November 2023

Effectiveness of Virtual Onboarding

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by

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A dissertation submitted in partial fulfillment
of the requirements for the degree of
Doctor of Business Administration
Muma College of Business
University of South Florida

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Date of Approval:
October 13, 2023

Keywords: Hybrid, Face-to-face, Turnover, Success, Human Resources, New Employee Orientation

DEDICATION

I would like to dedicate this dissertation to my beloved parents, Lakshmi and Sarada Menon, without whose hope and encouragement, I would have never completed this dissertation.

ACKNOWLEDGMENTS

I wish to acknowledge the encouragement and help provided by my committee, consisting of Prof. Matt, Prof. Richard, and Prof. Hemant. From the initial idea provided in class to this point of completion, Matt's thoughtfulness and insight guided me. Thank you, Matt. I am grateful to Richard for the deep insight and valuable feedback he provided at all our meetings. Thank you, Richard. Prof. Hemant provided excellent insights into improving the study and increasing its value, with wisdom and thoughtfulness Thank you, Prof. Hemant. I have only a deep sense of gratitude to my entire committee for painstakingly guiding me to complete this project.

I would also like to thank my mentor and chair of my previous doctoral degree, Dr. Paul Spector. He has been my guiding light over the years and one of the first people who recommended me to the DBA Program. Thank you, Paul.

Finally, I would like to thank Prof. Grandon Gill who helped me get into the Class of 2023. Thank you, Grandon.

Many other faculty, students and well-wishers have provided the best advice, but you are too numerous to mention. A big thank you to all of you even if I cannot acknowledge you individually. Thank you to all who helped me in the process.

And yes, a big thank you to my family, Lakshmi and Sarada, and well-wishers, Bonnie, Joan, Philip, and many others, for your valuable support and encouragement.

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ABSTRACT

During the COVID pandemic that began in 2020, interest in onboarding efficacy increased with going virtual. This survey research study focused on the effectiveness of virtual onboarding by comparing it with face-to-face (traditional) and hybrid onboarding. It spanned 12 different business sectors and involved 730 respondents, including executives, managers, technical personnel, and non-managerial staff. This exploratory study investigated the influence of the onboarding process on important organizational variables, including turnover intention and perception of self-performance. In addition, the study investigated the perception of success of the onboarding process. Results indicated that hybrid onboarding was the most effective followed by virtual and face-to-face onboarding. In addition, this study found gender differences in the onboarding process. No industry differences were found indicating these results were robust across different business sectors. In sum, the study results clearly indicated that virtual onboarding can become more effective by using a hybrid model of onboarding. Future research can examine the effectiveness of hybrid onboarding in different industries and service sectors.

CHAPTER ONE:

INTRODUCTION

Background and Context

Many organizations are in the process of transitioning or have already transitioned from in-person face-to-face onboarding systems to asynchronous and synchronous online onboarding. Virtual onboarding refers to the process of introducing new employees to an organization and its culture, values, and expectations through digital means, such as online training modules, webinars, and video conferencing. With the rise of remote work in recent years and the need for social distancing during the COVID-19 Pandemic, virtual onboarding has become increasingly popular for onboarding new hires while maintaining physical distancing. While research has shown that virtual onboarding may be more effective in terms of compliance and clarification, in-person onboarding may be more effective in terms of integrating the employee into the organization's culture and establishing connections with peers and mentors (Bauer, 2010).

Research from Glassdoor (Fica, 2018) shows that organizations with strong onboarding practices improve employee retention by 82% and productivity by more than 70%. Yet, according to Gallup (2018), only 12% of employees feel their organization does a great job onboarding new employees. The Aberdeen Group (2006) estimates that 90% of employees decide to stay with or leave a company within their first six months, so this initial timeframe is a key period for employers to ensure new organization members experience the foundational

aspects of their onboarding process. The McKinsey group (Smet et al., 2022) has found that many employees leave or turnover without having another job to move into, which is a relatively recent trend. The cost of replacing a new employee can be almost three times their salary.

The Business Case for Onboarding

Every week, new studies and online posts bolster the evidence that onboarding significantly improves an organization's competitive advantage. For example, a Boston Consulting Group study (2012) of the most impactful human resource management functions found that recruiting was related to an organization's ability to generate 3.5 times the profit growth and 2 times the profit margin. Behind recruitment, onboarding was related to 2.5 times the profit growth and 1.9 times the profit margin. Therefore, collectively, organizations with good recruiting and onboarding programs may enjoy 6 times better growth in profits and 3.9 times the profit margin than organizations that employ a haphazard approach to recruiting and onboarding. The study indicated that profit growth and profit margin increased due to structured or purposeful recruiting and onboarding. Additionally, new employees who went through a structured onboarding experience were 58% more likely to remain with the organization after 36 months than those who did not.

The benefits of onboarding for a business provide immense paybacks. When employees get onboarded right, their confidence improves, and they do a fantastic job. Employees feel a sense of belonging if onboarding is done right. Research shows that they integrate better and become better team players (Chillakuri, 2020). In addition, they are less likely to leave the company. With the increasing use of virtual onboarding processes, research shows that technology has been used in onboarding very often as part of a hybrid model (Cascio, 2000). Several studies have tried to assess how a virtual format can impact the onboarding experience

for newcomers (e.g., Elset, 2018; Flanagin & Waldeck, 2004; Gruman & Saks, 2018). This research focuses on the business benefits of good onboarding techniques.

Hiring and retaining employees are directly related to effective onboarding processes. Research by Saks and Gruman (2012) has found that employee fit to an organization can only be ensured through effective onboarding. However, this fit can be affected by several factors in the onboarding process, such as the initial employee perception of the organization and its support, training, culture, and integration processes. In addition, factors like the type of industry/sector, job level (managerial/non-managerial), type of work (remote or hybrid), and demographic factors may have more of an impact on new hires than an initial job offer. In fact, many organizations do extensive recruitment and selection and spend a lot of time and resources on these activities while not paying adequate attention to the effectiveness of the onboarding process. The net effect reduces the efficacy of the hiring and selection process.

In recent years, because of the impact of the COVID-19 Pandemic, many organizations have resorted to using virtual onboarding techniques to onboard employees. However, not many studies have examined the effectiveness of these onboarding techniques.

Researchers in the field of onboarding have developed several onboarding models that have been used to explain the effectiveness of the onboarding process. For example, Bauer and Erdogan's (2012) 4 Cs model explains the effectiveness of onboarding in terms of compliance, clarification, culture, and connection. Other models for effective onboarding include the Klien et al. model (2015), using the Inform-Welcome-Guide (IWG) typology based on earlier research by Klein and Heuser (2008). Caldwell and Peters (2018) developed an effective onboarding model based on a ten-step process. These models try to highlight important elements of the effectiveness of onboarding processes. Since organizations spend vast resources on recruitment

and hiring, effective onboarding is a critical element in ensuring that they get a return on the resources invested.

Typically, newcomers either align with the culture of their new organization or leave it during the onboarding process, so onboarding can speed up the process of determining the level of employee-organization fit (Pike, 2014). The Aberdeen Group (2006) estimates that 90% of employees decide to stay with or leave a company within their first six months, so that time period is a key one for employers to ensure new organization members experience the foundational aspects of their onboarding process. All of the visible and invisible costs of new hire attrition add up to an average of 33% of an employee's annual salary and up to 213% for senior or executive level positions, as the cost to replace them when they leave an organization (Boushey & Glynn, 2012; Otto, 2017).

Given the significance of onboarding programs in the success of new hires and their organizations, it is important to understand what the onboarding process is meant to accomplish. According to Bauer et al. (2007), onboarding should build role clarity, task mastery, self-efficacy, and social acceptance for newcomers to adjust in a well-rounded manner. Despite all of the time and effort spent on recruiting and hiring, organizations do not spend a considerable effort at making sure the employees are properly onboarded (Krasman, 2015), and perhaps many human resources departments, managers, and practitioners truly do not understand what onboarding should entail (Kumar & Pandey, 2017). The context for this study focused on sectors growing the fastest in terms of using virtual onboarding.

Problem Statement

Many organizations are in the process of transitioning or have already transitioned from in-person face-to-face onboarding systems to asynchronous and synchronous online onboarding. However, this transition can create several challenges. While research by Gruman and Saks

(2018) has shown that virtual onboarding may be more effective in terms of compliance and clarification, in-person onboarding may be more effective in terms of integrating the employee into the organization's culture and establishing connections with peers and mentors.

Research Questions

This study focused on the effectiveness of virtual onboarding processes and how it relates to the three outcome variables of turnover intention, the performance of the individual employee, and satisfaction with the onboarding process. More specifically, this research study addressed the following three research questions:

RQ1: In comparison to face-to-face onboarding, does virtual onboarding lead to higher turnover intention rates?

RQ2: In comparison to face-to-face onboarding, does virtual onboarding lead to higher perceived (self-assessed) employee performance?

RQ3: In comparison to face-to-face onboarding, does virtual onboarding lead to higher perceived success of the onboarding program?

Substantive Focus

The substantive focus of this study compared virtual onboarding with in-person face-to-face onboarding systems. The study also examined the type of onboarding process related to the intent of employees to turnover. Subsequently, we examined the relationships between virtual onboarding and self-assessed employee performance. Differences in onboarding effectiveness were examined in terms of organizational size (large, medium, and small), organizational sector, employee level (manager, employee), and time taken for onboarding.

Significance of the Study

The study contributes to the understanding of how virtual onboarding can be effectively implemented and how it affects employee intention to turnover, performance, and satisfaction with the onboarding process. The findings of the study can be used to guide organizations in developing more effective virtual onboarding programs.

This study provides the following outcomes:

1. Compare the effectiveness of virtual onboarding to traditional in-person onboarding.
2. Identify the key factors that contribute to the effectiveness of virtual onboarding.
3. Make recommendations to organizations for improving their virtual onboarding processes.

CHAPTER TWO:

LITERATURE REVIEW

Key Findings from Previous Studies

The literature review provides an overview of the current state of research on virtual onboarding and its effectiveness. The purpose of this chapter is to summarize and critically evaluate the existing literature on the topic to identify gaps in the current knowledge and areas for further research.

Previous studies on virtual onboarding have found that it can be just as effective as traditional in-person onboarding in terms of employee engagement, retention, and performance. However, the effectiveness of virtual onboarding depends on the quality and design of the virtual onboarding program. Factors that have been found to contribute to the effectiveness of virtual onboarding include clear communication, personalized content, and providing opportunities for social interaction and networking.

Within the organization, a formal, well structured, and managed onboarding program is often overlooked (Bauer, 2010). It is as though a general company rule presentation and welcome from your manager are sufficient for the new employees, together with their access badge and a desk without further formalized structure. The study by Gruman and Saks (2011) concluded that, in general, new hires prefer a structured onboarding program over an unstructured one and saw it as one of the success factors of onboarding.

Caldwell and Caldwell (2016) defined ten errors that companies often make during the onboarding process from a human resource (HR) perspective that can be summarized as miscommunicating or overloading new hires with information, not understanding or supporting the new employees with transitional stress, mishandling the scheduling of training, tools, introductions, or communication, failing to provide a realistic view of the role, and not supporting relationship building. Mitchell and Gamlem (2017) stated that well-structured onboarding has more impact on retention and engagement than tuition reimbursement and vacation benefits.

Challenges are also caused by different preferences, experience levels, personalities, and approaches among the new hires (Bauer, 2010; Gruman & Saks, 2011; Mitchell & Gamlem, 2017). For example, some new hires might prefer to go through the material on their own while some want to have everything explained to them in detail and do not like to review material on their own. Some might feel very comfortable building a social network at work whereas others might be hesitant to reach out to new people. Gruman and Saks (2011) highlight that, in general, onboarding studies assume that one style works for all and challenge the idea.

Because of Connectivity created by technology, employers can leverage it to support new hires' virtual onboarding process, substantially reducing cost and time in the process by frequently using a hybrid model that combines the elements of technology and face-to-face onboarding (Cascio, 2000; Good & Cavanagh, 2017; Gruman & Saks, 2018). Many studies have tried to assess the impact of the virtual onboarding process for newly hired onboarded employees (e.g., Elset, 2018; Flanagin & Waldeck, 2004).

Time and Onboarding

The timing of the onboarding process and its components are also a consideration for organizations. One of the most common mistakes employers make while onboarding new hires is not continuing the process long enough (Bauer, 2013; Krasman, 2015; Laurano, 2013). Krasman (2015) sums it well by stating: “Onboarding isn’t a one-time event; it’s a process that persists through all the early stages of an employee’s journey. Even more, it’s an investment in workers that helps them become more productive and more satisfied members of [their] organization” (p. 10).

Although effective onboarding cannot occur in a single day, no definitive answer exists for exactly how long it should last. The Aberdeen Group (2006) stated that onboarding new hires for less than a month is likely to impact retention rates negatively, citing that companies with onboarding programs that last less than a month are 30% less likely to keep their new hires for more than a year compared to those with longer onboarding processes. Laurano (2013) found that the timeframe that companies use to onboard their new hires varies widely, and a period of one to three months is the most common timeframe that companies use to complete the onboarding experience.

Bauer (2010) stated that based on research and general knowledge, employees get approximately 90 days to prove themselves in a new role and move from outsider to insider. The 90- day mark is also recorded by Mitchell and Gamlem (2017) as the final checkpoint on how the new hire is settling into the company. From a company perspective, the faster the new employees can execute their roles efficiently, the better.

If the company is successful in onboarding, there are short and long-term benefits for the employee and the company, in remote and office-based onboarding. Employees have better job

satisfaction, organizational commitment, and more effective communication with management. A company often experiences higher retention and engagement rates, desired work performance and productivity, stronger bonds between colleagues, and increased customer satisfaction in return (Bauer, 2010; Mitchell & Gamlem, 2017; Snell, 2006). This study focuses on the effectiveness of virtual onboarding processes related to the types of generic onboarding activities and their effect on employee impact variables like job satisfaction, turnover intention, and overall onboarding success.

In 2016, The Aberdeen Group surveyed employers and found that only 37% of companies used an onboarding period longer than one month to integrate new hires, and approximately 15% of companies surveyed only provide one day for onboarding activities. Although many organizations use onboarding to reduce the ramp-up time for newcomers (e.g., Bauer, 2013; Coff & Kryscynski, 2011), Klein et al. (2015) found that the timing of onboarding practices is more complex than offering everything as early as possible in the onboarding experience.

Turnover Intention

Employee turnover is one of the biggest problems associated with inadequately designed virtual onboarding programs. Employee turnover is disruptive to organizational performance. Scholars have noted that the loss of human capital could inhibit service quality, organizational objectives, and financial goals (Walumbwa et al., 2019). Ferreira and Almeida (2015) agree that attention to human capital is an essential component of organizational performance and critical for leaders to address.

A few studies found the visible and invisible costs of new hire attrition add up to an average of 33% of an employee's annual salary and up to 213% for senior or executive level

positions, as the cost to replace them when they leave an organization (Boushey & Glynn, 2012; Otto, 2017). Ganzel (1998) found that employees in their study who participated in a structured onboarding program were 69% more likely to be retained after three years. Hays (2016) found that 22% of employees in their study said they would definitely look for another job if they didn't have a positive onboarding experience.

Kang et al. (2018) tested the relationship between turnover and replacement costs using the turnover-replacement cost mechanism. After collecting data from 224 South Korean firms, the researchers found that turnover negatively affects replacement costs, which can vary depending on firm size and industry over time. However, researchers within the academic community have thoroughly maintained that excessive turnover negatively impacts organizations and overall business practices with no regard to size or industry sector (Ferreira & Almeida, 2015; Jarupathirun & Gennaro, 2017; Kim, 2017). Managers must be aware that excessive turnover can have severe repercussions on the organization. Therefore, effectively managing resource allocation is vital.

Some scholars have argued that organizational leaders should manage resource allocation as their understanding of turnover and replacement costs enhances (Kang et al., 2018). Realizing mounting replacement costs resulting from employee turnover should convince managers and organizational leaders to make better organizational and operational decisions and sound financial choices (Kang et al., 2018). Indeed, the multifaceted nature of financial burdens underscores the complexity of costs associated with employee-staff turnover.

Performance of Employees

Direct manager performance appraisal, sometimes called standard appraisal (Appelbaum et al., 2011), is a performance appraisal (PA) led by the employee's direct manager (Baruch,

1996). In this process, the same steps Campbell and Lee (1988) discussed for self-assessment apply to direct manager appraisal, but with a different point of view. The manager can use different methods to evaluate the employee, ranging from behavioral-based ratings like behaviorally anchored rating scales (BARS) or behavior observation scales (BOA) to objective-based ratings like management by objective (MBO; Lee, 1985).

As the name suggests, self-appraisal is an appraisal technique where the individual reviews and assesses their job performance (Muchinsky & Howes, 2019). Campbell and Lee (1988) identify four steps within the self-appraisal process. They include the individual having a personal take on the job requirement, then working to meet the requirements or goals. Next, the individual evaluates their behavior toward reaching the goal, and then they create feedback for themselves.

Many similarities exist between the two different performance appraisal processes. No matter which method is selected, it is essential that all parties involved clearly understand how the PA will be used. Performance appraisals can be used by management to gain information to make personal decisions like pay, promotions, and training or as a feedback tool for employees (Baruch, 1996).

Another area where the performance methods align is how the information gathered should be used to encourage and engage in a back-and-forth conversation between the employee and manager (Buhler, 2005). The purpose of these ongoing conversations should be tied to the original purpose of the review, which can include discussions on recognition, rewards, achievements, development plans, and action plans for shortcomings (Buhler, 2005).

Differences in Methods

Some critical differences exist between self-appraisal and direct manager appraisal. Suliman (2003) notes that with the self-appraisal method, employees can reflect on their performance and consider their strengths and weaknesses. This reflection is valuable as the employee is the most aware of the knowledge, skills, and abilities (KSAs) needed for the job, what areas they excel in, and where they might need improvement. Additionally, since the employee is the one most engaged in the work, they can also take notice of and bring forward key performance attributes that might be overlooked with other methods (Campbell & Lee, 1988).

Another benefit of self-appraisal methods is increased employee buy-in to the process, which manifests in different ways but can be an advantage for the organization. Self-appraisals allow employees to deeply understand their goals or performance targets (Baruch, 1996). Employees can reflect on their performance related to the goals with the self-appraisal process. The self-appraisal process has also been linked to improved employee satisfaction (Suliman, 2003). Research shows that SA can help employees accept the feedback that results from the process (Roberts, 2003).

The self-appraisal method has its challenges. Typical results show that SA yield fewer objective results (Buhler, 2005). Additionally, the results tend to be more positive than manager assessments. Although training does not eliminate this challenge, employees need to have a clear understanding of the purpose of the appraisal process, should be trained on what to consider, have access to the forms prior to filling them out, and be prepared to provide details to back up their rankings (Buhler, 2005).

Direct manager performance appraisals can be very effective if the managers have the tools to assess their subordinates accurately. Managers must be trained on topics like goal setting, coaching, offering feedback, and conflict management (Roberts, 2003). Being informed on topics like these helps ensure that the manager evaluates the job performance, not the person (Montague, 2007). This type of training can also help reduce rating errors (Roberts, 2003).

Some rating errors include the halo or horn effect, where a person is overly influenced by one act or trait; negative or positive leniency, where the rating is lower or higher to make oneself feel better; or stereotyping (Montague, 2007). Another difference with direct manager appraisals is the limited time a manager may have to directly observe how an employee operates (Baruch, 1996). Managers have many roles beyond direct observation, which can lead to rating errors. In this case, the recency effect, where the rating can go up or down based on the events that happened most recently, can play a role in the manager's judgment (Montague, 2007). The same could be said for the halo or horn effect mentioned above.

Business Implications of the Onboarding Process

Laurano (2013) examined the top objectives that companies have when implementing comprehensive onboarding programs, which are listed below:

- 68% want to get new employees productive more quickly
- 67% want better employee engagement and productivity
- 51% want higher rates of employee retention

Previous research has examined these metrics that are directly related to effective virtual onboarding, including:

1. Getting new employees productive more quickly (Time to Productivity): Ganzel (1998) found that employees in their study who attended their entire onboarding process reached full

productivity two months earlier than those who did not. Talmundo (2020) found that 62% of employees hired in the last 12 months met first performance milestones on time for those who had formal onboarding programs compared to 17% among organizations without formal onboarding. Filipkowsi (2016) found that those with directed onboarding get better talent outcomes and are twice as likely to report faster times to proficiency. Wells (2005) reported that it takes a mid-senior manager approximately 6.2 months to break even in terms of cost to hire versus contribution to the company. Without proper onboarding, this timeline could be significantly extended, resulting in further financial investment or loss.

2. Better employee engagement: TrainingMag (2014) found that 54% of employers who implemented an onboarding program saw significant gains in employee engagement metrics. Hays (2016) found that 51% of employees say they would go 'above and beyond' if they had a positive onboarding experience, with another 33% 'maybe' doing the same.
3. Higher rates of employee retention: Ganzel (1998) found that employees in their study who participated in a structured onboarding program were 69% more likely to be retained after three years. Hays (2016) found that 22% of employees in their study said they would definitely look for another job if they didn't have a positive onboarding experience, and another 41% said they might look for a new job because of poor virtual onboarding practices.
4. Better assimilation of new hires: Talmundo (2020) found a 33% year-to-year improvement in hiring manager satisfaction for those with formal onboarding compared to a 3% increase among organizations without formal onboarding.

The direct financial investment in hiring new employees is another measure that directly impacts the bottom line for organizations. The various financial impacts of new hire attrition include the cost of hiring, cost of training, cost of learning and development, cost of time with

the unfilled role, and impacts on productivity for other workers due to turnover (Altman, 2020; Jacobs, 2012; Pike, 2014).

The 4 Cs of Onboarding

Bauer (2010) has simplified the ideal onboarding program scope to four constructs, called the four Cs: Compliance, Clarification, Culture, and Connection. These 4 Cs have been referred to in more recent studies, including Caldwell and Peters (2018), as the basic division of the required coverage of the onboarding process. The compliance element covers basic company legal and policy rules and regulations that should be carefully reviewed and communicated to the new employee. Clarification is highlighted by Caldwell and Peters (2018) as a key block of the onboarding process; it is seen as an element often poorly handled. This step aims to ensure that employees understand their actual job and related expectations; Bauer (2010) refers to this area as the one that suffers the most in online onboarding. The third block, culture, covers information on company norms and behaviors; however, this area is often overlooked because it is assumed to be easy to understand and absorb during daily work. The fourth block, connection, relates to establishing key interpersonal relationships and explaining information networks essential for an employee to perform well, which could be seen as challenging in a remote environment.

Snell (2006) and Mitchell and Gamlem (2017) view onboarding as starting earlier than the first day of employment. They start the process with the acceptance of the offer rather than the selection of the employee, like Bauer (2010).

To gain a comprehensive overview of the elements of effective onboarding, researchers have proposed several theories and models. For example, similarities between Snell's (2006) task-based onboarding process timeline, Bauer's (2010) research-based model, Cooper-Thomas and Anderson's (2006) learning-focused model, and Caldwell and Peter's (2018) ten core

onboarding program steps are captured and streamlined using Bauer's (2010) simplified 4 C model, which covers the key elements mentioned in all other theories at a high level.

Key Elements of Successful Onboarding

Between the flows and models introduced, two key differences can be identified. The previous studies from Bauer (2010) and Snell (2006) have found that onboarding plays an important role in new hires' successful integration into a company, which normally culminates in increased employee satisfaction and lower turnover intention and higher productivity.

Pike (2014) also notes that creating fit is a major intended outcome of onboarding, at employee-organization and employee-job levels. This outcome involves helping newcomers align with the culture of the organization and understand their role within the organization, which ultimately can increase performance levels and organizational commitment (Pike, 2014). This study examines the assessment of fit related to culture, competency, and skills.

Gaps in the Current Literature

The main gaps in the current literature related to studies that solely examined the process of onboarding are explaining it rather than relating it to variables like turnover and performance. Also, many studies have been based on small samples. Though a number of studies have been conducted on virtual onboarding, most have been based on small sample sizes and have not been outcome-based studies (Davis et al., 2020; Dong et al. 2021a; Dong et al, 2021b; Dufour et al.2021).

These studies would not have been able to ascertain turnover intention, performance, and quality of the onboarding as indicated by success of onboarding. Additionally, much of the research on virtual onboarding has been focused on the technology used to deliver the onboarding content rather than the content (Harris et al, 2020; Jiang et al. 2021; Zheng et al.

2021). This study focuses exclusively on different onboarding modalities and their relative efficacy.

As stated, to gain a comprehensive overview of the elements of effective onboarding, researchers have proposed several theories and models between Snell's (2006) task-based onboarding process timeline, Bauer's (2010) research-based model, Bauer's (2010) simplified 4 Cs model, Cooper-Thomas and Anderson's (2006) learning-focused model, and Caldwell and Peter's (2018) ten core onboarding program steps. However, very few research studies have been conducted to examine the validity of these processes in the real world. The current study does this by using a survey to examine the effectiveness of onboarding techniques. A need exists for further research to examine the effects of virtual onboarding on employee engagement, retention, and performance as well as to examine the impact of different virtual onboarding program designs on these outcomes (Davis et al., 2020; Dong et al. 2021a; Dong et al, 2021 b; Dufour et al.2021; Harris et al, 2020; Jiang et al. 2021; Zheng et al. 2021). The current research fulfills this need.

CHAPTER THREE:

METHODOLOGY

The effectiveness of virtual onboarding was examined by comparing it to the various types of onboarding methods used in different types of organizations, which included a representation of 12 different organizational sectors. The details are presented in this chapter.

Outcome Variables of the Study

This study examined the following three outcome variables:

1. Turnover Intention of the Employee
2. Self-Assessment of Performance
3. Perception of Success with the Onboarding Process (another instrument to measure employee "fit").

We also examined the 4 Cs Model, which captures the ideas of four constructs, or the four Cs: Compliance, Clarification, Culture, and Connection. We examined in which modality these types of information are delivered in the Onboarding process. These outcome variables were measured using scales validated in previous studies. The following scales measured the respondents' perception about the effectiveness of the Onboarding process:

1. The Turnover Intention Scale: a three-item scale developed by Xu and Paine (2019) with high reliability and validity.

2. Performance Questionnaire (PQ): a self-assessment instrument designed to measure work performance (Church, 1997). The three dimensions measured include onboarding helping in managing relationships, understanding the business, and improving the quality of performance.

3. Overall Onboarding Success: measured by using a five-item scale developed by Sharma and Stol (2020). This additional instrument was used to measure job fit and culture fit. This scale measures five dimensions related to the effectiveness of the initial orientation program: helping to understand the organization's culture, understanding the expectations and responsibilities related to the job, increased confidence created through onboarding, the onboarding process, and social integration in the workplace. These variables all measure the job fit and the culture fit of the employee.

Research Design

The research design for this study was a survey research design. An online survey was collected from 730 participants. The survey was designed and administered using Qualtrics. Qualtrics is widely used in survey research and is very convenient, user-friendly, and easy to administer. The data collection was done by Qualtrics in June 2023 and July 2023. The specific guidelines provided to Qualtrics was to collect the data across all industry types in the United States. It was also given instructions to ensure at least 10 different industries were represented in this sample. The aim of the data analysis was to provide insights into the factors that contribute to the effectiveness of virtual onboarding compared to face-to-face onboarding and the success of the onboarding process in general.

Data Collection Methods

Online surveys were used to collect quantitative data on employee demographics, fit, retention, performance, and success of the onboarding process. The survey consisted of demographic data and a questionnaire to assess the effectiveness of the onboarding process and the three outcome measures (See Appendices A, B, and C).

Brief Description of the Appendices

Appendix A introduces the researcher to the respondents and asks for basic information related to demographic information, the sector of employment, whether they were onboarded or not, and the length of the onboarding process; Appendix B presents employee response related to the 4 Cs of Compliance, Clarification, Culture, and Connection; Appendix C consists of scales to measure the outcome variables of turnover intention, performance, and overall satisfaction with the process.

The survey was developed using Qualtrics software and administered to employees in 12 different business sectors (see Appendix A). Respondents who have gone through virtual, traditional in-person face-to-face, or hybrid onboarding were allowed to participate in the survey that took approximately 10 minutes. The survey was tested in a mock test with employees in a consulting firm, and most completed it in less than 10 minutes.

Sample and Population

The sample for this study consisted of 730 respondents who have gone through either virtual, traditional in-person, or hybrid onboarding. Per the researchers' knowledge, these samples are one of the largest real-world ones collected; respondents were provided with a Qualtrics link and asked to respond to the survey.

Data Analysis Techniques

The survey data was analyzed using descriptive statistics, t-tests, and ANOVA to compare the effectiveness of virtual onboarding to traditional face-to-face onboarding. Further analysis was conducted to develop a profile of individuals likely to leave or stay in terms of their onboarding experiences. The data was securely maintained in the DBA Drop Boxes provided.

CHAPTER FOUR:

RESULTS

The results of the study provided many interesting findings. This survey was conducted by the Qualtrics Company covering 12 different industries and took approximately one week to collect during the summer of 2023; 730 usable responses were collected in all.

Demographics

The total sample size was 730 respondents. In terms of demographic details, the data consisted of 287 males and 434 females; nine respondents were in the nonbinary category. In terms of age distribution, the largest group in the sample was in the age group 30-39 years (31%) followed by the under 25 group (28%) and the 23-29 group (18%). The sample consisted of a real-world working population with 34% nonmanagerial employees, 24% managers, 13% supervisors, 10% executives, 9% technical, and 9% others. The group included 77% full-time and 23% part-time employees.

Employees were surveyed from across 12 sectors that included:

1. Automotive and Mobility (7%)
2. Capital Projects and Infrastructure (3%)
3. Consumer and Retail (17%)
4. Energy Resources and Materials (4%)
5. Financial Services (11%)

6. Health Care Systems and Services (17%)
7. High Tech, Telecom and Internet (8%)
8. Pharmaceuticals and Medical Products (2%)
9. Private Equity and Principal Investors (1%)
10. Public Sector (7%)
11. Social Sector (4 %)
12. Other (19%)

Since the study focused to virtual onboarding, one question on the survey related to familiarity with the use of computers. Most respondents said they were very familiar or somewhat familiar with the use of computers (95%). Since most respondents were in the age group 30-39 years (31%), the respondents were mostly mid-career employees. In terms of employment tenure, 34% of the respondents had 1-2 years of tenure, 32% had 3-5 years of experience, 23% had less than one year of experience, and approximately 12% had 7-10 years of experience.

Onboarding Results

In the survey, 32% of the respondents were virtually onboarded. Another 34% were onboarded using traditional face-to-face methods. Finally, about one third (34%) of the group was onboarded using virtual and face-to-face methods. Table 1 shows the details of the division in terms of onboarding modality.

Table 1. Modality of Onboarding

Type of onboarding	Industry Type			*N*
	Manufacturing	Service	Other	
Virtual	Male=51	Male=42	Male=3	234
	Female=30	Female=100	Female=7	

Table 1. (Continued)

	Missing=0	Missing=1	Missing=0	
Face-to-Face	Male=35	Male=50	Male=2	248
	Female=27	Female=123	Female= 7	
	Missing=0	Missing=4	Missing=0	
Hybrid	Male=28	Male=74	Male=2	248
	Female=25	Female=105	Female=10	
	Missing=0	Missing=3	Missing=1	
	Manufacturing=196	Service=502	Missing=32	730

The majority of respondents were female, comprising 60% (n = 434), whereas male respondents accounted for 36% (n = 287). This result may be due to a larger service industry sample compared to a manufacturing sample. This distribution was not by design but occurred based on who responded to the survey. The industry split into manufacturing and services indicated that service was the largest category, consisting of 502 respondents (68.8%) while manufacturing consisted of 196 respondents (26.8%). Regarding their intention to join the organization, 23% of respondents said they joined the organization as a career launchpad, 32% for career stability, 22% for career growth, 11% for growing talent, and 12% for advancement without a degree.

Length of Time for Onboarding

Finally, the span of the onboarding process was also important and discussed at length in the literature. The data revealed that the onboarding process in an organization can extend from one day to one year. Additionally, the data showed that 31% of surveyed respondents were onboarded in two weeks while 28% were onboarded in one day. Approximately 2% of the respondents surveyed said their onboarding lasted a year. Detailed information is provided in Appendix A.

Analysis of Research Questions

The three research questions guiding this study were:

RQ1: In comparison to face-to-face onboarding, does virtual onboarding lead to higher turnover intention rates?

RQ2: In comparison to face-to-face onboarding, does virtual onboarding lead to higher employee performance?

RQ3: In comparison to face-to-face onboarding, does virtual onboarding lead to higher success for the onboarding process?

To test RQ1, the following hypotheses were used:

Null Hypothesis 1: There is no statistically significant difference between onboarding types on turnover intention.

Alternate Hypothesis 1: There is a statistically significant difference between onboarding types on turnover intention.

This hypothesis was rejected based on the results of ANOVA, which yielded a significant F at the $p < .001$. See Table 2.

Table 2. Hypothesis 1 F-Test Results

ANOVA	*F*-value	Significance
Onboarding type on turnover intention	$F(2,727)=3.565$	*** p < .001.

Table 3. Turnover Intention Mean Scores and SD

Type of Onboarding	N	Mean	Standard Deviation
Virtual	223	2.83	1.14

Table 3. (Continued)

Type of Onboarding	N	Mean	Standard Deviation
Face to face (traditional)	235	2.58	1.03
Hybrid	232	2.64	1.13

Table 3 above shows the means scores for virtual onboarding (2.83), Hybrid (2.64), and face to face onboarding (2.58). It indicates that the intention to turnover is higher for virtual and lower for hybrid and lowest for ace to Face. This result may be because in face-to-face onboarding, the onboarded employee gains a sense of connection and culture (Bauer, 2011). In addition to the demographic and onboarding results provided, we examined the data further to look at some interesting relationships between variables in the study.

Table 4. Post Hoc Tukey Test for Turnover Intention

Type of Onboarding	N	Mean Difference	Significance
Virtual- Hybrid	243	-0.207	$p< 0.021$
Face to face-Hybrid	255	-0.245	$p<0.003$
Virtual -Face to Face	232	-0.038	$P<0.806$

While there are several post hoc tests, the Tukey HSD Test was used for this analysis, which shows if there are statistically significant differences between different pairs of means. In other words, it addresses the question whether there is a statistically significant difference between the different pairs of mean values.

The one-way ANOVA's indicate that the type of onboarding has a significant impact on employee perception of self-performance and perception of success of the onboarding program.

Both outcomes are highly significant at the p<.001 level. A detailed explanation is provided below related to performance and success.

Table 5. Hypotheses 2 and 3 F-Test Results

ANOVA	F- Value	Significance
Onboarding Type on Employee Performance	F(2,727)=16.11	***
Onboarding Type on Onboarding Success	F(2,727)=8.62	***

As Table 6 shows, the mean performance was highest for hybrid onboarding (3.77) followed by virtual (3.56) and face to face (3.53). Again, this result attests to the overwhelming importance of hybrid compared to face to face and virtual onboarding.

Table 6. Performance Mean Scores and SD

Type of Onboarding	N	Mean	Standard Deviation
Virtual	243	3.56	.66
Face to Face (Traditional)	255	3.53	.58
Hybrid	232	3.77	.49

Table 7. Post Hoc Test for Performance

Type of Onboarding	N	Mean Difference	Significance
Virtual- Hybrid	243	0.1801	p < .02
Face to face-Hybrid	255	0.2354	p < .002
Virtual -Face to Face	232	0.0581 ..	Ns

The post hoc tests indicate a statistically significant difference between virtual and hybrid onboarding ($p < .02$). The difference between face to face and hybrid was also highly significant

($p < .002$). However, there was no statistically significant difference between virtual and face to face onboarding. As mentioned earlier, this result may reflect the fact that performance may be enhanced by the virtual element because of saving time and effort while the face-to-face element provides the security of associating with the organization in terms of culture and connection (Bauer, 2011). By saving time and effort along with gaining a better understanding of the organization's culture and connections, performance perception is enhanced.

Table 8. Success Mean Scores and SD

Type of Onboarding	N	Mean	Standard Deviation
Virtual	243	3.65	.86
Face to face (Traditional)	255	3.62	.79
Hybrid	232	3.89	.71

Table 8 shows that the highest mean score for success is for hybrid onboarding (3.89). The next highest was for virtual onboarding (3.65) while the lowest mean score was for face to face (3.62). Again, this self-perception of the success of the onboarding process is reflective of what was mentioned with the other outcome variables. Hybrid was perceived to be the most successful while face to face onboarding was perceived to be the least successful. Possibly, this result may occur because face to face may engender losing time.

Table 9. Post Hoc Test for Success

Type of Onboarding	N	Mean Difference	Significance
Virtual- Hybrid	243	0.24575	$p < .02$
Face to face-Hybrid	255	0..27062	$p <. 002$
Virtual -Face to Face	232	0.03186	ns

Table 9 shows the post-tests related to success. The table indicates a highly significant difference between virtual onboarding and hybrid onboarding. ($p < .02$). Also, there was a statistically significant difference between Face to Face and Hybrid onboarding ($p < .002$). There was no statistically significant difference between virtual and face-to-face onboarding.

The results discussed in the tables above are presented in the figures below. See Figures 1, 2, and 3 for turnover intentions, perceptions of performance, and perceptions of onboarding success data in a graphic format.

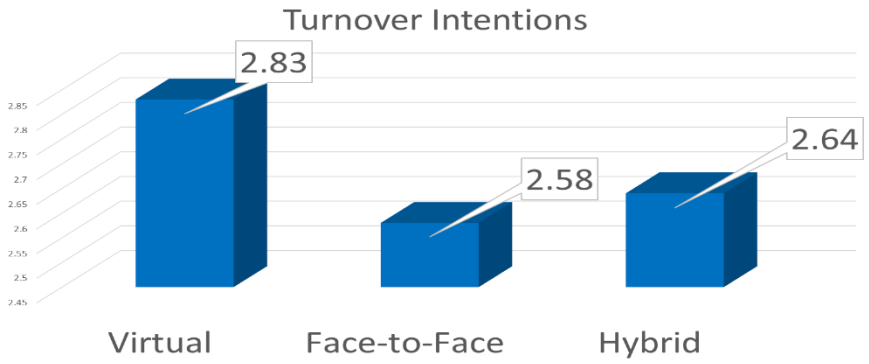

Figure 1. Type of Onboarding and Turnover Intentions

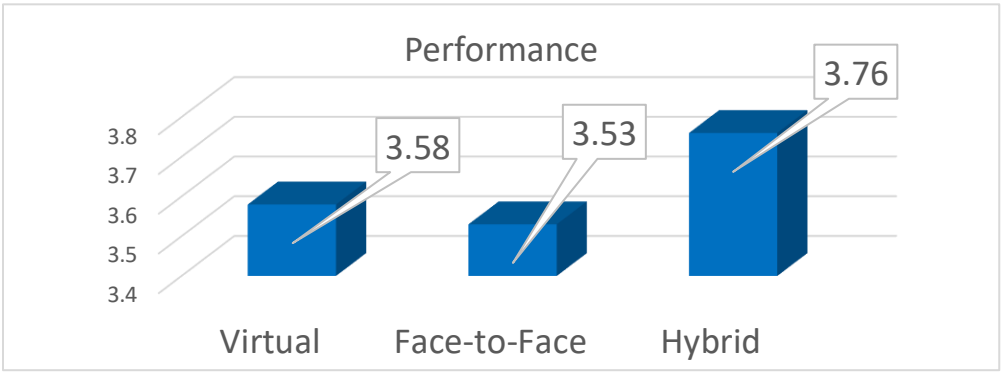

Figure 2. Type of Onboarding and Perceptions of Performance

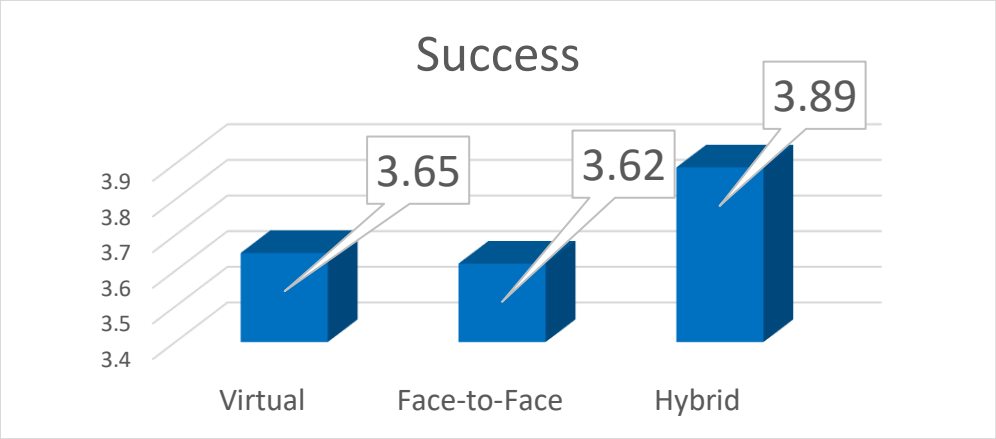

Figure 3. Type of Onboarding and Perceptions of Onboarding Success

Interaction Study

To explore further, the researcher conducted a 3x2x2 study to evaluate the effectiveness of virtual onboarding. Although there were no three-way interactions, some interesting two-way and one-way interactions surfaced. The results of this analysis are shown below in Tables 10-12 below.

Table 10. Results of the 3x2x2 ANOVA in Relation to Perception of Success

Variables that Impact Success in Onboarding						
	Df	Sum Sq	Mean Sq	F value	Pr(>F)	Sig
Industry Type	1	0.2	0.2398	0.474	0.49146	
Onboarding Type	2	6.2	3.1169	8,620	0.00224	** p <.01
Gender	1	1.5	1.5437	3.05	0.08119	
Onboarding Type*Industry Type	2	0.1	0.0297	0.059	0.94303	
Gender*Industry Type	1	0.1	0.0868	0.172	0.67887	
Gender*Onboarding Type	2	5.1	2.5704	5.079	0.00647	** p<.01
Gender*Onboarding Type*Industry Type	2	0.7	0.3541	0.7	0.49709	

Succes in Onboarding

In terms of main effects, those who engaged in hybrid onboarding ($M = 3.89$) reported significantly more successful integration of onboarding information than those who experienced face-to-face onboarding (3.62) or virtual onboarding (3.63) ($F(2,730)=8.62$, $p < .002$). There were also significant interaction effects between onboarding type and gender ($F(2,730)=5.079$, $p < .001$). Males who experienced hybrid onboarding ($M = 3.86$) reported higher integration of onboarding information than males who experienced face-to-face onboarding ($M = 3.46$). Males who experienced face-to-face onboarding ($M = 3.46$) also integrated this information less effectively than females who experienced face-to-face onboarding ($M = 3.57$). These interactions are shown in Figure 4.

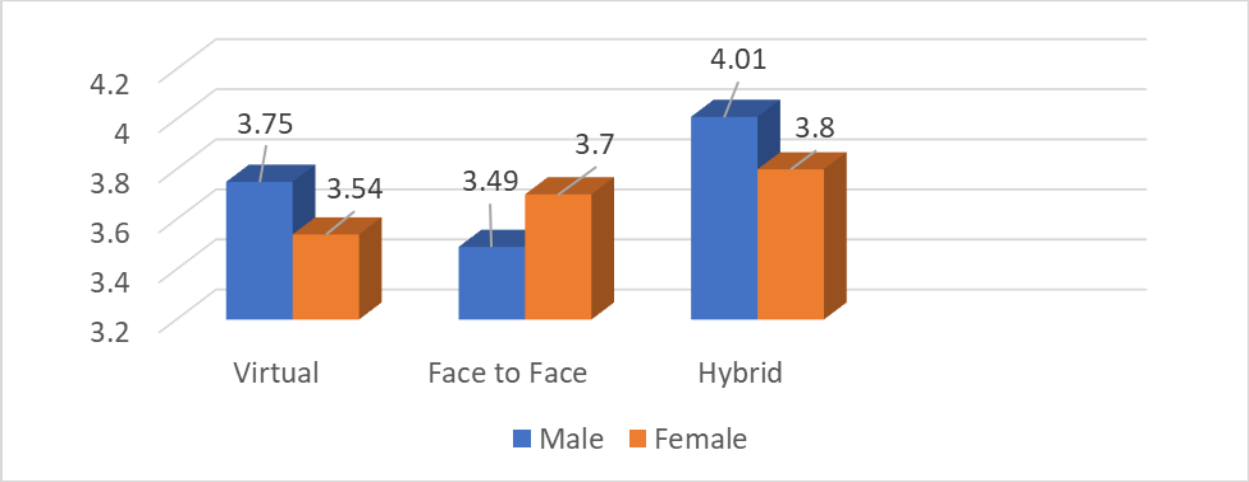

Figure 4. Perception of Success Predicted by Onboarding and Gender

Table 11. Results of the 3x2x2 ANOVA in Relation to Performance

Variables that Impact Self-Reports of Performance						
	df	Sum Sq	Mean Sq	F value	Pr(>F)	Sig
Industry Type	1	0.16	0.162	0.501	0.47943	
Onboarding Type	2	7.97	3.984	12.351	5.39E-06	***
Gender	1	1.14	1.143	3.543	0.06021	

Table 11. (Continued)

Variables that Impact Self-Reports of Performance						
	df	Sum Sq	Mean Sq	F value	Pr(>F)	Sig
Onboarding Type*Industry Type	2	0.37	0.184	0.571	0.56534	
Gender*Industry Type	1	0	0	0	0.98628	
Gender*Onboarding Type	2	3.88	1.942	6.018	0.00257	**
Gender*Onboarding Type*Industry Type	2	0.31	0.156	0.485	0.6162	

Performance

Those who engaged in hybrid onboarding (M = 3.76) reported significantly better perceived performance than those who experienced face-to-face onboarding (M = 3.53) or virtual onboarding (M = 3.58) (F(2,727)=16.11, P<.001). There were also significant interaction effects between onboarding type and gender (F(2,730)=6.018, p < .001). Males who received virtual onboarding (M = 3.67) reported better perceived performance than males who received face-to-face (M = 3.46) or females who received virtual onboarding (M = 3.48). Males who received face-to-face onboarding (M = 3.46) reported worse performance than females who received hybrid onboarding (M = 3.71). Males who received hybrid onboarding (M = 3.86) reported better performance than females who reported virtual onboarding (M = 3.48) or face-to-face onboarding (M = 3.57). Females who received virtual onboarding (M = 3.48) reported worse performance than males (M = 3.86) and females (M = 3.71) who received hybrid onboarding. These interactions are shown in Figure 5.

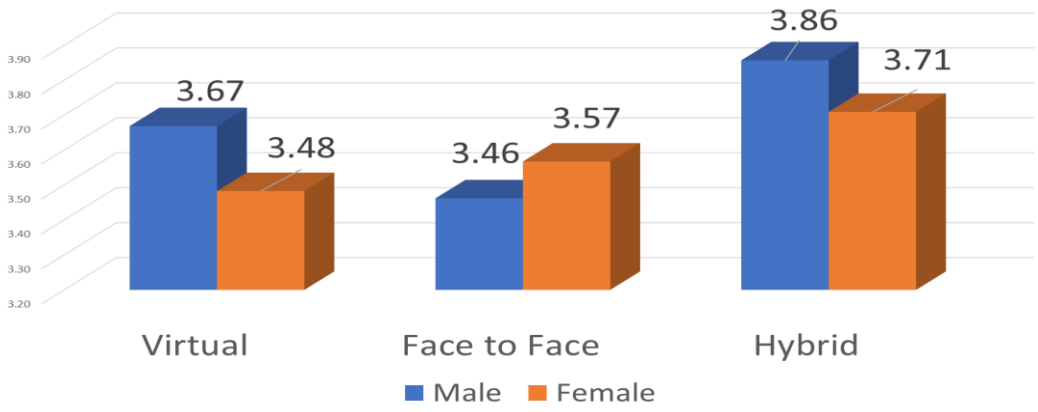

Figure 5. Perception of Performance Predicted by Gender and Onboarding Type

The results of this interaction indicate that while males are significantly higher than females in terms of virtual onboarding, they are significantly lower than females in terms of face-to-face onboarding and higher in terms of hybrid onboarding.

Table 12. Results of the 3x2x2 ANOVA in Relation to Turnover

Variables that Impact Turnover Intention						
	df	Sum Sq	Mean Sq	F value	Pr(>F)	Sig
Industry Type	1	1.1	1.13	0.889	0.346	
Onboarding Type	2	5	2.523	3.565	0.0382	**
Gender	1	0	0.014	0.011	0.917	
Onboarding Type*Industry Type	2	1.3	0.632	0.497	0.6083	
Gender*Industry Type	1	0.4	0.381	0.3	0.584	
Gender*Onboarding Type	2	3.3	1.666	1.31	0.2704	
Gender*Onboarding Type*Industry Type	2	6.9	3.473	2.732	0.0658 .	

Turnover Intention

In terms of main effects, those who engaged in hybrid onboarding (M = 2.64) reported significantly more successful integration of onboarding information than those who experienced face-to-face onboarding (M = 2.58) or virtual onboarding (M =2.83) ($F(2,727) = 3.565$, $p < .001$). There were also significant interaction effects between onboarding type and gender ($F(2,678) = 5.079$, $p = .006$). Males who experienced hybrid onboarding (M = 4.01) reported

higher integration of onboarding information than males who experienced face-to-face onboarding (M = 3.49). Males who experienced face-to-face (M = 3.49) onboarding also integrated this information less effectively than females who experienced virtual onboarding (M = 3.54) and face-to-face onboarding (M = 3.70). These interactions are shown in Figure 4. See Table 5 which shows the variables that impact self-reports of performance.

Performance

Those who engaged in hybrid onboarding (M = 3.77) reported significantly better perceived performance than those who experienced face-to-face onboarding (M = 3.53) or virtual onboarding (M = 3.56) (F(2,678) = 12.351, P < .001). There were also significant interaction effects between onboarding type and gender (F(2,678)=6.018, p = .003). Males who received virtual onboarding (M = 3.67) reported better perceived performance than males who received face-to-face (M = 3.46) or females who received virtual onboarding (M = 3.48). Males who received face-to-face onboarding (M = 3.46) reported worse performance than females who received hybrid onboarding (M = 3.71). Males who received hybrid onboarding (M = 3.86) reported better performance than females who reported virtual onboarding (M = 3.48) or face-to-face onboarding (M = 3.57). Females who received virtual onboarding (M = 3.48) reported worse performance than males (M = 3.86) and females (M = 3.71) who received hybrid onboarding. These interactions are shown in Figure 6.

The results of this interaction indicate that while males are significantly higher than females in terms of virtual onboarding, they are significantly lower than females in terms of face-to-face onboarding and higher in terms of hybrid onboarding.

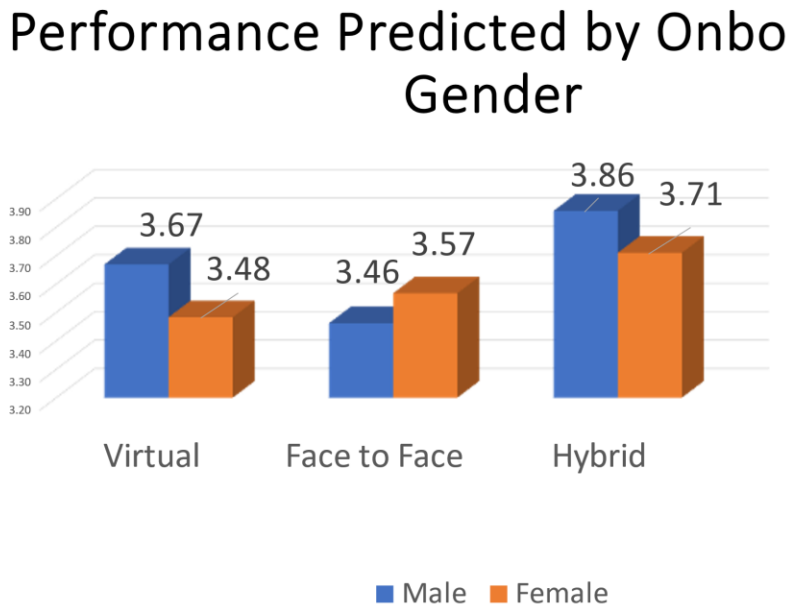

Figure 6. Perception of Performance Predicted by Onboarding and Gender

Turnover Intention

There were no main effects or interaction effects for turnover intention.

Table 13. Variables that Impact Performance in a 3x2 ANOVA

Predictor	*df*	Sum Sq	Mean Sq	*F*-value	Pr(>F)	Sig
Gender	1	1.33	1.326	4.008	0.045685	*
Type of Onboarding	1	4.88	4.88	14.747	0.000134	***
Industry Type	1	0.16	0.159	0.479	0.488994	
Gender*Type of Onboarding	1	0.04	0.044	0.133	0.71517	
Gender*Industry Type	1	0.01	0.007	0.022	0.881155	
Type of Onboarding*Industry Type	1	0.14	0.135	0.408	0.523063	
Residuals	683	226.01	0.331			

* $p < .05$. *** $p < .001$.

Hybrid onboarding had significantly higher scores on self-reports of performance metrics (M = 3.75) than face-to-face (M = 3.51) or virtual (M = 3.57). Additionally, men (M = 3.66) reported performing significantly better than women (M = 3.58). Again, their hybrid onboarding seems to be superior to virtual and traditional face-to-face onboarding.

Table 14. Type of Onboarding

Measure	Virtual		Face-to-Face		Hybrid	
	M	*SD*	*M*	*SD*	*M*	*SD*
Performance	3.58	0.66	3.53	0.58	3.76	0.49
Turnover	2.84	1.14	2.39	1.03	2.64	1.13
Success	3.65	0.86	3.62	0.79	3.89	0.71

Table 15. Industry Types

Measure	Manufacturing			Service	
	M	*SD*		*M*	*SD*
Performance	3.583	0.623		3.615	0.561
Turnover	2.688	1.171		2.5	1.11
Success	3.519	0.78		3.559	0.695

Table 16. Gender

Measure	Male			Female	
	M	*SD*		*M*	*SD*
Performance	3.657	0.586		3.576	0.574
Turnover	2.631	1.181		2.621	1.091
Success	3.611	0.728		3.518	0.712

Methods of Onboarding

Several methods of onboarding are used by organizations, including synchronous or live interactions using technology. Examples are using audio and video technology for chatting, asynchronous where the interactions are usually not live (i.e., email communication), and traditional in-person, where the interaction is face to face without any intervention of technology.

Employees are onboarded in many modes and variations; we looked at the different ways this process occurs. Data was also collected on the types of onboarding practices used in the organization. See Table 13. These onboarding practices were divided into the following categories:

Synchronous

- Face to Face 1:1
- Face to Face 1:Many
- Face to Face Many: Many

Asynchronous

- Asynchronous 1:1
- Asynchronous 1: Many
- Asynchronous Many: Many

Traditional In Person

- Face-to-Face 1:1
- Face to Face 1: Many
- Many: Many

These four are the most used onboarding methods in organizations. As Table 14 indicates, the most common onboarding technique used is synchronous face to face 1:1 onboarding followed by traditional in person face to face 1:1 onboarding, synchronous face to face 1: many, and traditional in person face to face 1: many.

Table 17. Types of Onboarding Combined

Onboarding type		Percentage
Synchronous face to face 1:1		16.6 %
Synchronous face to face 1:many		11.9%
Synchronous face to face many: many		10.6%
Asynchronous face to face 1:1		9.0%
Asynchronous face to face 1:many		9.6%
Asynchronous face-to-face many: many		7.4%

Table 17. (Continued)

Onboarding type		Percentage
Traditional face to face 1:1		13.0%
Traditional face-to-face 1:many		10.9%
Traditional face to face many: many		5.2%
No onboarding		5.8%

4 Cs Model

We also looked at the 4 Cs model. The other data pertaining to the detailed information for the 4 C's are provided in Table 15.

Table 18. 4 Cs Model

Onboarding type		Percentage
Compliance		
Synchronous face to face 1:1		19.6 %
Synchronous face to face 1:many		14.5%
Synchronous face to face many:many		10.8%
Asynchronous face to face 1:1		8.6%
Asynchronous face to face 1:many		9.9%
Asynchronous face-to-face many: many		5.4%
Traditional face to face 1:1		12.5%
Traditional face to face 1:many		8.0%
Traditional face to face many: many		5.3%
No onboarding		5.4%
Clarification		
Synchronous face to face 1:1		18.6 %
Synchronous face to face 1:many		11.4%
Synchronous face-to-face many: many		9.6%
Asynchronous face-to-face 1:1		10.04%
Asynchronous face to face 1:many		8.9%
Asynchronous face-to-face many: many		8.1%
Traditional face to face 1:1		13.9%
Traditional face-to-face 1:many		8.3%
Traditional face to face many: many		5.6%
No onboarding		5.7%

Table 18. (Continued)

Culture	
Synchronous face to face 1:1	14.9 %
Synchronous face to face 1:many	11.4%
Synchronous face to face many:many	11.8%
Asynchronous face to face 1:1	8.3%
Asynchronous face to face 1:many	10.2%
Asynchronous face-to-face many:many	8.2%
Traditional face to face 1:1	12.9%
Traditional face to face 1:many	6.4%
Traditional face to face many:many	6.0%
No onboarding	5.8%
Connection	
Synchronous face to face 1:1	14.6 %
Synchronous face to face 1:many	11.1%
Synchronous face to face many:many	10.6%
Asynchronous face to face 1:1	9.4%
Asynchronous face to face 1:many	9.9%
Asynchronous face-to-face many:many	7.9%
Traditional face to face 1:1	13.2%
Traditional face to face 1:many	9.9%
Traditional face to face many:many	7.0%
No onboarding	6.4%

Data collected on the 4 Cs of onboarding revealed the most commonly used methods were synchronous face-to-face onboarding, followed by traditional face-to-face methods and asynchronous methods.

CHAPTER FIVE:

DISCUSSION

The Current Study

This study examined propositions regarding onboarding styles and their perceived effectiveness using survey research. Three hypotheses were tested, and the null hypotheses were rejected. The hypothesis confirmed the results of many studies cited earlier (Pike, 2014; Kumar & Pandey, 2017; Ferreira & Almeida, 2015; Jarupathirun & Gennaro, 2017; Kim & Hyun, 2017). A discussion of the significant results is provided in this chapter.

In this study, we examined the effectiveness of virtual onboarding compared to face-to-face and hybrid onboarding. Virtual onboarding has become a reality, especially after the COVID-19 Pandemic, and most organizations are eager to fill positions quickly using this onboarding process. This study, however, revealed that virtual onboarding is not necessarily the best method of onboarding employees in terms of organizational outcomes. The three organizational outcomes that were tested included turnover intention, performance, and perception of success of the onboarding process. These variables were chosen as they were considered important in previous studies and from an organizational perspective.

This study indicated that turnover intention increased when only virtual onboarding was done. However, the turnover intention was much lower for the traditional face-to-face and hybrid groups. The best interpretation for this result is that face-to-face and hybrid methods help

potential employees create new connections and understand the culture of the organization better (Bauer, 2010). A general preference exists among potential employees to have face-to-face contact for connectivity and understanding. This contact could be in the form of traditional or synchronous face-to-face methods. Research shows that one on many and many on many techniques are generally not preferred by employees. This result may be because the individual may get a better sense of culture and connectedness and gain more clarification in a 1:1 situation where they can get individual attention. Face-to-face methods of onboarding may also help to reduce the stress associated with the job as a face is associated with it. It also helps potential employees clarify many of their doubts.

The current study showed that a better onboarding process led to better organizational fit and a lower turnover intention in organizations. This study also revealed that the performance and success of the onboarding process also improved if the right onboarding methods were used. Although we used perceptual measures for measuring performance and the success of the onboarding process, previous studies showed that these perceptual measures were valid and could serve as a proxy for measuring the real performance and success. In the real world, it is difficult to measure these outcomes due to legal requirements; hence, we had to use perceptual measures. However, studies have shown consistency of rating accuracy in using rating scales (Borman, 1977). Research shows rating accuracy has been consistent for the same raters and across raters.

Turnover intention was one of the outcome variables for this study because recent research has indicated it was very difficult to retain employees after the COVID-19 Pandemic. Couched in terms like “The Great Resignation,” many companies especially in the service sector

like restaurants, could not remain open due to a shortage of skilled staff. Our study showed that the turnover rate among men (M=2.71) was higher than among women.

Employees seem to prefer more face-to-face interaction, especially as they want to establish a connection with a new organization. In addition, they are interested in knowing about the culture. Most organizations have cultural values and employees want to know if they will fit in. These values can be assessed by using valid scales that measure the perception of organizational connection and culture but that was not the intent of this study. In this study, we found that onboarded employees preferred face to face onboarding but were indifferent to whether it was done synchronously or traditionally.

However, regarding the cultural aspect, it appears that employees would like to meet and socialize with fellow employees. A study published in the Sloan Management Review (Cable et al., 2013) found that when socialization focused on individual identity, employees were much less likely to quit their jobs in the first six months. When an individual is recognized, it makes them happy, less likely to leave the job, and feel more valued and productive in the organization. This study confirmed the outcomes of this study related to performance and turnover intention.

We examined three organizational outcomes in this study: turnover intention, performance, and success of the onboarding program. The results showed that hybrid and face-to-face onboarding were superior to virtual onboarding in terms of all three outcome variables measured in this study. This result may be because virtual onboarding may be fast and reduces the time for onboarding from the organizational perspective. The employee can start working quickly and with minimal loss of time on the job. Virtual onboarding techniques offer several advantages over traditional in-person onboarding methods, especially in the context of remote and hybrid work. Some key advantages include: flexibility in terms of time and venue without

the need for being physically present, cost-effectiveness since it reduces travel and accommodation costs, scalability and organizations can onboard multiple employees at the same time, and accessibility when training tools are readily available.

However, research has shown that potential recruits are more interested in seeing the "face" of the organization and having more personal interaction and communication with colleagues and managers. This preference aligns with previous research studies that have been done in the area of onboarding. Better-managed companies have a "face" in the form of brand image as well as extensive employee involvement in the training process and employee feedback processes, which helps improve the quality of onboarding (Gruman & Saks, 2011).

Again, this research revealed that face-to-face and hybrid methods were superior for employee performance compared to exclusively virtual methods. Frequently, employees have a "need to know" and do not know where to get that information in a virtual system. In many cases, the "need to know" is simply psychological, a result of stress and anxiety. These unresolved stressors move into the job and interfere with job performance, which reduces the person-organization fit and the performance of the individual. Face-to-face methods help establish a connection; this connection can be established through traditional methods or synchronous methods. Our study reveals that combining them in terms of a hybrid model gives the best advantage.

The last aspect is related to culture. In a paper published in the *Harvard Business Review*, Denise Lee Yohn (2016) found great customer service is reflected in employee engagement numbers by as much as up to one and half times compared to companies with non-engaged employees. There is a direct correlation between engaged employees and great customer service, and great customer service has a direct impact on the bottom line. The current study also found

that the onboarding method has a significant impact on intention to turnover, one of the outcome variables in this study that reflects engagement. Less engaged employees are more likely to leave the organization as they feel undervalued.

A study published in the Sloan Management Review cited earlier (Cable et al., 2013) found that when socialization focused on individual identity, employees were much less likely to quit their jobs in the first six months. When an individual is recognized, it makes them happy and less likely to leave the job as well as feel more valued and productive in the organization. This finding is similar to the findings of this study, where we found the employee also wants a sense of culture and connectivity that can only be provided by hybrid methods. Efficacy is further improved if organizations can supplement using synchronous methods/traditional face-to-face methods and replace virtual asynchronous methods. This research study indicated that asynchronous methods were the least effective methods for the sample of respondents surveyed.

These recommendations become more relevant in the context of "The Great Resignation" where potential employees need a lot of motivation in the recruitment process. Studies show that the longer you make an employee wait in the onboarding process, the less likely he is to stay. Since 86% of newly hired employees stay or leave in a new organization in the first few months, it makes sense to provide them with the best opportunity to succeed. Onboarding programs that focus on helping employees feel welcome, supported, and successful during this period can have a big impact on retention. A report published by Hays (2016) showed that in the workplace, 51% of the employees who were happy with the onboarding process wanted to stay in the same company while 22% of the people surveyed who had not received proper onboarding wanted to quit. The current study also reflected a similar sentiment. Employees who perceived a successful onboarding process were less likely to leave the organization and have higher performance

levels. These studies indicated that the key to successful onboarding is supporting managers. When they feel equipped and empowered to do a good job, they will do a good job.

Finally, there is the question of organizational culture. Traditional onboarding helps employees understand the culture better. It also answers the question: Is the organization a good fit for the employee? It would not be wise to hire the employee and invest in training and development to later discover the person is not a good fit the organization, for doing so incurs increased costs, lowers performance, and produces higher turnover. The idea of culture has climbed the list of priorities for candidates over the years.

Most people looking for work consider company culture as 'relatively' important while 46% claim it is 'very' important. This statistic means candidates care about company culture more than ever. Therefore, the organization needs to make sure its onboarding program reflects the mission, vision, values, and culture that the organization wants to create (Job Seeker Nation Study, 2021).

In a report published by recruiting consultants, 22% of people surveyed reported that not receiving a proper induction and onboarding influenced their decision to look for another job. They compared this statistic to 51% of employees admitting that a great onboarding experience motivated them to similarly go "above and beyond." A direct correlation exists between a good onboarding experience and employee engagement, and employees with a positive experience during onboarding are more likely to be motivated and productive employees. The current study revealed that turnover intention increases the perception of success of the onboarding process.

An article by the Society of Human Resources Management estimated the cost of replacement for one worker to equal approximately one-third of the worker's annual earnings; this estimate is conservative compared to other available sources, which vary based on the

position. If the cost of turnover is high, an organization needs to focus on retention as well as recruitment since effective onboarding is a key part of retention and recruitment.

Limitations of the Study

This research study relied on survey research techniques. Consequently, no sweeping generalizations are possible based on this sample of 730 respondents. The specific sample data that emerged was based on those who responded to this survey. The sample consisted of executives, managers, technical, supervisory, and nonmanagerial categories of employees with at least, in most cases, a bachelor's or master's degree. Also, these individuals worked in full-time jobs where the remuneration and perks are well above the national average, and the jobs were permanent. Their responses can be quite atypical compared to the general population. The survey was distributed randomly, and these respondents answered it, which may create problems of interpretation and generalizability of these findings. A major limitation of this study is the use of self-report measures. Many of the instruments may have been tapping into the same construct, resulting in common method variance. Other disadvantages include self-serving biases, social desirability biases, and other biases, including the acquiescence bias and neutral response bias.

This study did not examine the timeframe between onboarding and turnover intent, but it is possible that this timeframe may have impacted the findings. Future studies can examine this timeframe, especially related to different business and industrial sectors.

Future Research and Conclusions

Future research could focus on attributional processes in a cross-cultural context in the sense that the perception may differ. For example, turnover intention may be lower in a culture where job security is high. A future study could focus on why people make certain attributions

in a particular culture. It could also examine whether the results of this study hold across other samples, like engineers and healthcare professionals.

More objective methods could be used in the future (i.e., experimental studies with control groups using different methods of onboarding) or simulations where subjects were given alternate onboarding scenarios and asked how they were likely to react to these onboarding scenarios. Manipulations could also be attempted for some of the moderating variables, i.e., asking subjects to imagine they are members of large teams, small teams, or working individually to note whether this aspect influences their turnover intention, perceived performance, and perceived success with the onboarding process.

The perception of employee learning style can also influence the findings of this study. Future studies can examine learning styles of employees to make the process more effective. For example, Kolb's (1985; 2015) Learning Style Inventory describes four different learning styles: diverging, converging, assimilating, and accommodating. These styles can be examined in terms of the effectiveness of onboarding in general and virtual onboarding. Also, learning styles, such as using visual, auditory, and kinesthetic modes of learning, may influence the learning styles of the employees, which may influence onboarding styles, turnover intention, perception of performance, and success. Future studies could examine how these learning styles influence onboarding processes.

Age is another factor that may influence the effectiveness of virtual onboarding. It is possible that age may be a significant factor influencing the use of virtual onboarding; future studies can examine the relationship between age and the effectiveness of virtual, face-to-face, and hybrid onboarding. It is possible that younger applicants may prefer virtual onboarding. This relationship may be moderated by familiarity with the use of technology and virtual onboarding

processes. However, a recent report from the American Society of Ageing, quoted by Hawk (2017) writing for the American Association of Society Executives, notes multiple studies show that older workers are just as productive as their younger counterparts, creating newer concepts like “reverse mentoring” in the onboarding process.

Similarly, alternate scenarios can be devised by placing individuals on board using different methods or managers/supervisors who are at different levels of seniority, experience, or education and measuring the related turnover intention, performance, and success. It is also possible to conceive of more controlled studies, like A/B testing, which is essentially an experiment where two or more variants of an intervention or concept are shown to users at random, and statistical analysis is used to determine which version is more appealing. Placing people in in-groups, out-groups, and individually and asking them to perform a series of onboarding exercises could possibly influences the individuals' perceptions of turnover intention, performance, and success under varying conditions of leadership. One could also conceive of using other validated outcome scales in different organizations or industries.

Future research could also investigate which onboarding aspects work well in a face-to-face environment versus a hybrid environment. For example, it is possible that face-to-face onboarding can provide in-depth information about an individual that may help in future placements and rotations and improve person-job fit. However, hybrid methods may help reduce time because the virtual component may help reduce redundancy in the onboarding process. One could also study other outcome variables, including real performance, sales, absenteeism, profit, or sick days, to see if a relationship exists between onboarding style and these outcome variables. Also, this study was cross-sectional. Future studies could examine how these relationships change over time due to social, economic, and political factors.

Finally, future studies could also follow employees after onboarding using 30/60/90-day onboarding for new employees, where employees are provided realistic goals to be achieved during the first 30, 60 and 90 days of their induction process. Regular assessments could be conducted at the end of the first, second, and third months with corrections made in the onboarding process. These goals are linked to the mission of the organization and highly recommended, especially for virtually onboarded employees. This type of onboarding assessment allows for quick changes depending on the employees' level of progress.

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APPENDIX A:

EFFECTIVENESS OF VIRTUAL ONBOARDING SURVEY INSTRUMENT

I am Shanks Menon pursuing a DBA at the MUMA School of Business, at the University of South Florida and I am doing a survey to find out the effectiveness of virtual onboarding in organizations. I would appreciate it if you could provide with me some time to respond to the attached survey.

Instructions

It should take approximately 10 minutes to complete this survey.

1. Do you work full-time in the organization you are employed in today?

   Yes/No

2. What kind of an onboarding process did you complete when you joined your organization:

A. Virtual Onboarding B. Face to Face C. Both D. No Onboarding

3. Type of business/sector you work in: Select the one that applies to you:

   Automotive & Mobility

   Capital Projects & Infrastructure

   Consumer & Retail

   Energy, Resources & Materials

   Financial Services

   Healthcare Systems & Services

High Tech, Telecoms & Internet

Pharmaceuticals & Medical Products

Private Equity & Principal Investors

Public Sector

Education/Social Sector

4. How familiar are you with the use of computers and technology?

A. Very Familiar B. Somewhat Familiar C. Not Familiar

Demographic information. Mark the box that appropriately describes you.

1. Please indicate your gender

Male

Female

2. Please indicate your age group.

Under 25

25-29

30-39

40-45

46-55

56-64

65 or older

3. What is your highest level of education?

High School

Associate Degree

Bachelor's Degree

Master's Degree

Doctoral Degree

Other (Please describe) _____

4. How long have you worked at the current organization?

Less than 1 year

1-2 years

3-6 years

7-10 year

More than 10 years

5. What is your current job role?

Non-Managerial

Supervisor

Technical

Manager

Executive

Other (Please describe) _____

6. What kind of virtual onboarding training did you receive at the start of your new job? Indicate all that apply.

Technical Training

Job-Related Training

Department/Team-Related Training

Organization Related Training

Any other training: Please specify_____

All of the above

Did not receive any training

7. How many hours was the initial virtual onboarding for your new job?_____

8. Did you join your company because it was a:

Career Launchpad: Best Workplaces to Start From

Career Stability: Best Workplaces to Stay and Thrive

Career Growth: Best Places to Advance Within

Growing Talent: Best Workplaces at Growing their own Talent

Advancement Without a Degree: No need for a college education

9. On the table below tick on the response that best describes the time you spent on your onboarding:

Length of Onboarding Period	1 day	2 weeks	3 weeks	4 weeks	5 weeks	6 weeks	7 weeks	8 weeks	12 weeks	1 year	Others Please Specify Below

APPENDIX B:

ONBOARDING SURVEY

Please use the following framework to guide you through the next set of questions. It provides a brief idea about the onboarding process.

Compliance: The compliance element covers basic company legal and policy rules and regulations that should be carefully reviewed and communicated to the new employee. This is where companies do pre-hire onboarding.

Clarification. This step aims to ensure that employees understand their actual job and related expectations. This is where companies do extensive training and meeting with supervisors and colleagues to clarify work roles and expectations.

Culture: The third block, culture, covers information about company norms and behaviors; however, this is often overlooked as these are assumed to be easy to understand and absorb during daily work. This may take the shape of mentoring by a senior colleague about behaviors and norms.

Connection: relates to establishing key interpersonal relationships and explaining information networks essential for an employee to perform well. Employers very often set up a buddy system to work with new employees to reduce stress related to the job and new employees' sense of belonging.

Rate the following table by placing a tick where applicable in your survey using the scale provided:

The 4 Cs and Types of Onboarding

Onboarding type	Dimension			
	Compliance	Clarification	Culture	Connectivity
Synchronous Face to Face 1:1				
Synchronous Face to Face 1:Many				
Synchronous Face to Face Many:Many				
Asynchronous Face to Face 1:1				
Asynchronous Face to Face 1:Many				
Asynchronous Face to Face Many:Many				
Traditional In-Person Onboarding 1:1				
Traditional In-Person Onboarding 1:Many				
Traditional In-Person Onboarding Many:Many				
No Onboarding				

APPENDIX C:

TURNOVER INTENTION, PERFORMANCE ON THE JOB, AND OVERALL ONBOARDING SUCCESS

Please complete the following instruments:

Turnover Intention

Turnover intention is measured using a 3-item scale from Xu and Payne (2014).

Item	1 Strongly Disagree	2 Disagree	3 Neither Agree or Disagree	4 Agree	5 Strongly Agree
I often think about quitting this job.					
I will probably look for a new job during the next year					
I am actively looking for another job.					

Performance on the Job

Reflect on your job. Place a tick against the response that most closely reflects your performance.

	Needs Improvement 1	**Fair 2**	**Good 3**	**Very Good 4**	**Excellent 5**
Overall Self Evaluation					
Managing Relationships: (e.g. with Supervisor, Colleagues, and Customers)					
Understanding the Business: (e.g. knowledge of job, industry, customers, and processes).					
Quality of Performance: (e.g. achieve results in budget/time allotted, timeliness in responding, follow-up)					

Overall Onboarding Success

Onboarding success is measured using a 5-item scale developed by Sharma and Stol (2020).

Item	1 Strongly Disagree	2 Disagree	3 Neither Agree or Disagree	4 Agree	5 Strongly Agree
The initial orientation program helped me feel less stressful about joining a new workplace.					
I got a good idea about the organizational culture during my onboarding					
I clearly understand the expectations and responsibilities of my job.					
I am confident that I am capable of excelling in my job.					
I can say I am socially integrated in my workplace.					

Thank you for participating.