted in job dissatisfaction with tendency to leave job in the future during the pandemic of Covid-19 (Said & El-shafei, 2021). On the other hand, employees enjoyed their job during COVID 19 pandemic when their job security is guaranteed, all facilities are fulfilled, a happy atmosphere is provided, and suitable workload is given (Hidayat et al., 2021). Therefore, depending on the individuals' work conditions, environment and experience would be their own take on how the pandemic affected their overall motivation, satisfaction, and retention. Nevertheless, the workplace will not be the same as it was before the pandemic, humanity has evolved to brace the change and thrive against adversity.

Summary

This study covered the gap in the literature regarding the skills gap, its relation to training and the effects of lack of training. This present study findings provide more evidence on the skills gap and its effect on employee retention, productivity, motivation, satisfaction, and performance. Moreover, the study contributes to the literature in this field through adding the experiences of employees in the outsourcing industry to a list of industries affected by the skills gap. The aim of this review is to (a) add value to the field and development of employees, and (b) improve employees' training experience. Next, Chapter III covers the study's methodology and details how the study's collection of data, population, sample, procedures, research scope and design will be.

Chapter III: Methodology

This chapter presents the methodology for this dissertation. It explains the study's population, sample, source of data collection techniques, operational procedures, methodological approach, and description of research instrument. Furthermore, it details the research scope, design, and interpret data analysis.

I. Research Scope

The contribution of this study was to provide an understanding of the types of training that render the best results on employees. Another contribution was to determine the cause of the skill gap between the employees and which skills they are currently lacking. By doing this, the company can prepare training materials focused on these skills and seek to improve their employee retention, productivity, motivation, and satisfaction.

II. Research Design

This research study was exploratory, descriptive, and causal in nature. The study was exploratory since the topic of multiple intelligences in training has not been researched in its full capacity since most studies on this topic are catered towards education. Nonetheless, researchers such as Zhang, Liu, and Sun (2019) dabble on this topic in hopes of incorporating the essence of multiple intelligence in company's day to day training. Furthermore, by incorporating multiple intelligences and adult learning, we aimed to bridge any skills gap within the company with training catered to their type of intelligence. With the use of existent company data, we gathered results that detailed the correlation of lack of skills with employee retention, productivity, motivation, and satisfaction; while also, determining what was the root of the skills gap and which skills the employees considered they were lacking necessary for their success.

III. Methodological Approach

The methodological approach was a mixed method research conducted through existing company data. The data was analyzed in a quantitative way using SPSS and Excel as statistical tools. The survey respondents on the data were evaluated using the unrestricted probability sampling design, otherwise known as simple random design. The reason this method was chosen is because every single element in the population has the same chance of being selected as a subject. In addition, this method was chosen over the other methods available due to our current lack of time, budget situation, and the fact that we were using existing company data.

IV. Population

The sample size was calculated based on the total amount of respondents on the data provided by the company to make sure the sample was a significant representation of the population and a statistically significant sample size to ensure research validity.

V. Type of sample

The sample were employees of an organization in the Outsourcing industry. To ensure everyone has a fair chance, the respondents from the data were chosen in a simple random sampling way. The data was reviewed and analyzed to ensure all answers qualify for the research. From the data received, the sample was of 1,429 employees.

VI. Source of Data Collection

We partnered with the Learning and Development in the company to gather the data from their records. The data was provided by the company as this will be backyard research with a convenient and random sample.

[See Appendix 1 for Data Collection Plan]

VII. Description of the Research Instrument

Since this was backyard research, no research instrument was made as the data was provided by the company.

VIII. Operational Procedures

To ensure the study was completed within the desired timeframe, a Gantt chart was created to allocate tasks in designated time slots.

[See Appendix 2 for Gantt Chart]

IX. Analysis to Interpret Data

The data was analyzed using SPSS and Excel. An analysis of ANOVA, frequencies, and linear regression were done to analyze the results. The frequencies were analyzed using Microsoft Excel, while the more advanced statistical tests were run on SPSS. This study's main purpose was to determine which skills the employees considered lacking necessary for their success and the correlation of lack of skills with employee retention, productivity, motivation, and satisfaction. Aside from these the study aimed to determine the cause of the skills gap, and which type of training is most effective. Because of this, we partnered with the Learning and Development in the company to gather the data from their records.

Summary

Chapter 3 detailed every aspect of the research that was conducted, from the research scope and design to its methodological approach. The chapter provided the structure for the study and how the collection of data, and sample section took place. Furthermore, it explained how the collected data was analyzed and the study's timeline.

The following chapter will introduce the results of the research conducted in this study. It will present and analyze the data from the survey data by themes and subthemes.

Chapter IV: Results

This study aimed to explore the diverse types of training and find which is best suited for the employees of the organization. Ultimately, by identifying and implementing these training methods, we hoped that the organization and its employees would better understand what they can do to close the skills gap. In this chapter, the results of this quantitative company data are presented, including demographic information of employees, and the various survey question sections that tackled topics such as, but not limited to, multiple intelligences, job skill level, interest in learning skills, motivation to learn, and training preference.

Overview of the Study

To explore the various topics discussed in Chapter I, we relied on the company data that was shared with us. This company data contained the responses to a survey that is run on a monthly basis within the company. The analysis of the findings in this chapter are organized by themes, where each theme and subtheme relate to a section of the company data that was shared. The company data did not contain any demographic information that could identify the employee as the survey is done anonymously so employees can express themselves freely and to protect their privacy.

Excel Frequencies

Demography

Understanding the demography of the employees in the company helps provide background information to support the categories observed. The company data shared contained a total of 1429 responses from the company survey that is shared on a monthly basis.

Gender

With regards to their gender, 1071 (74.95%) of the employees were female, 304 (21.27%) were male, 20 (1.40%) were non-binary/non-conforming, 8 (0.56%) were transgender and 26 (1.81%) preferred not to respond. Table 1 summarizes the demographic gender information.

Table 1

Gender	Total	Percentage
Man	304	21.27%
Non-binary/non-conforming	20	1.40%
Prefer not to respond	26	1.82%
Transgender	8	0.56%
Woman	1071	74.95%
Grand Total	1429	100.00%

Age

In terms of the age range, the data contained a wide age range of responses from employees as young as 18 to those over 65. From the responses, 298 (20.85%) were from employees 18 to 24 years of age, 427 (29.88%) were from employees 25 to 34 years of age, 320 (22.39%) were from employees 35 to 44 years of age, 242 (16.93%) were from employees 45 to 54 years of age, 126 (8.82%) were from employees 55 to 64 years of age, and 16 (1.12%) were from employees 65 years old and over. Table 2 summarizes the demographic age information.

Table 2

Age	Total	Percentage
18-24 years old	298	20.85%
25-34 years old	427	29.88%
35-44 years old	320	22.39%
45-54 years old	242	16.93%
55-64 years old	126	8.82%
65 years old and over	16	1.12%
Grand Total	1429	100.00%

Ethnicity

Of the employees in the company data, 19 (1.33%) of them were American Indian or Alaska Natives, 28 (1.96%) were Asian, 464 (32.47%) were Black or African American, 390 (27.29%) were Hispanic, 70 (4.90%) were Multiracial, 20 (1.40%) were Native Hawaiian or Other Pacific Islander, 39 (2.73%) preferred not to respond, and 399 (27.92%) were White.

Table 3 summarizes the demographic ethnicity information.

Table 3

Ethnicity	Total	Percentage
American Indian or Alaska Native	19	1.33%
Asian	28	1.96%
Black or African American	464	32.47%
Hispanic	390	27.29%
Multiracial	70	4.90%
Native Hawaiian or Other Pacific Islander	20	1.40%
Prefer not to respond	39	2.73%
White	399	27.92%
Grand Total	1429	100.00%

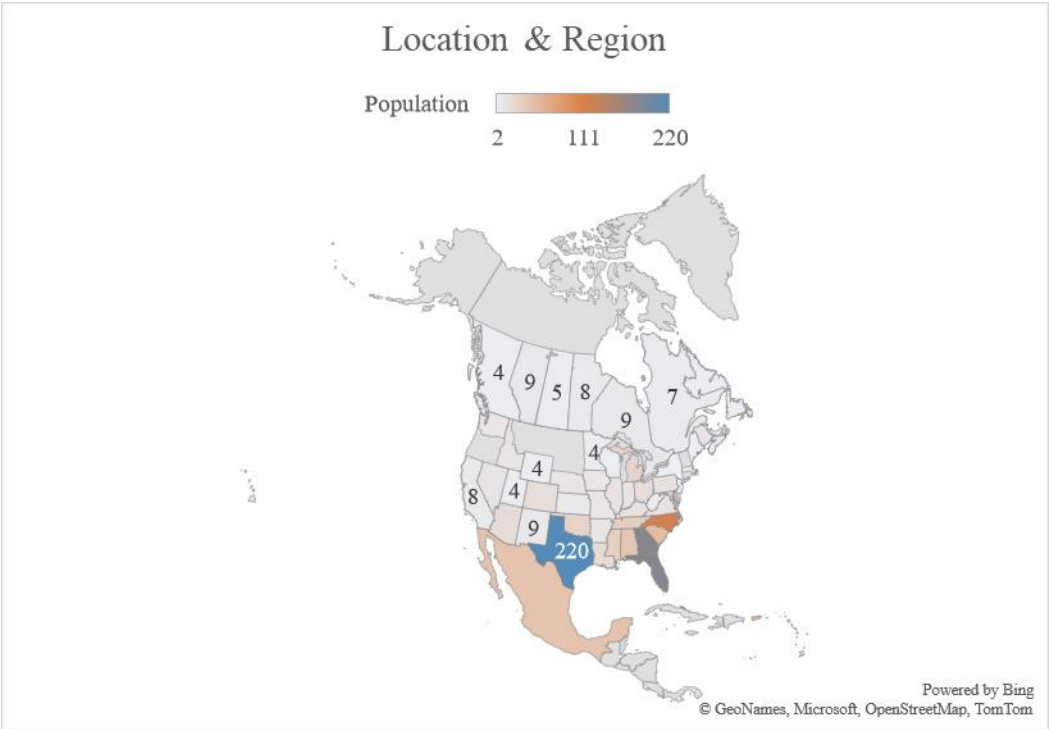
Location & Region

Employees in the company data were in various locations that the company operates in. The first location is Canada with 65 (4.55%) of employees, out of which 23 (1.61%) were in the Atlantic region, 16 (1.12%) were in Central Canada, 22 (1.54%) were in the Prairie Provinces, and 4 (0.28%) were in the West Coast. The next location is Mexico with 46 (3.22%) of employees all of which were in the Center region. The last location is the United States of America with 1,318 (92.23%) of employees, out of which 60 (4.20%) were in the Caribbean, 131 (9.17%) were in the Midwest, 62 (4.34%) were in the Northeast, 712 (49.83%) were in the Southeast, 280 (19.59%) were in the Southwest, and 73 (5.11%) were in the West. Table 4 summarizes the demographic location and regional information, and Chart 1 visualizes the data.

Table 4

Location & Region	Total	Percentage
Canada	65	4.55%
Atlantic region	23	1.61%
Central Canada	16	1.12%
Prairie Provinces	22	1.54%
West Coast	4	0.28%
Mexico	46	3.22%
Center	46	3.22%
USA	1318	92.23%
Caribbean	60	4.20%
Midwest	131	9.17%
Northeast	62	4.34%
Southeast	712	49.83%
Southwest	280	19.59%
West	73	5.11%
Grand Total	1429	100.00%

Chart 1



Multiple Intelligences

The company data survey contained fourteen (14) questions related to multiple intelligences. Out of these fourteen questions bodily kinesthetic, intra-personal, musical, and naturalistic had two questions each, while, inter-personal, linguistic, and spatial had only one question each and lastly, logical-mathematical had three questions. Table 5 shows each question along with its specific multiple intelligence type together with the results from the company data survey. Going by the multiple intelligence type, on table 6, it gives an average percentage of their answers. From these results, we can conclude that the employees had the highest score for naturalistic intelligence (61.55%), followed by musical (47.41%), linguistic (41.36%), intra-personal (40.69%), logical-mathematical (37.95%), spatial (32.54%), inter-personal (31.98%), and lastly, bodily-kinesthetic (15.61%). Chart 2 visualizes these averages while Chart 3 showcases all averages for each multiple intelligence type.

Table 5

Question	Multiple Intelligence Type	<u>Strongly Agree</u>		<u>Agree</u>		<u>Neutral</u>		<u>Disagree</u>		<u>Strongly Disagree</u>		<u>Grand Total</u>	
		Total	Percentage	Total	Percentage	Total	Percentage	Total	Percentage	Total	Percentage	Total	Percentage
I am proud of my large vocabulary.	Linguistic	591	41.36%	558	39.05%	256	17.91%	20	1.40%	4	0.28%	1429	100.00%
Using numerical symbols is easy for me.	Logical-mathematical	602	42.13%	561	39.26%	230	16.10%	33	2.31%	3	0.21%	1429	100.00%
I love listening to music.	Musical	1042	72.92%	294	20.57%	79	5.53%	9	0.63%	5	0.35%	1429	100.00%
I consider myself an athlete.	Bodily-kinesthetic	148	10.36%	163	11.41%	382	26.73%	491	34.36%	245	17.14%	1429	100.00%
I know for a fact, people of all ages are fond of me.	Inter-personal	457	31.98%	489	34.22%	424	29.67%	47	3.29%	12	0.84%	1429	100.00%
I am fascinated by plant and animal kingdom.	Naturalistic	574	40.17%	461	32.26%	286	20.01%	86	6.02%	22	1.54%	1429	100.00%
I enjoy learning something new every day.	Intra-personal	891	62.35%	461	32.26%	71	4.97%	2	0.14%	4	0.28%	1429	100.00%
I observe and determine facts based on that.	Logical-mathematical	628	43.95%	556	38.91%	212	14.84%	22	1.54%	11	0.77%	1429	100.00%
I have varied musical interest and play multiple musical instruments.	Musical	313	21.90%	299	20.92%	368	25.75%	349	24.42%	100	7.00%	1429	100.00%
I don't get lost easily and use maps and landmarks to find my path.	Spatial	465	32.54%	499	34.92%	281	19.66%	129	9.03%	55	3.85%	1429	100.00%
I feel good about being physically fit.	Bodily-kinesthetic	298	20.85%	381	26.66%	508	35.55%	162	11.34%	80	5.60%	1429	100.00%
I consider all humans as equal irrespective of their sex, color, caste etc.	Naturalistic	1185	82.93%	175	12.25%	59	4.13%	5	0.35%	5	0.35%	1429	100.00%
I don't like wasting time on trivial issues.	Logical-mathematical	397	27.78%	457	31.98%	423	29.60%	115	8.05%	37	2.59%	1429	100.00%
I like to keep a journal to record my daily thoughts.	Intra-personal	272	19.03%	275	19.24%	390	27.29%	339	23.72%	153	10.71%	1429	100.00%

Table 6

Multiple Intelligence Type	Average of Strongly Agree Percentage	Average of Agree Percentage	Average of Neutral Percentage	Average of Disagree Percentage	Average of Strongly Disagree Percentage
Bodily-kinesthetic	15.61%	19.03%	31.14%	22.85%	11.37%
Inter-personal	31.98%	34.22%	29.67%	3.29%	0.84%
Intra-personal	40.69%	25.75%	16.13%	11.93%	5.49%
Linguistic	41.36%	39.05%	17.91%	1.40%	0.28%
Logical-mathematical	37.95%	36.72%	20.18%	3.97%	1.19%
Musical	47.41%	20.75%	15.64%	12.53%	3.67%
Naturalistic	61.55%	22.25%	12.07%	3.18%	0.94%
Spatial	32.54%	34.92%	19.66%	9.03%	3.85%
Grand Total	39.30%	28.14%	19.84%	9.04%	3.68%

Chart 2

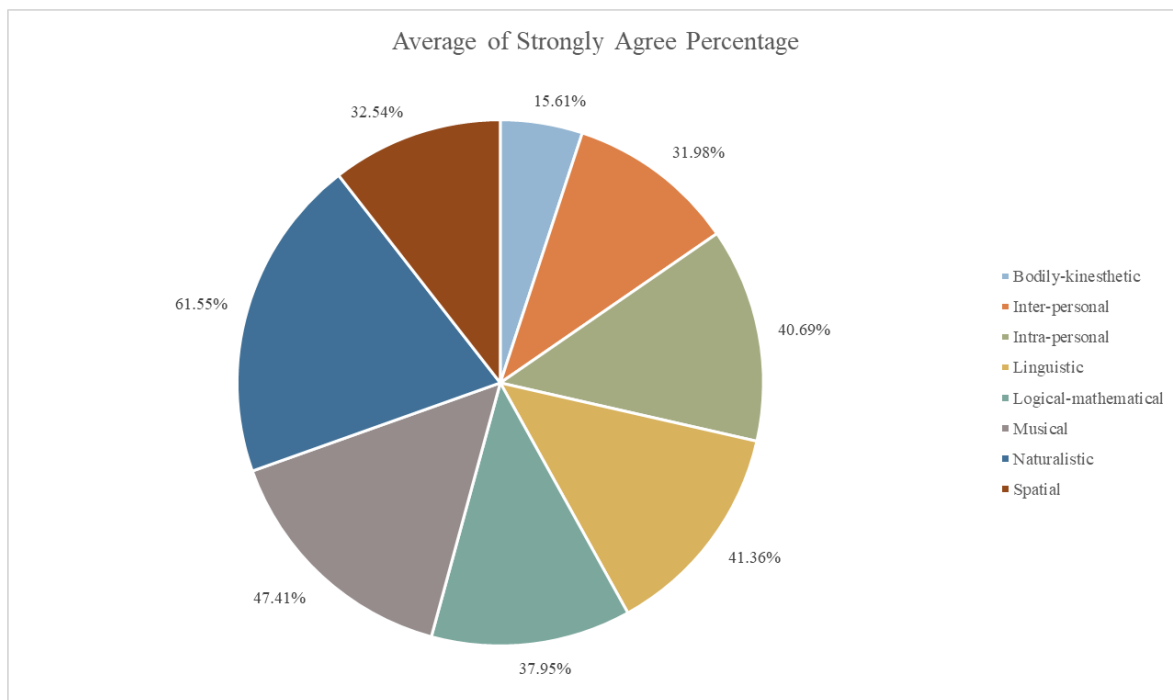
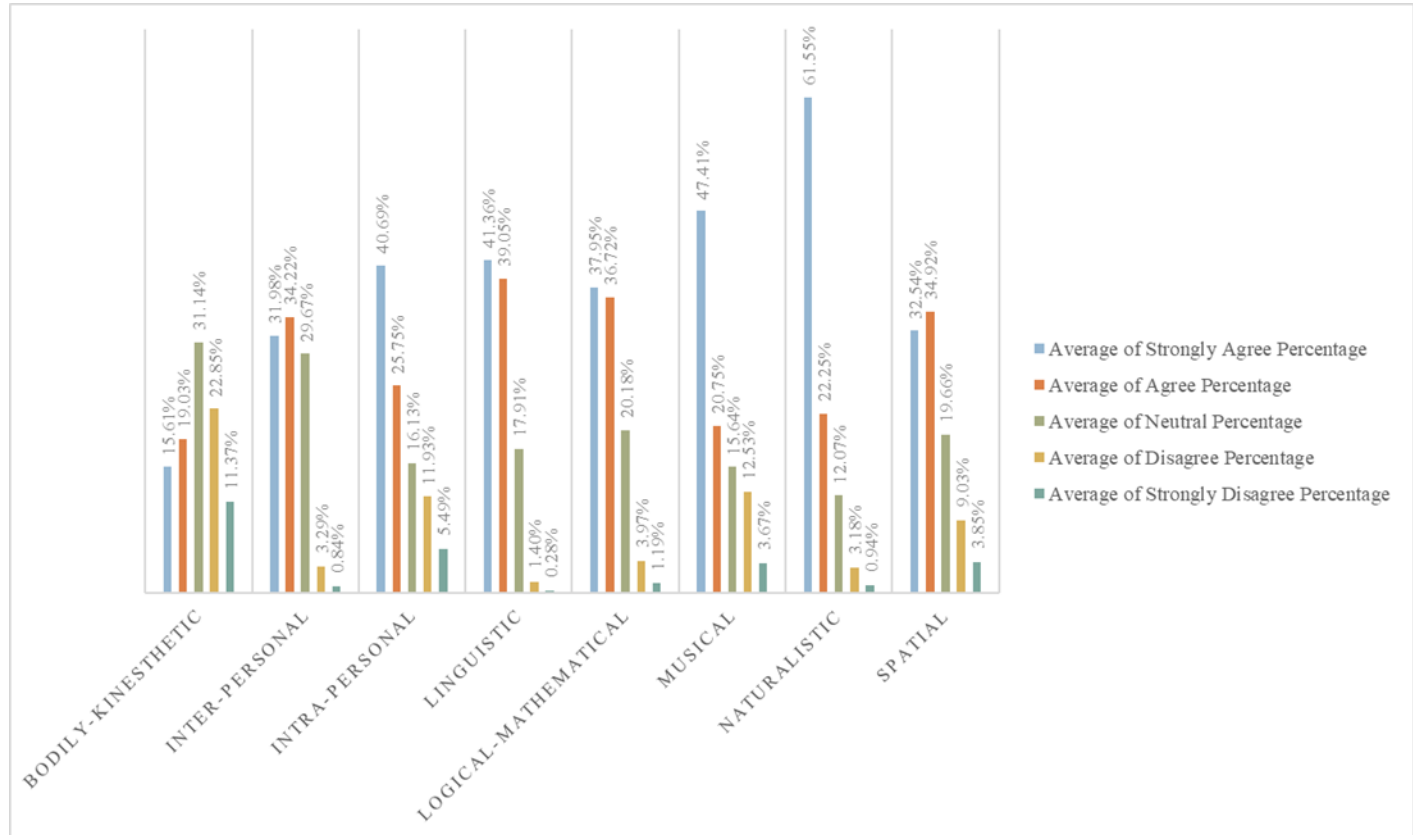


Chart 3



Skills Gap

In terms of evaluating the skills gap, the company survey data contained six (6) questions on the topic. From these questions, we found that 27.92% of the employees disagree or strongly disagree with the premise *“I feel that I have the necessary skills to complete my job.”*, 28.20% of the employees felt neutral and 43.88% agreed or strongly agreed to the premise. Thus, we can conclude there is a skills gap within the employee population of 27.92%.

Furthermore, in relation to the premise *“I feel there are skills I need to be taught.”*, 58.08% of employees agreed or strongly agreed, 15.82% remained neutral and 26.10% disagreed or strongly disagreed. Therefore, we can conclude that more than half of the employee population feel there are skills they need to be taught.

The third premise was “*There are specific skills that I would like to learn.*”. For this premise, the company data results indicated that 73.06% of the employee population agreed or strongly agreed to this premise, 23.51% remained neutral and 3.43% disagreed or strongly disagreed. From these results, we can conclude that close to two thirds of the employee population feel there are skills they’d like to learn.

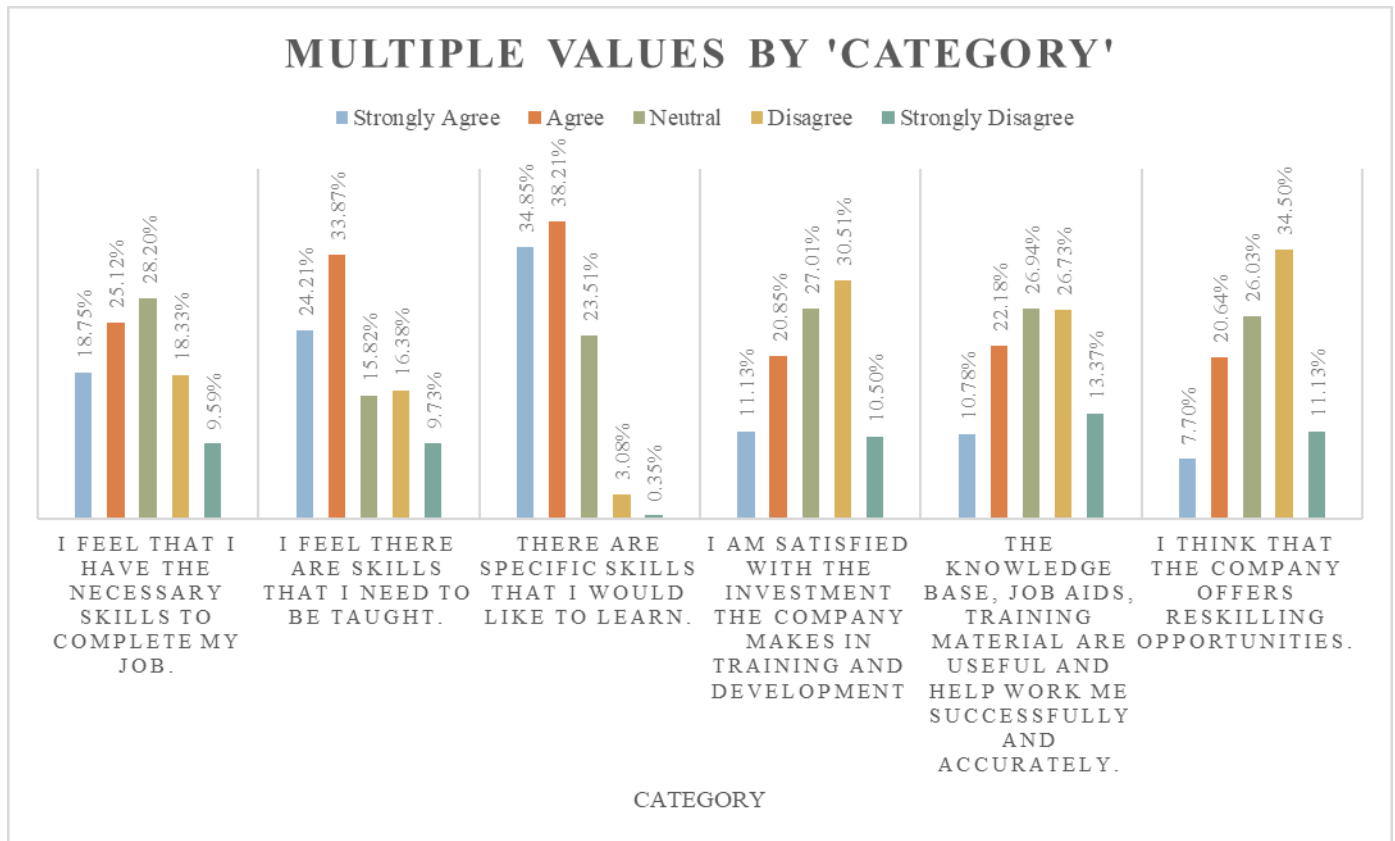
The last three questions were related to the company and its efforts to close the skills gap through resources and investment in learning and development. For the fourth premise, “*I am satisfied with the investment the company makes in training and development.*”, we found that 31.98% agreed or strongly agreed with the premise, 27.01% remained neutral and 41.01% disagreed or strongly disagreed. From these results, we can understand that the company could invest more in their learning and development as 68.02% of the employees felt neutral, disagreed, or strongly disagreed with the current amount of investment. Next, for the fifth premise, “*The Knowledge Base, job aids, training material are useful and help work me successfully and accurately.*”, 32.96% of employees agreed or strongly agreed with the premise, 26.94% felt neutral and 40.10% disagreed or strongly disagreed. Given these results, we can conclude that 67.04% of the employee population felt neutral, disagreed, or strongly disagreed with the premise. Therefore, the company can look into further improving these areas to ensure employees have an enhanced learning and work experience. Lastly, the results of the sixth premise, “*I think that the company offers reskilling opportunities.*”, indicated that 28.34% of employees agreed or strongly agreed with the premise, 26.03% felt neutral and 45.63% disagreed or strongly disagreed. Going by these results we can conclude that 71.66% of the employee population felt neutral, disagreed, or strongly disagreed with the premise. Thus, the company can invest in reskilling opportunities and also promote the existent reskilling opportunities as this

could be the result of employees not being aware of the current reskilling opportunities available at the company.

Table 7

Category	<u>Strongly Agree</u>		<u>Agree</u>		<u>Neutral</u>		<u>Disagree</u>		<u>Strongly Disagree</u>	
	Total	Percentage	Total	Percentage	Total	Percentage	Total	Percentage	Total	Percentage
I feel that I have the necessary skills to complete my job.	268	18.75%	359	25.12%	403	28.20%	262	18.33%	137	9.59%
I feel there are skills that I need to be taught.	346	24.21%	484	33.87%	226	15.82%	234	16.38%	139	9.73%
There are specific skills that I would like to learn.	498	34.85%	546	38.21%	336	23.51%	44	3.08%	5	0.35%
I am satisfied with the investment the company makes in training and development	159	11.13%	298	20.85%	386	27.01%	436	30.51%	150	10.50%
The Knowledge Base, job aids, training material are useful and help work me successfully and accurately.	154	10.78%	317	22.18%	385	26.94%	382	26.73%	191	13.37%
I think that the company offers reskilling opportunities.	110	7.70%	295	20.64%	372	26.03%	493	34.50%	159	11.13%

Chart 4



Job Level Skill

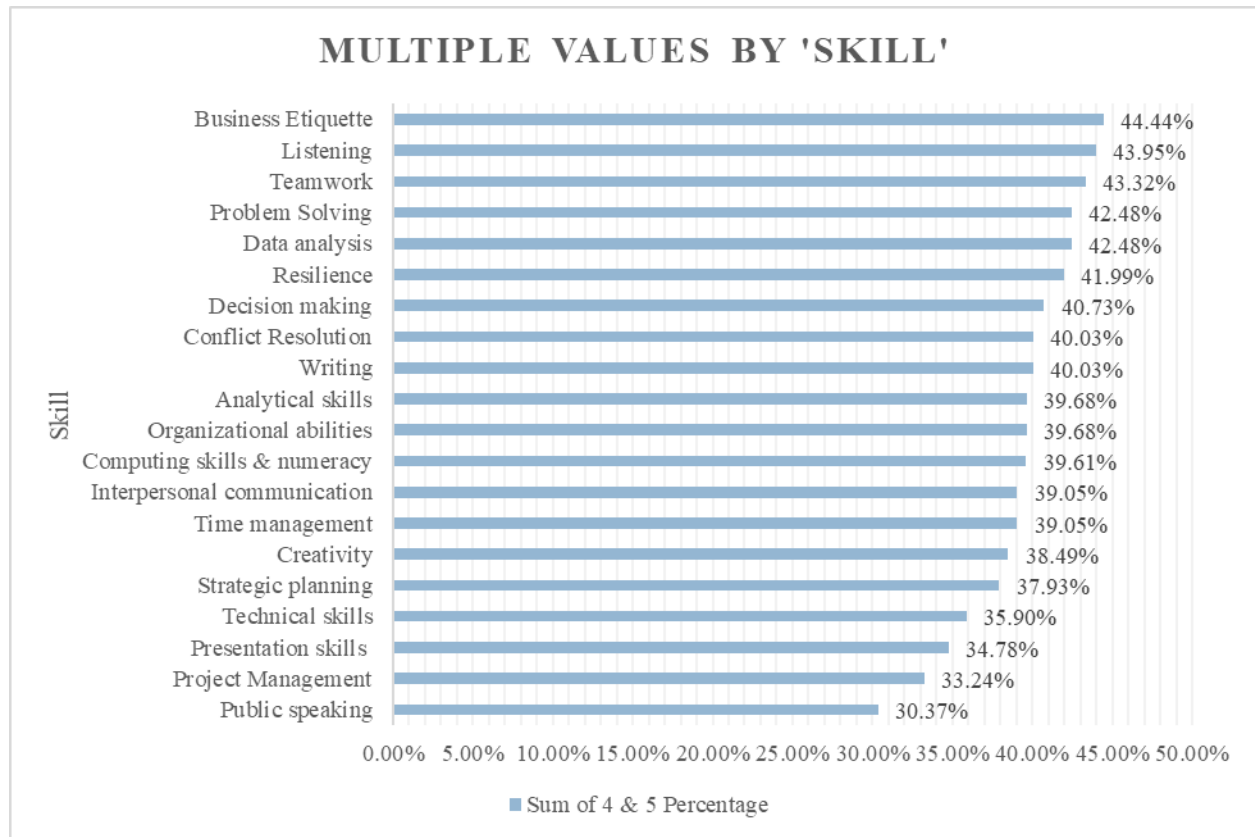
Following the questions related to the skills gap, the company survey data contained a section related to how the employees felt about their current skill level. The question asked them to rate how they felt about their current skill level from one (1) to five (5), one being highly unprepared and five being highly prepared. From this section's results, we found that employees felt mostly prepared in soft skills as the average of summed 4 and 5 score responses was 1.41% higher than hard skills with soft skills having an average of 40.06% while hard skills had an average of 38.66%. Out of the skills listed, the top five skills that the employees felt they were prepared for were business etiquette with 44.44%, followed by listening with 43.95%, teamwork with 43.32%, problem solving with 42.48%, and lastly, data analysis with 42.48%. On the other hand, the five skills with the lowest percentage of employees felt they were prepared for were

public speaking with 30.37%, project management with 33.24%, presentation skills with 34.78%, technical skills with 35.90%, and strategic planning with 37.93%. Nonetheless, it is important to mention that more than half of the employees did not feel prepared or highly prepared in any of these skills as the highest score amongst the skills was 44% and the lowest 30%. The table below showcases the results for this section along with the chart at the bottom that visualizes the results shared previously.

Table 8

Hard vs Soft	Skill	<u>1</u>		<u>2</u>		<u>3</u>		<u>4</u>		<u>5</u>	
		Total	Percentage	Total	Percentage	Total	Percentage	Total	Percentage	Total	Percentage
Soft	Interpersonal communication	222	15.54%	186	13.02%	463	32.40%	302	21.13%	256	17.91%
Hard	Writing	239	16.72%	178	12.46%	440	30.79%	288	20.15%	284	19.87%
Soft	Public speaking	149	10.43%	361	25.26%	485	33.94%	256	17.91%	178	12.46%
Hard	Project Management	166	11.62%	328	22.95%	460	32.19%	289	20.22%	186	13.02%
Hard	Organizational abilities	206	14.42%	216	15.12%	440	30.79%	308	21.55%	259	18.12%
Hard	Computing skills & numeracy	232	16.24%	205	14.35%	426	29.81%	295	20.64%	271	18.96%
Hard	Business Etiquette	270	18.89%	168	11.76%	356	24.91%	307	21.48%	328	22.95%
Soft	Teamwork	255	17.84%	168	11.76%	387	27.08%	302	21.13%	317	22.18%
Soft	Problem Solving	250	17.49%	164	11.48%	408	28.55%	316	22.11%	291	20.36%
Soft	Resilience	245	17.14%	181	12.67%	403	28.20%	299	20.92%	301	21.06%
Hard	Data analysis	253	17.70%	172	12.04%	397	27.78%	298	20.85%	309	21.62%
Soft	Analytical skills	221	15.47%	172	12.04%	469	32.82%	294	20.57%	273	19.10%
Hard	Technical skills	200	14.00%	237	16.59%	479	33.52%	286	20.01%	227	15.89%
Soft	Listening	246	17.21%	150	10.50%	405	28.34%	316	22.11%	312	21.83%
Soft	Conflict Resolution	216	15.12%	194	13.58%	447	31.28%	316	22.11%	256	17.91%
Soft	Decision making	222	15.54%	176	12.32%	449	31.42%	310	21.69%	272	19.03%
Hard	Creativity	206	14.42%	245	17.14%	428	29.95%	288	20.15%	262	18.33%
Soft	Time management	208	14.56%	218	15.26%	445	31.14%	301	21.06%	257	17.98%
Hard	Strategic planning	209	14.63%	239	16.72%	439	30.72%	300	20.99%	242	16.93%
Hard	Presentation skills	182	12.74%	302	21.13%	448	31.35%	285	19.94%	212	14.84%

Chart 5



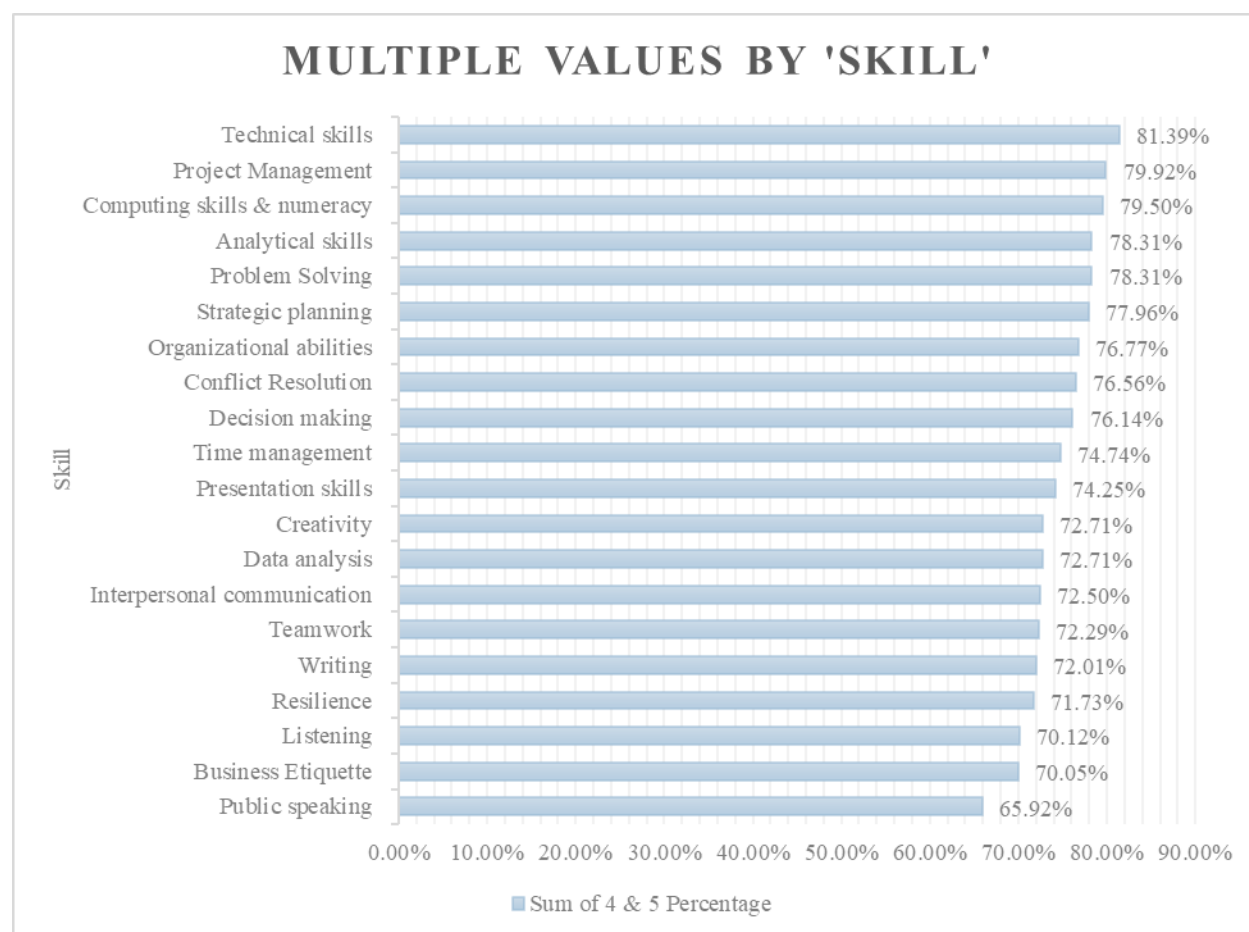
Interest in Learning Skills

After the section related to how the employees felt about their current skill level, the company data asked for their interest in learning more about a series of skills. The question asked them to rate how interested you would be in learning more about them from one (1) to five (5), one being highly uninterested and five being highly interested. From this section's results, we found that employees were interested in learning more about both soft and hard skills as the difference between the average of summed 4 and 5 score responses was 2.06%, with hard skills having an average of 75.72% and soft skills an average of 73.66%. Out of the skills listed, the top five skills that the employees were interested to learn more about were technical skills with an 81.39%, followed by project management with 79.92%, computing skills and numeracy with 79.50%, analytical skills with 78.31%, and lastly, problem solving with 78.31%. On the other hand, the five skills with the lowest percentage of employees interested in learning more were public speaking with 65.92%, business etiquette with 70.05%, listening with 70.12%, resilience with 71.73%, and writing with 72.01%. Nonetheless, it is important to note that the employees were interested in learning more about all of the skills, hence why all of the skills' percentages were higher than 65%, which in itself is a high interest rate. The table below showcases the results for this section along with the chart at the bottom that visualizes the results shared previously.

Table 9

Hard vs Soft	Skill	1		2		3		4		5	
		Total	Percentage	Total	Percentage	Total	Percentage	Total	Percentage	Total	Percentage
Soft	Public speaking	132	9.24%	98	6.86%	257	17.98%	226	15.82%	716	50.10%
Hard	Business Etiquette	153	10.71%	77	5.39%	198	13.86%	149	10.43%	852	59.62%
Soft	Listening	148	10.36%	90	6.30%	189	13.23%	165	11.55%	837	58.57%
Soft	Resilience	130	9.10%	76	5.32%	198	13.86%	188	13.16%	837	58.57%
Hard	Writing	112	7.84%	81	5.67%	207	14.49%	230	16.10%	799	55.91%
Soft	Teamwork	123	8.61%	67	4.69%	206	14.42%	160	11.20%	873	61.09%
Soft	Interpersonal communication	94	6.58%	82	5.74%	217	15.19%	217	15.19%	819	57.31%
Hard	Data analysis	134	9.38%	64	4.48%	192	13.44%	179	12.53%	860	60.18%
Hard	Creativity	127	8.89%	63	4.41%	200	14.00%	157	10.99%	882	61.72%
Hard	Presentation skills	95	6.65%	67	4.69%	206	14.42%	200	14.00%	861	60.25%
Soft	Time management	115	8.05%	66	4.62%	180	12.60%	194	13.58%	874	61.16%
Soft	Decision making	105	7.35%	62	4.34%	174	12.18%	197	13.79%	891	62.35%
Soft	Conflict Resolution	97	6.79%	52	3.64%	186	13.02%	191	13.37%	903	63.19%
Hard	Organizational abilities	103	7.21%	48	3.36%	181	12.67%	227	15.89%	870	60.88%
Hard	Strategic planning	92	6.44%	51	3.57%	172	12.04%	229	16.03%	885	61.93%
Soft	Problem Solving	96	6.72%	52	3.64%	162	11.34%	209	14.63%	910	63.68%
Soft	Analytical skills	80	5.60%	56	3.92%	174	12.18%	211	14.77%	908	63.54%
Hard	Computing skills & numeracy	82	5.74%	44	3.08%	167	11.69%	203	14.21%	933	65.29%
Hard	Project Management	67	4.69%	46	3.22%	174	12.18%	211	14.77%	931	65.15%
Hard	Technical skills	72	5.04%	44	3.08%	150	10.50%	221	15.47%	942	65.92%

Chart 6



Motivation to Learn

When it comes to evaluating the employee's motivation to learn, the company survey data contained four (4) questions on the topic. From these questions, we found that 93.21% of the employees agree or strongly agree with the premise "*I am motivated to learn and gain new skills.*", 4.62% of the employees felt neutral and 2.17% disagreed or strongly disagreed with the premise. Thus, we can conclude employees are highly motivated to learn and gain new skills.

Next, for the second premise, "*I feel that more training is needed for employees.*", 72.92% of the employees agreed or strongly agreed with the premise, 16.86% felt neutral and 10.22% disagreed or strongly disagreed. Thus, almost two thirds of the employee population believe there is a need for more employee training.

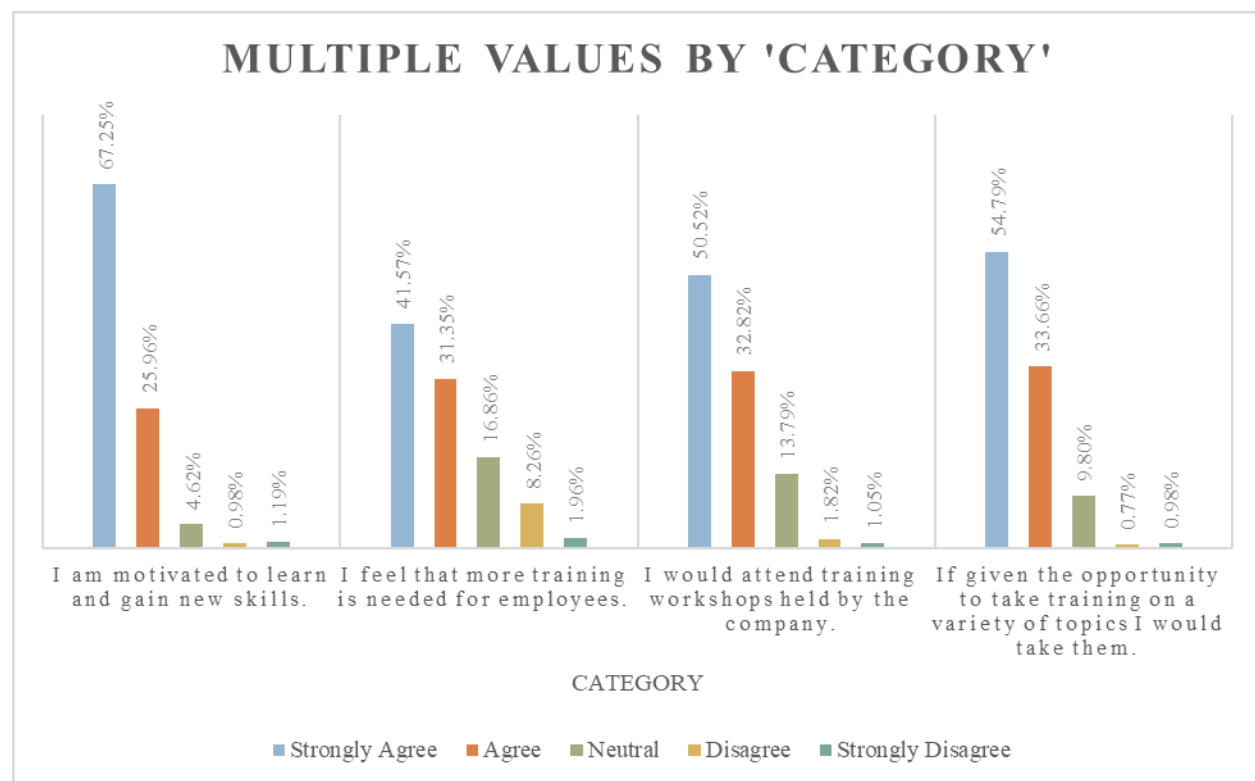
Moreover, in relation to the premise "*I would attend training workshops held by the company.*", 83.34% of employees agreed or strongly agreed, 13.76% remained neutral and 2.87% disagreed or strongly disagreed. Therefore, we can conclude that the majority of the employee population would attend workshops held by the company.

Lastly, for the fourth premise, "*If given the opportunity to take training on a variety of topics I would take them.*", we found that 88.45% of employees agreed or strongly agreed, 9.80% remained neutral and 1.75% disagreed or strongly disagreed. As a result, we can determine that most of the employee population would take training if given the opportunity. The table and chart below illustrate the company data results.

Table 10

Category	<u>Strongly Agree</u>		<u>Agree</u>		<u>Neutral</u>		<u>Disagree</u>		<u>Strongly Disagree</u>	
	Total	Percentage	Total	Percentage	Total	Percentage	Total	Percentage	Total	Percentage
I am motivated to learn and gain new skills.	961	67.25%	371	25.96%	66	4.62%	14	0.98%	17	1.19%
I feel that more training is needed for employees.	594	41.57%	448	31.35%	241	16.86%	118	8.26%	28	1.96%
I would attend training workshops held by the company.	722	50.52%	469	32.82%	197	13.79%	26	1.82%	15	1.05%
If given the opportunity to take training on a variety of topics I would take them.	783	54.79%	481	33.66%	140	9.80%	11	0.77%	14	0.98%

Chart 7



Training Preference

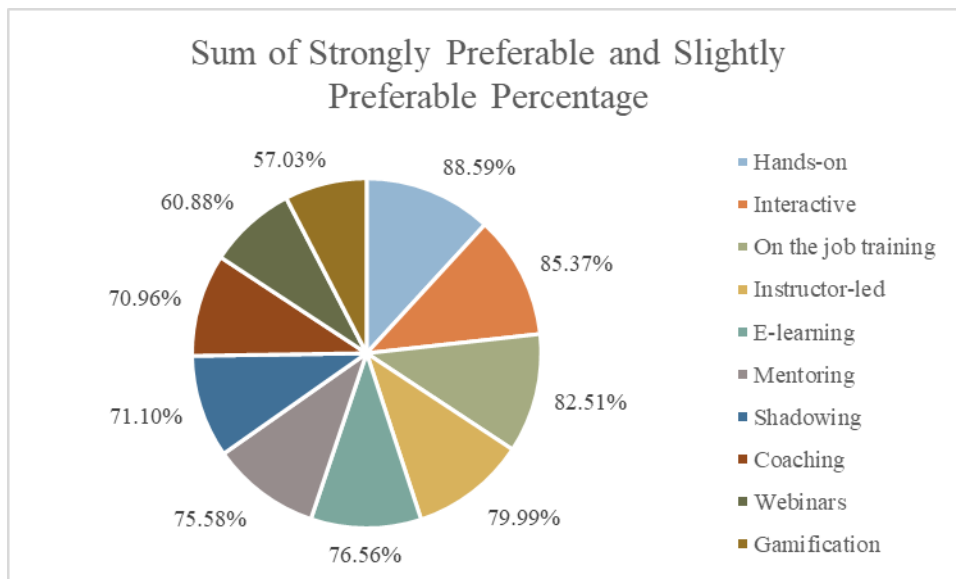
The next section in the company data questioned the employee's preference on several training methods. From the results, we found that the training method the employees had a strong or slight preferability to was hands-on (88.59%), followed by interactive (85.37%), on the job training (82.51%), instructor-led (79.99%), e-learning (76.56%), mentoring (75.58%), shadowing (71.10%), coaching (70.96%), webinars (60.88%), and lastly gamification (57.03%). Using these

results, the company can train employees with their preferred methods allowing for a better training experience. The table below summarizes the results from the company data while the chart visualizes the results mentioned previously.

Table 11

Traditional vs Non-Traditional	Category	<u><i>Strongly preferable</i></u>		<u><i>Slightly preferable</i></u>		<u><i>No preference</i></u>		<u><i>Slightly unpreferable</i></u>		<u><i>Strongly unpreferable</i></u>	
		Total	Percentage	Total	Percentage	Total	Percentage	Total	Percentage	Total	Percentage
Non-Traditional	Hands-on	991	69.35%	275	19.24%	149	10.43%	7	0.49%	7	0.49%
Non-Traditional	Interactive	890	62.28%	330	23.09%	187	13.09%	13	0.91%	9	0.63%
Traditional	On the job training	875	61.23%	304	21.27%	197	13.79%	35	2.45%	18	1.26%
Traditional	Instructor-led	713	49.90%	430	30.09%	250	17.49%	25	1.75%	11	0.77%
Traditional	Mentoring	685	47.94%	395	27.64%	287	20.08%	43	3.01%	19	1.33%
Non-Traditional	E-learning	669	46.82%	425	29.74%	253	17.70%	51	3.57%	31	2.17%
Traditional	Shadowing	662	46.33%	354	24.77%	285	19.94%	83	5.81%	45	3.15%
Traditional	Coaching	614	42.97%	400	27.99%	327	22.88%	63	4.41%	25	1.75%
Non-Traditional	Gamification	510	35.69%	305	21.34%	524	36.67%	50	3.50%	40	2.80%
Non-Traditional	Webinars	466	32.61%	404	28.27%	415	29.04%	89	6.23%	55	3.85%

Chart 8



Employee Satisfaction, Motivation, Performance and/or Productivity

With regards to evaluating the current employee motivation, satisfaction, performance and productivity, the company data contained thirteen (13) questions around these areas.

From these questions, we found that 31.35% of the employees agree or strongly agree with the premise *“I feel like I am reaching my full potential with this position.”*, 38.70% of the employees felt neutral and 29.95% disagreed or strongly disagreed with the premise. Similarly, when presented with the following premise *“I feel that I'm growing professionally.”*, 40.66% of the employees agree or strongly agree, 27.57% was neutral and 31.77% disagreed or strongly disagreed with the premise. Thus, we can conclude less than a third of employees feel they're not reaching their full potential with their position nor are growing professionally.

Additionally, in relation to the premise *“My job gives me the opportunity to develop my skills.”*, 32.68% of employees agreed or strongly agreed, 34.85% remained neutral and 32.47% disagreed or strongly disagreed. In parallel with the previous premise, when presented with the premise *“My job gives me the opportunity to learn my skills.”*, 27.92% of employees agreed or strongly agreed, 41.57% remained neutral and 30.51% disagreed or strongly disagreed. From these results we can conclude that less than one third of employees don't believe their job gives them the opportunity to develop their skills or learn new skills.

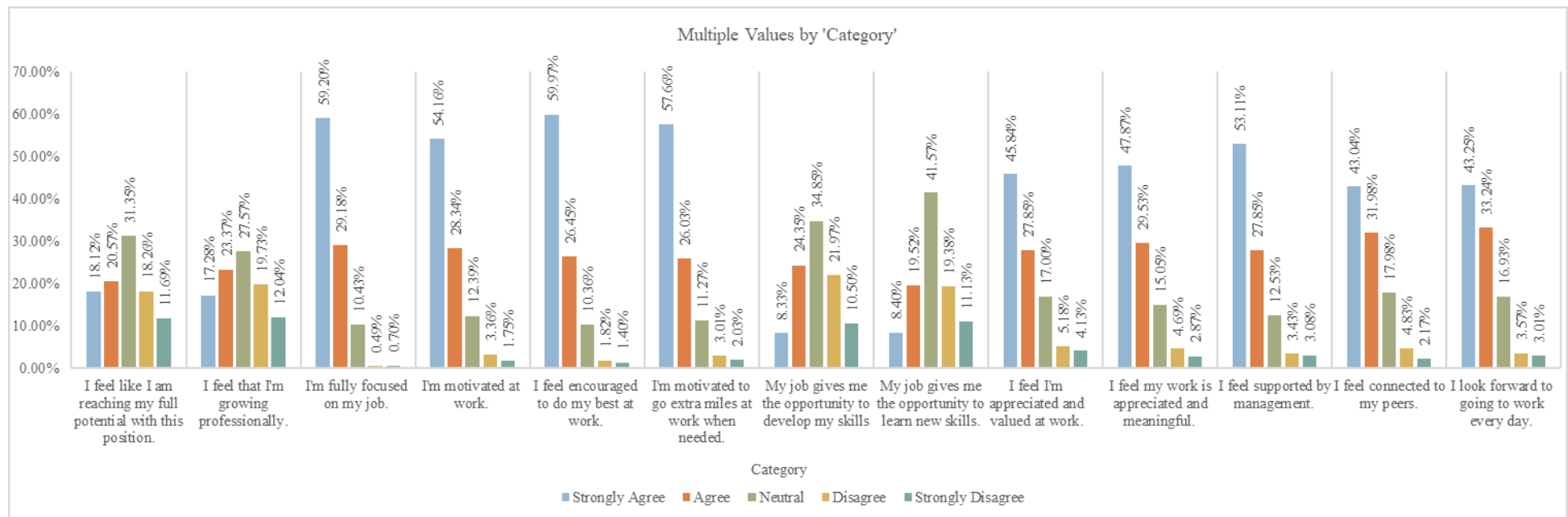
It's important to note that on these four (4) premises the highest percentage was obtained by the neutral category.

For the rest of the premises in this section, the majority of the employees agree or strongly agree with the premise with less than one tenth disagreeing or strongly disagreeing and less than one fifth remaining neutral. The table below summarizes the results from the company data while the chart visualizes the results mentioned previously.

Table 12

Category	<u>Strongly Agree</u>		<u>Agree</u>		<u>Neutral</u>		<u>Disagree</u>		<u>Strongly Disagree</u>	
	Total	Percentage	Total	Percentage	Total	Percentage	Total	Percentage	Total	Percentage
I feel like I am reaching my full potential with this position.	259	18.12%	294	20.57%	448	31.35%	261	18.26%	167	11.69%
I feel that I'm growing professionally.	247	17.28%	334	23.37%	394	27.57%	282	19.73%	172	12.04%
I'm fully focused on my job.	846	59.20%	417	29.18%	149	10.43%	7	0.49%	10	0.70%
I'm motivated at work.	774	54.16%	405	28.34%	177	12.39%	48	3.36%	25	1.75%
I feel encouraged to do my best at work.	857	59.97%	378	26.45%	148	10.36%	26	1.82%	20	1.40%
I'm motivated to go extra miles at work when needed.	824	57.66%	372	26.03%	161	11.27%	43	3.01%	29	2.03%
My job gives me the opportunity to develop my skills	119	8.33%	348	24.35%	498	34.85%	314	21.97%	150	10.50%
My job gives me the opportunity to learn new skills.	120	8.40%	279	19.52%	594	41.57%	277	19.38%	159	11.13%
I feel I'm appreciated and valued at work.	655	45.84%	398	27.85%	243	17.00%	74	5.18%	59	4.13%
I feel my work is appreciated and meaningful.	684	47.87%	422	29.53%	215	15.05%	67	4.69%	41	2.87%
I feel supported by management.	759	53.11%	398	27.85%	179	12.53%	49	3.43%	44	3.08%
I feel connected to my peers.	615	43.04%	457	31.98%	257	17.98%	69	4.83%	31	2.17%
I look forward to going to work every day.	618	43.25%	475	33.24%	242	16.93%	51	3.57%	43	3.01%

Chart 9



Employee Retention

The company data also had a section related to employee retention. In this section, we found that 64.59% of employees are very likely to recommend the organization to friends or peers as a great place to work, 55.14% are very likely to stay at this company if they were offered the same job at another organization, 67.32% are very likely to apply to their position again, and 71.59% are very likely to stay with the company for another year. From these results, we can understand that more than half of the employees of the company are happy enough to stay and promote the company to others regardless of the training opportunities offered and the existent skills gap. The table below summarizes the results from the company data while the chart visualizes the results mentioned previously.

Table 13

Category	<u>Very likely</u>		<u>Somewhat likely</u>		<u>Neither likely nor unlikely</u>		<u>Somewhat unlikely</u>		<u>Very unlikely</u>	
	Total	Percentage	Total	Percentage	Total	Percentage	Total	Percentage	Total	Percentage
How likely would you recommend this organization to friends or peers as a great place to work?	923	64.59%	336	23.51%	91	6.37%	46	3.22%	33	2.31%
If you were offered the same job at another organization, how likely would it be for you to stay at this company?	788	55.14%	283	19.80%	216	15.12%	76	5.32%	66	4.62%
How likely would you be to apply to this position again?	962	67.32%	279	19.52%	96	6.72%	47	3.29%	45	3.15%
How likely are you to stay with the company for another year?	1023	71.59%	227	15.89%	97	6.79%	39	2.73%	43	3.01%

Chart 10



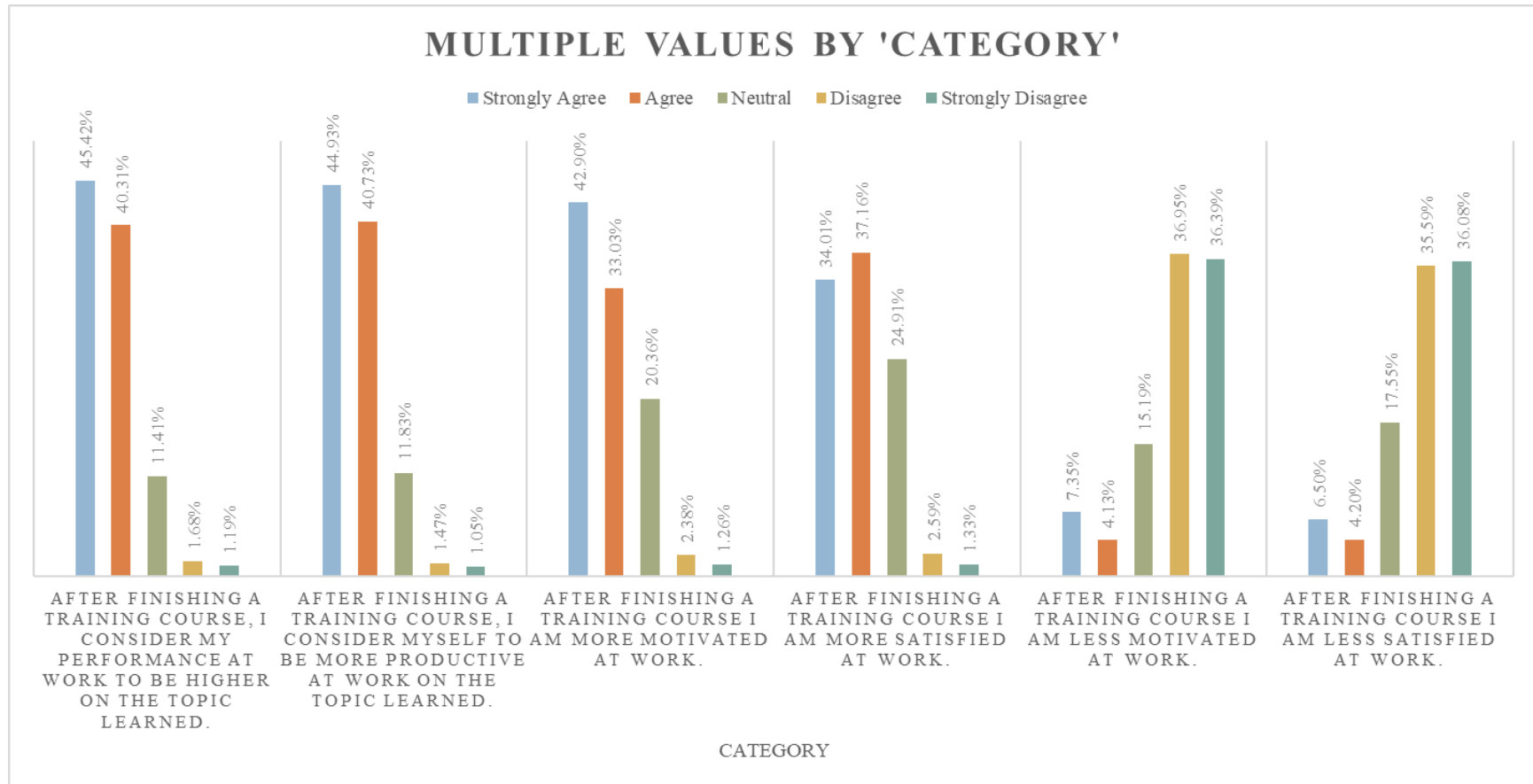
Correlation

The next section of the survey was focused on the correlation between finishing a training course and the employee's performance, productivity, motivation, and satisfaction at work. This section contained six (6) questions from which we found that after finishing a training course over 70% of the employees strongly agreed or agreed that their performance was higher, they were more productive, motivated, and satisfied at work. Furthermore, less than one fifth of employees strongly agreed or agreed that after finishing a training course they felt less satisfied and motivated at work. Therefore, we can conclude that learning and development opportunities positively impact employee's motivation, satisfaction, productivity, and performance.

Table 14

Category	<u>Strongly Agree</u>		<u>Agree</u>		<u>Neutral</u>		<u>Disagree</u>		<u>Strongly Disagree</u>	
	Total	Percentage	Total	Percentage	Total	Percentage	Total	Percentage	Total	Percentage
After finishing a training course, I consider my performance at work to be higher on the topic learned.	649	45.42%	576	40.31%	163	11.41%	24	1.68%	17	1.19%
After finishing a training course, I consider myself to be more productive at work on the topic learned.	642	44.93%	582	40.73%	169	11.83%	21	1.47%	15	1.05%
After finishing a training course, I am more motivated at work.	613	42.90%	472	33.03%	291	20.36%	34	2.38%	18	1.26%
After finishing a training course, I am more satisfied at work.	486	34.01%	531	37.16%	356	24.91%	37	2.59%	19	1.33%
After finishing a training course, I am less motivated at work.	105	7.35%	59	4.13%	217	15.19%	528	36.95%	520	36.39%
After finishing a training course, I am less satisfied at work.	93	6.50%	60	4.20%	251	17.55%	509	35.59%	516	36.08%

Chart 11



SPSS Statistical Tests

To identify the correlation between closing the skills gap with employee retention, performance/productivity, motivation, and/or satisfaction, a series of statistical tests were run on SPSS. These statistical tests were Linnear Regression and ANOVA. Below are the results and their interpretation.

Linnear Regression & ANOVA

Descriptive Statistics

Descriptive Statistics			
	Mean	Std. Deviation	N
If given the opportunity to take training on a variety of topics I would take them.	4.40	.775	1429
After finishing a training course, I consider myself to be more productive at work on the topic learned.	4.27	.805	1429
After finishing a training course, I consider my performance at work to be higher on the topic learned.	4.27	.818	1429
After finishing a training course, I am more motivated at work.	4.14	.907	1429
After finishing a training course, I am more satisfied at work.	4.00	.902	1429
How likely are you to stay with the company for another year?	4.50	.955	1429

The data above is a summary of descriptive statistics from the company data. Below is an interpretation of the results:

1. Training Opportunities (Closing the Skills Gap): The average response to “If given the opportunity to take training on a variety of topics I would take them” is 4.40 with a standard deviation of 0.775. This suggests that most employees are likely to take advantage of training opportunities, with a relatively small variation in responses.
2. Productivity and Performance: The average responses to “After finishing a training course, I consider myself to be more productive at work on the topic learned” and “After finishing a training course, I consider my performance at work to be higher on the topic learned” are both 4.27, with standard deviations of 0.805 and 0.818 respectively. This

indicates that most employees feel that they are more productive and perform better at work after completing a training course.

3. Motivation and Satisfaction: The average responses to “After finishing a training course I am more motivated at work” and “After finishing a training course I am more satisfied at work” are 4.14 and 4.00 respectively, with standard deviations of 0.907 and 0.902 respectively. This suggests that most employees feel more motivated and satisfied at work after completing a training course.
4. Retention: The average response to “How likely are you to stay with the company for another year?” is 4.50, with a standard deviation of 0.955. This indicates that most employees are likely to stay with the company for another year.

The number of respondents (N) for all questions is 1429, which suggests that the company data has a large sample size, and the results should be quite reliable.

Correlations

		Correlations					
		If given the opportunity to take training on a variety of topics I would take them.	After finishing a training course, I consider myself to be more productive at work on the topic learned.	After finishing a training course, I consider my performance at work to be higher on the topic learned.	After finishing a training course, I am more motivated at work.	After finishing a training course, I am more satisfied at work.	How likely are you to stay with the company for another year?
Pearson Correlation	If given the opportunity to take training on a variety of topics I would take them.	1.000	.438	.429	.454	.450	.269
	After finishing a training course, I consider myself to be more productive at work on the topic learned.	.438	1.000	.860	.746	.708	.339
	After finishing a training course, I consider my performance at work to be higher on the topic learned.	.429	.860	1.000	.734	.683	.320
	After finishing a training course, I am more motivated at work.	.454	.746	.734	1.000	.789	.362
	After finishing a training course, I am more satisfied at work.	.450	.708	.683	.789	1.000	.348
	How likely are you to stay with the company for another year?	.269	.339	.320	.362	.348	1.000
Sig. (1-tailed)	If given the opportunity to take training on a variety of topics I would take them.	.	<.001	<.001	<.001	<.001	<.001
	After finishing a training course, I consider myself to be more	.000	.	.000	.000	.000	.000

	productive at work on the topic learned.						
	After finishing a training course, I consider my performance at work to be higher on the topic learned.	.000	.000	.	.000	.000	.000
	After finishing a training course, I am more motivated at work.	.000	.000	.000	.	.000	.000
	After finishing a training course, I am more satisfied at work.	.000	.000	.000	.000	.	.000
	How likely are you to stay with the company for another year?	.000	.000	.000	.000	.000	.
N	If given the opportunity to take training on a variety of topics I would take them.	1429	1429	1429	1429	1429	1429
	After finishing a training course, I consider myself to be more productive at work on the topic learned.	1429	1429	1429	1429	1429	1429
	After finishing a training course, I consider my performance at work to be higher on the topic learned.	1429	1429	1429	1429	1429	1429
	After finishing a training course, I am more motivated at work.	1429	1429	1429	1429	1429	1429
	After finishing a training course, I am more satisfied at work.	1429	1429	1429	1429	1429	1429
	How likely are you to stay with the company for another year?	1429	1429	1429	1429	1429	1429

The correlation matrix above shows the relationship between different variables in the company data. Below is an interpretation of the results:

1. Training Opportunities (Closing the Skills Gap) and Other Variables: The correlation between “If given the opportunity to take training on a variety of topics I would take them” and other variables ranges from 0.269 to 0.454, indicating a positive but moderate relationship.
2. Productivity and Performance: The correlation between “After finishing a training course, I consider myself to be more productive at work on the topic learned” and “After finishing a training course, I consider my performance at work to be higher on the topic learned” is 0.860, indicating a strong positive relationship.
3. Motivation and Satisfaction: The correlation between “After finishing a training course I am more motivated at work” and “After finishing a training course I am more satisfied at work” is 0.789, indicating a strong positive relationship.
4. Retention and Other Variables: The correlation between “How likely are you to stay with the company for another year?” and other variables range from 0.269 to 0.362, indicating a positive but moderate relationship.

The significance level (Sig.) for all correlations is less than 0.001, which means all these correlations are statistically significant.

The number of respondents (N) for all correlations is 1429, which suggests that the survey has a large sample size, and the results should be quite reliable.

Model Summary

Model Summary^b										
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	Change Statistics			Sig. F Change	Durbin - Watson
						F Change	df1	df2		
1	.500 ^a	0.250	0.248	0.673	0.250	94.992	5	1422	0.000	1.979

a. Predictors: (Constant), How likely are you to stay with the company for another year?, After finishing a training course, I consider my performance at work to be higher on the topic learned., After finishing a training course I am more satisfied at work., After finishing a training course I am more motivated at work., After finishing a training course, I consider myself to be more productive at work on the topic learned.

b. Dependent Variable: If given the opportunity to take training on a variety of topics I would take them.

The model summary above is a summary of the linear regression analysis. Below is an interpretation of the results:

1. R (Multiple Correlation Coefficient): The R value is 0.500, which represents the correlation between the observed and predicted values of the dependent variable. This value ranges from 0 to 1, with 1 indicating a perfect positive relationship. An R value of 0.500 suggests a moderate positive correlation.
2. R Square (Coefficient of Determination): The R Square value is 0.250, which means that 25% of the variability in the dependent variable can be explained by the model. In other words, the independent variables in the model account for 25% of the changes in the dependent variable.
3. Adjusted R Square: The Adjusted R Square value is 0.248, which adjusts the R Square for the number of predictors in the model. It is always lower than R Square and is a more accurate measure of the goodness of fit of the model.

4. Std. Error of the Estimate: The standard error of the estimate is 0.673, which measures the standard deviation of the residuals (the difference between the observed and predicted values). A lower value indicates a better fit to the data.
5. F Change: The F Change value is 94.992 and its significance level (Sig. F Change) is 0.000, which means that the overall model is statistically significant.
6. Durbin-Watson: The Durbin-Watson statistic tests for autocorrelation in the residuals from a statistical regression analysis. The statistic ranges from 0 to 4, with a value around 2 meaning no autocorrelation. In this case, it's 1.979, indicating that there's no autocorrelation in the data. Furthermore, the result of 1.979 proves that the model specification and validity of the study is adequate given its value close to 2.00.

ANOVA

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	214.838	5	42.968	94.992	<.001 ^b
	Residual	643.210	1422	.452		
	Total	858.048	1427			

a. Dependent Variable: If given the opportunity to take training on a variety of topics I would take them.

b. Predictors: (Constant), How likely are you to stay with the company for another year?, After finishing a training course, I consider my performance at work to be higher on the topic learned., After finishing a training course I am more satisfied at work., After finishing a training course I am more motivated at work., After finishing a training course, I consider myself to be more productive at work on the topic learned.

The table above is the output of an ANOVA analysis. From the results we can conclude that the model has a significant effect on the dependent variable which is "If given the opportunity to take training on a variety of topics I would take them." This is indicated by the significance level which is less than 0.001. Furthermore, the F-statistic (94.992) is quite large, which typically indicates a stronger relationship between the variables.

Coefficients

Coefficients ^a									
		Unstandardized Coefficients		Standardized Coefficients			Correlations		
Model		B	Std. Error	Beta	t	Sig.	Zero-order	Partial	Part
1	(Constant)	2.184	0.113		19.391	0.000			
	After finishing a training course, I consider myself to be more productive at work on the topic learned.	0.095	0.047	0.099	2.032	0.042	0.438	0.054	0.047
	After finishing a training course, I consider my performance at work to be higher on the topic learned.	0.086	0.044	0.091	1.944	0.052	0.429	0.051	0.045
	After finishing a training course, I am more motivated at work.	0.124	0.036	0.145	3.421	0.001	0.454	0.090	0.079
	After finishing a training course, I am more satisfied at work.	0.146	0.034	0.170	4.324	0.000	0.450	0.114	0.099
	How likely are you to stay with the company for another year?	0.077	0.020	0.095	3.816	0.000	0.269	0.101	0.088

The data above shows the result of the Regression's Coefficients. The coefficients indicate how much the dependent variable changes with a one-unit change in the predictor while other predictors are held constant. For example, for every unit increase in "After finishing a training course, I consider myself to be more productive at work on the topic learned", there is an expected increase of 0.095 in the dependent variable "If given the opportunity to take training on a variety of topics I would take them", assuming all other variables are held constant. Additionally, in terms of significance of predictors, all predictors are significant at the 0.05 level except for "After finishing a training course, I consider my performance at work to be higher on the topic learned" which has a p-value of 0.052, slightly above the common alpha level of 0.05.

Residual Statistics

Residuals Statistics^a					
	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	2.71	4.83	4.40	.388	1428
Residual	-3.752	1.979	.000	.671	1428
Std. Predicted Value	-4.359	1.093	.000	1.000	1428
Std. Residual	-5.578	2.942	.000	.998	1428

a. Dependent Variable: If given the opportunity to take training on a variety of topics I would take them.

The table above shows the statistics of the residuals from the regression analysis. The residuals (the difference between the observed and predicted values) have a mean of 0 and standard deviation close to 1, which indicates the model has a good fit and suggests that the model's assumptions are likely met.

Summary

This chapter presents the results of the analysis of the company survey data. The survey covered various topics related to the employees' skills, interests, motivation, and preferences for training. The chapter was organized by themes, each corresponding to a survey question. The chapter provided an overview of the study and the company data, followed by the results of each theme and subtheme. Next, Chapter V covers the study's discussion and details the summary of findings, limitations, future research, recommendations, conceptual model after research and a conclusion.

Chapter V: Discussion

In this chapter, the results of the statistical analysis are interpreted and discussed in relation to the research questions and hypotheses. The implications of the findings for the existing literature and theory are also explored. The chapter is organized as follows: first, a summary of the main findings is provided; second, the limitations of the study are acknowledged and discussed; third, some directions for future research are suggested; and fourth, some recommendations for practice and policy are offered. Finally, a conclusion is drawn that summarizes the main contributions and implications of the study.

Summary of Findings

The following section will explain and interpret the study hypotheses based on the results from the previous chapter.

General hypothesis

H0: Closing the skills gap does improve employee retention, motivation, satisfaction, and/or performance/productivity.

Ha: Closing the skills gap does not improve employee retention, motivation, satisfaction, and/or performance/productivity.

Based on the data results from Chapter 4, closing the skills gap does improve employee retention, motivation, satisfaction, and/or performance/productivity. Below is a breakdown of the results that lead to this conclusion:

1. Performance Improvement: A large majority of employees (85.73%) agree or strongly agree that their performance at work is higher in the topic learned after finishing a training course.

2. Productivity Improvement: Similarly, 85.66% of employees agree or strongly agree that they are more productive at work on the topic learned after finishing a training course.
3. Motivation Increase: A significant majority of employees (75.93%) agree or strongly agree that they are more motivated at work after finishing a training course.
4. Satisfaction Increase: More than half of the employees (71.17%) agree or strongly agree that they are more satisfied at work after finishing a training course.
5. Recommendation Likelihood: A large majority of employees (88.10%) would very likely or somewhat likely recommend this organization to friends or peers as a great place to work.
6. Retention Likelihood: Most employees (74.94%) would very likely or somewhat likely stay at this company if offered the same job at another organization.
7. Reapplication Likelihood: Most employees (86.84%) would very likely or somewhat likely apply to this position again.
8. Stay Duration: Most employees (87.48%) are very likely or somewhat likely to stay with the company for another year.
9. Motivation to Learn: A large majority of employees (93.21%) agree or strongly agree that they are motivated to learn and gain new skills.
10. Need for More Training: Most employees (72.92%) agree or strongly agree that more training is needed for employees.
11. Attendance Willingness: Most employees (83.34%) would attend training workshops held by the company.
12. Training Opportunity Utilization: Most employees (88.45%) would take training on a variety of topics if given the opportunity.

13. Reaching Full Potential: A majority of employees (38.69%) agree or strongly agree that they are reaching their full potential with this position.
14. Professional Growth: A significant portion of employees (40.65%) agree or strongly agree that they're growing professionally.
15. Focus on Job: A large majority of employees (88.38%) agree or strongly agree that they're fully focused on their job.
16. Motivation at Work: Most employees (82.50%) agree or strongly agree that they're motivated at work.
17. Encouragement to Do Best: A large majority of employees (86.42%) agree or strongly agree that they feel encouraged to do their best at work.
18. Motivation to Go Extra Miles: Most employees (83.69%) agree or strongly agree that they're motivated to go extra miles at work when needed.
19. Opportunity to Develop Skills: Only 32.68% of employees agree or strongly agree that their job gives them the opportunity to develop their skills.
20. Opportunity to Learn New Skills: Only 27.92% of employees agree or strongly agree that their job gives them the opportunity to learn new skills.
21. Feeling Appreciated and Valued: A majority of employees (73.69%) agree or strongly agree that they feel appreciated and valued at work.
22. Work Appreciation and Meaningfulness: Most employees (77.40%) agree or strongly agree that they feel their work is appreciated and meaningful.
23. Support from Management: A majority of employees (80.96%) agree or strongly agree that they feel supported by management.

24. Connection with Peers: Most employees (75.02%) agree or strongly agree that they feel connected to their peers.

25. Looking Forward to Work: Most employees (76.49%) agree or strongly agree that they look forward to going to work every day.

Given these results, we fail to reject the null hypothesis (H_0): Closing the skills gap does improve employee retention, motivation, satisfaction, and/or performance/productivity.

Additional hypotheses

Hypothesis 1

H_0^1 : Employees believe the company offers opportunities for reskilling.

H_a^1 : Employees believe the company does not offer opportunities for reskilling.

Based on the data results from Chapter 4, a majority of employees do not believe the company offers opportunities for reskilling. From the data results only 28.34% of employees agree or strongly agree that the company offers reskilling opportunities, while 45.63% disagree or strongly disagree and 26.03% are neutral.

Given this, we reject the null hypothesis and accept the alternative hypothesis (H_a): Employees believe the company does not offer opportunities for reskilling.

Hypothesis 2

H_0^2 : Employees are aware of the skills gap.

H_a^2 : Employees are not aware of the skills gap.

Based on the data results from Chapter 4, employees are somewhat aware of a skills gap. Below is a breakdown of the results:

1. Necessary Skills: While a majority of employees feel they have the necessary skills to complete their job (43.87% agree or strongly agree), there is still a significant portion who are neutral (28.20%) or disagree/strongly disagree (27.92%).
2. Need for Training: More than half of the employees (58.08%) agree or strongly agree that there are skills they need to be taught.
3. Desire to Learn: A large majority of employees (73.06%) agree or strongly agree that there are specific skills they would like to learn.
4. Satisfaction with Training: Only 31.98% of employees agree or strongly agree that they are satisfied with the company's investment in training and development, while 40.01% disagree or strongly disagree.
5. Usefulness of Resources: Only 32.96% of employees agree or strongly agree that the provided resources (Knowledge Base, job aids, training material) are useful and help them work successfully and accurately.
6. Reskilling Opportunities: Only 28.34% of employees agree or strongly agree that the company offers reskilling opportunities, while 45.63% disagree or strongly disagree.

In conclusion, while some employees feel they have the necessary skills for their job, many recognize a need for additional training and express a desire to learn specific skills. Furthermore, there seems to be dissatisfaction with the company's investment in training and development, as well as the usefulness of provided resources and reskilling opportunities. Therefore, we fail to reject the null hypothesis (H₀): Employees are aware of the skills gap.

Hypothesis 3

H₀³: Employees are self-motivated to improve their skills and participate in available training opportunities.

H_a³: Employees are not self-motivated to improve their skills and participate in available training opportunities.

Based on the data results from Chapter 4, a significant majority of employees are indeed self-motivated to improve their skills and participate in available training opportunities. Below is a breakdown from the results:

- 67.25% strongly agree and 25.96% agree that they are motivated to learn and gain new skills.
- 41.57% strongly agree and 31.35% agree that more training is needed for employees.
- 50.52% strongly agree and 32.82% agree that they would attend training workshops held by the company.
- 54.79% strongly agree and 33.66% agree that they would take training on a variety of topics if given the opportunity.

Given these results, we fail to reject the null hypothesis (H₀) that employees are self-motivated to improve their skills and participate in available training opportunities. However, it's important to note that this conclusion is based on the data from the company and may not apply to all contexts or populations. It's also worth noting that while a majority of employees express a desire for more training, this does not necessarily mean they are not self-motivated - it could indicate a high level of motivation to learn and improve.

Hypothesis 4

H0⁴: Employees feel the skills they are lacking are mostly soft skills.

Ha⁴: Employees feel the skills they are lacking are mostly hard skills.

Based on the data results from Chapter 4, employees feel they are lacking both hard and soft skills. However, the skill with the highest percentage of employees rating it as 1 (the highest level of lack or unpreparedness) is “Business Etiquette”, a hard skill, with 18.89% of employees rating it as such. On the other hand, the soft skill with the highest percentage of employees rating it as 1 is “Teamwork”, with 17.84% of employees rating it as such.

Therefore, based on this data, the alternative hypothesis (Ha: Employees feel the skills they are lacking are mostly hard skills) seems to be more supported. Thus, we reject the null hypothesis and accept the alternative hypothesis.

However, it’s important to note that this is a general interpretation. The perceived lack of skills might vary depending on the specific context or the individual perceptions of the employees. Also, this interpretation does not imply causation. Further research might be needed to understand the reasons behind these perceptions.

Hypothesis 5

H0⁵: Employees prefer training given in traditional strategies or methods.

Ha⁵: Employees prefer training given in non-traditional strategies or methods.

Based on the data from the previous chapter, it appears that employees have a stronger preference for non-traditional training methods, specifically hands-on and interactive methods, as compared to traditional methods like on-the-job training or instructor-led sessions.

For instance, 69.35% of employees strongly prefer hands-on (a non-traditional method), while only 61.23% strongly prefer on-the-job training (a traditional method). Similarly, 62.28% strongly prefer interactive (non-traditional), while only 49.90% strongly prefer instructor-led (traditional).

Therefore, the alternative hypothesis (Ha5: Employees prefer training given in non-traditional strategies or methods) seems to be more supported by this data. Thus, we reject the null hypothesis and accept the alternative hypothesis.

However, it's important to note that this is a general interpretation. The preference might vary depending on the specific context or the individual preferences of the employees. Also, this interpretation does not imply causation. Further research might be needed to understand the reasons behind these preferences.

Hypothesis 6

H0⁶: There is a positive correlation between closing the skills gap with employee retention, performance/productivity, motivation, and/or satisfaction.

Ha⁶: There is a negative correlation between closing the skills gap with employee retention, performance/productivity, motivation, and/or satisfaction.

Based on the data from Chapter 4, we fail to reject the null hypothesis (H0): There is a positive correlation between closing the skills gap with employee retention, performance/productivity, motivation, and/or satisfaction. The R Square value in the model summary is 0.250, which indicates that 25% of the variance in the dependent variable (employee retention, performance/productivity, motivation, and/or satisfaction) can be explained by the independent variables (closing the skills gap).

Furthermore, the Pearson Correlation values are all positive, suggesting a positive correlation between closing the skills gap and employee retention, performance/productivity, motivation, and satisfaction.

Lastly, the ANOVA table shows a significance level (p-value) of less than 0.001, which is less than the commonly used threshold of 0.05. This indicates that there is a statistically significant relationship between closing the skills gap and employee outcomes.

Therefore, there is sufficient evidence to accept the null hypothesis (H_0) that there is a positive correlation between closing the skills gap with employee retention, performance/productivity, motivation, and/or satisfaction. The alternative hypothesis (H_a) that there is a negative correlation is not supported by this data.

Limitations

This study had some limitations; specifically, the company survey is lengthy and has 106 questions, which could have resulted in survey fatigue. Running a shorter version of the survey with more targeted questions catered to lesser topics would be the solution.

Furthermore, as this study was done through backyard research, the study was limited to the employees of a specific company which could not relate to the situations of other companies. The resolution would be to expand the study to incorporate multiple organizations for a comparison in the research.

Another limitation was that most of the employees in the study were front-line employees as they represent the largest population within the company. A solution to this would be to run short surveys targeted at supervisors, managers, and executives to have a better understanding of their opinion towards the skills gap, how they are training their subordinates, and how they embrace multiple intelligences and adult learning.

Moreover, another limitation was that all of the employees work from home as the company solely works from home. A solution to this limitation would be to survey companies that have an in-office or hybrid model and do comparison research.

Lastly, the company's population in Mexico (3.22%) and Canada (4.55%) was minor compared to its population in the United States (92.23%) where it holds most of its business. Therefore, the results from these countries aren't intended to be generalized to the larger population of these countries. A solution to this limitation would be to expand the survey in these and other countries to gain a wider understanding of their population.

Future Research

In terms of future research, the study could be replicated in other countries aside from Mexico, Canada, and the United States. By doing so, the results could have a greater cultural impact and can help understand how different nations learn, which training methods they prefer and which skills they're motivated to learn. Moreover, it can be expanded to diverse industries, organizations, and work-type models. As mentioned earlier, this study was done through background research and thus, it only contained the results of one organization. Expanding the study to several industries can show how different organizations train their employees and what steps they're undergoing to close the skills gap. Additionally, further research could highlight which multiple intelligence is most present in each industry and which skill sets are preferred by their employees. Moreover, after Covid, more companies started working from home or remotely, by expanding this study to the various work-type models, it can result in a comparison of which work-type model is preferred for learning and working, be it in person/office, hybrid or remote.

Furthermore, it would also be valuable to explore the impact of incorporating employee feedback into training and development programs, as well as the potential benefits of offering incentives for completing training and development programs. Further research could also examine the role of leadership in supporting and promoting training and development initiatives, as well as the potential challenges and solutions for implementing such programs in diverse work environments. Additionally, research should explore how to tailor training programs to individual employee needs and preferences, as well as how to measure the effectiveness of such programs in terms of skill acquisition and application. For example, future research could investigate the potential benefits of using personalized learning algorithms to adapt training content to individual employee learning styles.

Finally, future research could explore the role of organizational culture in closing the skills gap and improving employee outcomes. This includes examining the impact of leadership styles, communication strategies, and employee involvement in training and development initiatives. Additionally, research could investigate how to foster a culture of continuous learning and development within organizations, and how to align training and development programs with broader organizational goals and strategies. For example, future research could examine how to optimize the use of training and development programs to enhance employee creativity and innovation, and how to promote a culture of knowledge sharing and collaboration within organizations. Ultimately, a better understanding of these factors could help organizations design more effective training and development programs that improve employee outcomes and contribute to overall organizational success.

Recommendations

Based on the findings of this study, several recommendations can be made for organizations seeking to close the skills gap and improve employee outcomes. It is recommended that companies conduct a thorough skills gap analysis to identify areas where employees lack the necessary skills. This analysis can help determine the specific training and development programs needed to close the gap and improve employee performance. By investing in targeted training programs, companies can ensure that employees have the skills they need to perform their job duties effectively and efficiently.

In addition to targeted training programs, it is recommended that companies implement a comprehensive onboarding process that includes ongoing training and development opportunities. By providing employees with continuous learning opportunities, companies can help keep employees engaged and motivated, and build a culture of learning within the organization. This can also help with employee retention, as employees are more likely to stay with a company that invests in their professional development. The organization could implement measurements and initiatives to foster a culture of continuous learning and development by encouraging employees to pursue additional training and education opportunities, and by providing incentives and recognition for those who do so.

Another recommendation is to involve employees in the training and development process. This can include soliciting feedback from employees on what skills they feel they need to improve, as well as involving them in the design and delivery of training programs. By involving employees in the process, companies can increase engagement and ownership of the training process, which can lead to better outcomes. Not only that, but the company can also

provide regular feedback and coaching to help employees identify areas for improvement and develop plans to address them. This feedback should be both constructive and supportive and should be delivered in a timely and consistent manner.

It is also recommended that companies measure the effectiveness and impact of their training and development programs. This can be done through assessments, surveys, or other feedback mechanisms. By measuring the effectiveness and impact of the programs, companies can identify areas for improvement and make necessary adjustments to ensure that the programs are achieving their desired outcomes. Moreover, organizations can use this data to continually refine and improve their approach. By taking these steps, organizations can effectively close the skills gap and create a more engaged, motivated, and productive workforce.

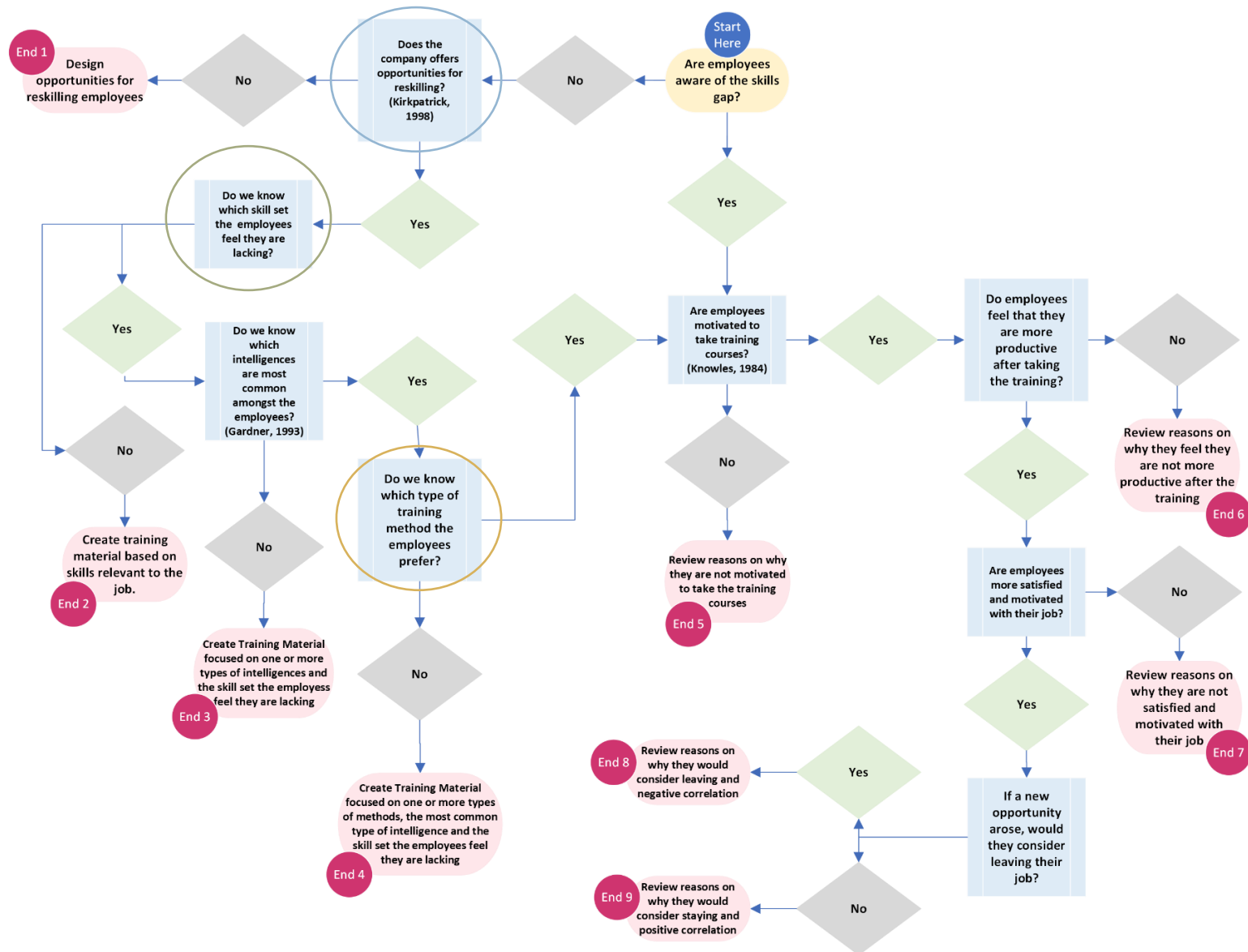
Furthermore, organizations can conduct a comprehensive training and development program that is tailored to the specific needs and goals of each employee. This program can include both technical and soft skills training and be regularly reviewed and updated based on employee feedback and performance. Additionally, it is recommended that organizations offer opportunities for employees to participate in cross-functional projects and job rotations to broaden their skills and increase their exposure to various parts of the organization. This way, the organization can gain better insight into their employee's skills and also offer opportunities for career development and growth.

Finally, it is recommended that companies make training and development a priority by allocating sufficient resources and budget to these initiatives. By investing in employee training and development, companies can improve employee performance, increase employee retention and satisfaction, and ultimately drive business success. As the job market becomes more

competitive, companies that prioritize employee development will be better positioned to attract and retain top talent.

Conceptual Model After Research

After the research, we found that even though the company offers reskilling opportunities, employees aren't aware of these opportunities. Therefore, promoting existent learning and development opportunities as well as ensuring employees' are able to take these during their shift would be an area to evaluate further. Additionally, through the research we found that although employees were mostly unprepared for hard skills, they actually lacked both hard and soft skills. Because of this, it is vital to take this into account and prepare programs to develop employees on both sets of skills. Moreover, while employees' top two training methods were non-traditional the two that followed were two traditional methods; thus, development sessions should incorporate both traditional and non-traditional methods. Aside from these highlighted items, the conceptual model remained the same as the original.



Conclusion

In accordance with the data results, it can be concluded that closing the skills gap through appropriate training and development programs can lead to improvements in employee retention, motivation, satisfaction, and/or performance/productivity. The data suggests that employees who undergo training are more likely to have higher performance, productivity, motivation, and satisfaction levels. Additionally, employees who receive training are more likely to recommend the company, stay longer, and feel appreciated and valued.

Although employees recognize a need for additional training and express a desire to learn specific skills, there seems to be dissatisfaction with the company's investment in training and development, as well as the usefulness of provided resources and reskilling opportunities. Therefore, companies need to invest more in training programs and provide useful resources to meet employees' needs for growth and development.

The study also reveals that employees are self-motivated to improve their skills and participate in available training opportunities. Employees prefer non-traditional training methods such as hands-on and interactive methods over traditional methods like on-the-job training or instructor-led sessions.

Furthermore, the data suggests that employees feel they are lacking both hard and soft skills. Business etiquette is the hard skill with the highest percentage of employees rating it as the highest level of lack or unpreparedness, while teamwork is the soft skill with the highest percentage of employees rating it as such. Therefore, companies need to provide more training programs to improve business etiquette and teamwork skills.

Finally, the study shows a positive correlation between closing the skills gap and employee retention, performance/productivity, motivation, and satisfaction. The data suggests that closing the skills gap can help improve employee outcomes. In conclusion, the study has demonstrated that closing the skills gap through appropriate training and development programs can significantly improve employee retention, motivation, satisfaction, and performance/productivity. Organizations that invest in such programs stand to benefit from a more skilled and motivated workforce, which can lead to improved organizational outcomes. Therefore, companies need to invest in appropriate training and development programs to close the skills gap and improve employee outcomes.

Summary

This chapter discussed and interpreted the findings in relation to the research questions, hypotheses, literature, and theory. It has also acknowledged and discussed the limitations and challenges of the study design and methodology and suggested some directions for future research on the relationship between employee training and development and the skills gap. Moreover, it has offered some recommendations for company practice and policy to enhance employee learning and success in the digital age. Finally, it has concluded that the study has provided some valuable insights and implications for the literature, theory, and practice of employee training and development and the skills gap.

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Appendix 1: Data Collection Plan

01 Request Approval from Company to share data for the study

02 Coordinate with Company to receive data

03 Partner with L&D to ensure all data needed is received

GANTT CHART

