A Success Case of Training Transfer of a Blended, Technical Training Initiative

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A Thesis in

The Department of

Education

Presented in Partial Fulfillment of the Requirements
for the Degree of Master of Arts (Educational Technology) at
Concordia University
Montreal, Quebec, Canada

August 2021

School of Graduate Studies

This is to certify that the thesis prepared

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Entitled: A Success Case of Training Transfer of a Blended, Technical Training Initiative

and submitted in partial fulfillment of the requirements for the degree of

Master of Arts (Educational Technology)

complies with the regulations of the University and meets the accepted standards with respect to originality and quality.

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ABSTRACT

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Research Problem: The purpose of this study was to explore how a technical, blended training solution impacted training transfer in an organization over time.

Research Questions:

Main Question. To what extent does training transfer within an organization from a specialized, technical, blended training program, several months after the training initiative?

Supporting Question (SQ) 1. Which skills were mastered by learners and which were not?

SQ 2. How are learners applying new skills in the months following the training initiative?

SQ 3. What factors enable or impede transfer of the training?

SQ 4. If training transfers, how do stakeholders benefit from the training initiative?

Literature Review: Technical training is instruction based on a specific product or task (Williams & Nafukho, 2015). Critical success factors for technical training include leveraging the skills workers have already developed with similar systems (Stull, 2018). Blended learning is the integration of different methods of teaching, such as directed versus self-directed or in person versus online (Rossett, 2019). Critical success factors for blended learning include standardization (a consistent message), segmentation (producing individual blocks with different teaching methods) and automation (approaches which require as little human intervention as possible) (Bitzer, Söllner & Leimeister, 2016). Training transfer is the degree to which learners apply and maintain over time the knowledge, skills and attitudes learned during a training program (Baldwin & Ford, 1988). Critical success factors for training transfer include trainee characteristics (consisting of ability or skill, self-efficacy, motivation and personality), training design (the approach used to conceive the program, such as the use of a realistic training environment), and work environment (the climate in which the learner evolves). Although the four-level Katzell-Kirkpatrick framework is the most used approach to evaluating training programs, its limitations include the fact that it does not consider workplace influences which might affect performance, does not identify avenues for further improvement and does not look beyond the training environment to examine performance (Bates, 2004; Brinkerhoff, 2005). An alternative is Brinkerhoff's Success Case Method, which details verifiable training stories to convey the value of learning in ways which organization leaders can find believable and relatable (Brinkerhoff, 2005; Williams & Nafukho, 2015).

Methodology: A qualitative approach inspired by Brinkerhoff's Success Case Method (1983, 2003, 2005) was used, with 22 participants in a large North American financial services provider. Participants completed training on an updated software application; more specifically, a customer service system. They were asked to complete a pre-training survey and three follow-up surveys: two, six and ten weeks following the implementation of the system changes. Of these, eight participants who self-identified as having successfully transferred the skills were interviewed. The data collected was then coded and a thematic analysis carried out to answer the research questions.

Results and Conclusions: Most participants (18 of 22) self-reported using their new skills, with a strong majority describing the use of their performance support system (an online help tool used to document employee processes and procedures) for support. Although training coaches had not directly observed participants using the system, anecdotal evidence from other stakeholders supported participants' self-assessment of successful transfer. Potential enablers to training transfer were identified, including the use of a knowledge management system, practice, and support from systems experts. Potential barriers included the overlap of the training program with summer vacation; lag time between training and the new system launch; fatigue with the frequency of system changes; and the lack of a training environment. Participants also identified benefits to the training program, including faster treatment time (the time it takes to handle a customer interaction), greater autonomy when using their systems, and fewer mistakes.

The data provided program stakeholders with information which would not have been possible with the Katzell-Kirkpatrick framework. Based on the findings, stakeholders could avoid repeating the pitfalls of the training program under study and find avenues for future improvement.

The implications of this study suggest eight take-aways to consider for practice. These include: documenting procedures in a performance support system; offering expert support and feedback; providing the opportunity to practice; properly scheduling training initiatives; planning change management activities; personalizing training to the learners' roles; planning quality assurance activities; and using blended learning approaches.

How the study supports or extends previous research for training transfer is also discussed, as are the limitations of the study, which include the lack of generalizability and some issues with the training initiative studied, such as the findings, which relied on participant self-assessment.

Future research could replicate the study with a larger sample size and a focus on different types of training initiatives such as "soft skills" training to determine whether the findings transfer to other types of training. Other potential areas of future research include the value of just-in-time training and how the presence of a training environment affects the transfer of complex technical skills.

ACKNOWLEDGMENTS

First and foremost, I want to thank my research supervisor, Dr. Saul Carliner for his guidance, valuable feedback, and patience. He always made time for me when I got stuck and was always able to set me in the right direction when I got lost.

I would also like to thank my committee members Dr. Richard Schmid and Dr. Giuliana Cucinelli for their time. Thanks as well to my thesis colleague Rachel Faust for helping me audit my results.

I am grateful for the support of my work colleagues, who allowed me to spend too much time talking about my research. Many thanks also to my research participants, who were generous enough to invest their time in my project.

Finally, and most importantly, thank you to my partner for offering his constant support and encouragement, never complaining when I spent entire weekends locked away in front of my laptop while he handled day to day chores without me.

TABLE OF CONTENTS

List of Tables ix

Chapter One: Introduction 1

Chapter Two: Literature Review 10

Technical Training 10

Blended Learning 13

Training Transfer 15

Factors Influencing Training Transfer 16

Training Evaluation 18

Barriers to Training Evaluation 19

Levels of Evaluation 20

Alternatives to the Katzell-Kirkpatrick Framework 21

Brinkerhoff Success Case Method 24

Chapter Three: Methodology 27

Selection of a Research Methodology 27

Criteria for Selecting a Research Site and Participants 29

Selecting a Research Site and Initiative 29

Selection of Participants 30

How data was Collected 32

How Data Was Analyzed 38
Assuring Credibility and Trustworthiness 41
Chapter Four: Results 44
Research Site, Training Initiative, and Participants Studied 44
About the Organization 44
About the Training Program Studied 45
Participants 49
Expectations Regarding Transfer Prior to the Training Initiative 52
Answers to the Supporting Research Questions 56
Response to SQ1. Which skills were mastered by learners and which were not? 56
Response to SQ2. How are learners applying new skills in the months following the training initiative? 60
Response to SQ3. What factors enable or impede transfer of the training? 65
Response to SQ4. If training transfers, how do stakeholders benefit from the training initiative? 73
Response to the Main Research Question 77
Chapter 5. Conclusions 80
Conclusions 80
Implications for Practice 80
Implications for Research and Theory 87

Limitations 90

Suggestions for Future Research 92

References 94

Appendix A 105

Appendix B 106

Appendix C 107

Appendix D 110

Appendix E 111

Appendix F 112

Appendix G 113

Appendix H 114

LIST OF TABLES

Table 1. Breakdown of Participation by Role 50

Table 2. Breakdown of Interviewees 52

Table 3. Response to Question About the Intention to Use New Skills (by the 22 participants surveyed) 53

Table 4. Response to Questions About the Support and Post-Training Performance (by the 22 participants surveyed) 54

Table 5. Percentage of Participants Who Reported Applying Their New Skills 61

Table 6. Potential Enablers and Barriers to Training Transfer 72

CHAPTER ONE: INTRODUCTION

Training departments generally have a strong interest in evaluating their work. In fact, a 2009 ASTD survey of 704 learning professionals found that 75% attributed "high value" or "very high value" to reporting the extent of transfer and results of the training; respectively called Level 3 and Level 4 evaluation from the widely used Katzell-Kirkpatrick framework (Kennedy, Chyung, Winiecky & Brinkerhoff, 2013). The Katzell-Kirtpatrick framework relies on evaluating four categories, or levels, of training effectiveness – Reaction, Learning, Behavior and Results – and provides a common language for evaluation criteria (Alliger & Janak, 1989). Despite this purported interest, very few training organizations go beyond tracking the satisfaction (Level 1 of the Katzell-Kirkpatrick framework) of learners regarding their training experiences. For example, according to the 14th edition of the Conference Board of Canada's *Learning and Development Outlook*, only 45% of organizations reported evaluating their learning practices and programs in 2016-2017 (Cotsman & Hall, 2018). 60% of Canadian organizations with strong learning cultures reported evaluating Level 1, or satisfaction, versus 33% of organizations with weak learning cultures. Furthermore, only 37% of organizations with a strong learning culture reported evaluating for Level 3, or behavioral change, versus 18% for those with weak learning cultures (Cotsman & Jall, 2018).

Some organizations try to use satisfaction surveys to compensate for the failure to conduct other types of evaluation and ask questions about learning, transfer, and results. But satisfaction surveys conducted immediately after a class session can only gauge whether participants believe they learned something or whether they hope to integrate it; actual learning can only be evaluated through a learning assessment (Level 2 of the Katzell-Kirkpatrick framework) (Arthur, Bennett, Edens & Bell, 2003). Furthermore, satisfaction surveys can only assess the intention to

apply the new knowledge and skills on the job, not whether that happened (only Level 3, or transfer evaluation, can do that). And satisfaction surveys can only assess whether participants believe the initiative added value for their organizations, not whether the training actually did so (only Level 4, or impact evaluation, can do that) (Arthur et al., 2003; Marshall & Rossett, 2014; Srimannarayana, 2017).

Perhaps the interest in evaluating training programs persists despite the limited actual effort invested because many good reasons exist for evaluating these programs. For one, workplace training programs increasingly rely on technology, such as instructor-led virtual classrooms or self-study elearning. Even before the COVID-19 pandemic, according to the ATD 2020 State of the Industry Report, in 2019, 19% of learning hours were instructor-led virtual classrooms (up from 9% in 2015) and 26% of learning hours were self-study elearning (up from 19% in 2015) (Ho, 2020). The use of technology and a move away from instructor led-classrooms has only grown with the cessation of all in-person training as a result of the pandemic. Potential benefits of using technology in training programs include the possibility of hiring employees for their skills rather than geographic location, increased accessibility of training content, economies of scale and standardisation of training content (Appana, 2008). However, this technology represents a major investment which demands accountability, and training professionals should be concerned with whether the investment is a worthwhile one (Tamkin, Yarnall & Kerrin, 2002).

But several other reasons for evaluating training programs exist. One is when organizations try alternate approaches to training, such as blended learning, which combines differing approaches, such as in face-to-face instruction and online instruction, or self-study and live classes (Hrastinski, 2019; Rossett, 2019). Evaluation helps training professionals determine

whether these methods have the intended impact, especially on transfer to the job and job performance. Some of the literature suggests these blended approaches can improve learning transfer (the degree to which application of knowledge, skills and attitudes learned during a training initiative are maintained over time (Baldwin & Ford, 1988)). For example, Rossett (2019) argues that blended learning can help learners develop habits for independent learning, increase cost-effectiveness and productivity, enhance retention, and provide consistent and easily updated content. Baldwin-Evans (2006a) further suggests that blended learning approaches provide learners with tools that allow them to get the information and instruction when and where they need it, which can increase training transfer over time. But these are proposed benefits; only an evaluation of training can assess whether organizations actually achieve them through blended learning.

Another reason for evaluating training programs is to determine its usefulness and effectiveness, irrespective of the type of training program. In other words, is the training solution accomplishing its objective (Bächmann, Abraham & Huber, 2019; Tamkin et al., 2002)? A study by Bächmann et al. (2019) suggests that organizations may be most interested in evaluating particular training programs, including those that are costly, that are potentially damaging (because poor-quality training program can affect the organization's success), or that target participants in managerial positions. Finally, an organization might want to evaluate training programs to identify how those programs could be improved. Feedback, obtained through evaluation is required to do that (Bächmann et al., 2019; Tamkin et al., 2002). If training is not properly evaluated, an organization has no way of knowing whether the desired objectives are reached and cannot improve their training programs to achieve them in the future.

In addition to exploring the impact of training on job performance, training evaluation can also provide insights into the success of a particular type of training. According to *Training* magazine, organizations offer several types of training, such as: executive development training (focused on skills which enable learners and their organizations to succeed, including motivation, communication, strategic thinking, and change management (Lawson, 2008)); management and supervisory training (focused on soft skills such as coaching, motivation, conflict resolution, and hard skills such as time management, project management, performance management, etc. (Atwood, 2008)); interpersonal development (focused in skills such as listening, team work, empathy, leadership and teamwork (Interpersonal Skills: Definitions and Examples, 2020)); technical training (instruction based on a specific product or task (Wakefield, 2011)); customer service training (with the goal of matching the expectations of an organization's clients (Shen & Tang, 2018)); sales training (focused on creating and finding new opportunities and closing deals (Sales Training, 2017)); professional development (industry specific instruction, such as education, accounting or medical training); and new employee training (onboarding of new workers) (Training Magazine, 2018).

Evaluating technical training should be particularly important for organizations, as the nature of the work by employees completing such training is generally critical to the organizations' operations (Williams & Nafukho, 2015). Williams and Nafukho (2015) argue that although other types of training such as customer service, are also important, and having dysfunctional technical training for employees in critical roles could have dire consequences for profitability and even safety. For example, if an airplane mechanic receives ineffective technical training for a new process, there could be injuries or even loss of life. Yet despite the importance

of technical training, Twitchell, Holton and Trott's (2000) descriptive study shows that this type of training is no more evaluated than other types of training.

Even when organizations evaluate their training programs beyond reaction, there are often concerns with the evaluation models employed. For example, although widely used, the four-level Katzell-Kirkpatrick framework has limitations that are well documented in the literature. Bates (2004) argues that the framework is incomplete and oversimplified, suggesting that it "does not consider individual or contextual influences in the evaluation of training" (Bates, 2004, p.342). The framework assumes causal linkages and an incremental importance of information that are all unproven (Alliger & Janak, 1989; Srimannarayana, 2017). For example, the training might not be well received by learners (Level 1), but they might still demonstrate the desired change in behavior through a Level 3 evaluation (Cunningham, 2007). The Katzell-Kirkpatrick framework also fails to account for other possible workplace influences that could affect performance outside of the training environment and does not help stakeholders identify further avenues for improvement. The training might have been well received by the participants (Level 1), but if they do not apply their new skills on the job (Level 3), the Katzell-Kirkpatrick framework does not allow the evaluator to determine why that is; the evaluation only determines that the training did not result in the desired change of behavior. Brinkerhoff (2005) notes that the Katzell-Kirkpatrick framework does not look beyond the training itself to examine the performance environment. In short, although the Katzell-Kirkpatrick framework might provide insights into the reactions to training, whether or not learners mastered the objectives, and the extent to which learners transferred what they learned to their jobs, it does not provide an understanding of what made the training effective or suggest ways in which it could become more effective.

In response, Salas and Cannon-Bowers (2001) point out the need to develop more diagnostic measures. They discuss Kraiger, Ford and Salas' (1993) proposal for a multi-dimensional view of learning, which could be used to assess and document learning outcomes, be they cognitive, affective or skill based. Another proposed diagnostic measure is Alliger, Tannenbaum, Bennet, Traver & Shotland's (1997) utility-type reaction measure, which asks learners whether the training was relevant and practical for their job performance rather than asking whether they enjoyed the training.

Other alternative frameworks have been proposed, which build on the Katzell-Kirkpatrick framework. Some rely on experimental design to provide more precise measures of learning and transfer. However, these frameworks require control groups, analyzing variance and identifying other causal factors, (Brinkerhoff, 2005). More specifically, Sackett & Mullen (1993) also argue that many training programs are carried out in organizations with a limited number of participants, in which the creation of a control group would greatly affect the validity of any statistical conclusions. More importantly, experimental design frameworks require that employers withhold training from some groups to contrast control and experimental groups: a practice that many trainers find to be unethical. More practically, the experimental approach is time and resource intensive, making it doubtful that typical organizations will invest the resources required. Perhaps these problems of too much time, too much cost, and complex logistics explains why most training departments do not conduct extensive evaluation beyond the reaction (Arthur et al., 2003), which seems to be the easiest to administer.

For the typical training department to generate data about the transfer of learning from its training initiatives, then, an evaluation framework needs to be simple enough to use in the workplace. It also needs to ensure that all people who need the training can receive it, that it can

be conducted with limited additional resources and time, and that it can not only explain what transferred but the characteristics of the training that led to its successful transfer.

The Brinkerhoff Success Case Method provides such a framework. This approach captures success stories that demonstrate the business effect of training and shares them with the larger organization to communicate the value of training in ways that organizational leaders will find believable and compelling (Williams & Nafukho, 2015). It details verifiable activities of learners who used their new skills in specific behaviors which can be shown to provide valuable results for the organization. Finally, it does not attempt to separate learning and performance; it assumes that any evidence of training effect is a function of both training and performance factors (Brinkerhoff, 2005). Brinkerhoff (2003) describes the following basic questions that can be answered through his Success Case Method:

- What is truly happening (examples include who is using the new skills?
- What is being used, how many people are using them?
- What results are produced by the training (be they intended or unintended)?
- What is the value of those results (if possible, in dollars)?
- How could the training be made better?

Unlike most other evaluation frameworks, the Success Case Method does not only examine the average performance of learners; rather, it tells the stories of the most successful and least successful learners. Furthermore, learners are not the only stakeholders whose perspectives are considered by the Success Case Method, as the perspectives of trainers and managers are included in the evaluation and provides an additional source of data beyond that of the participants. With several sources of data on the effectiveness of the program and from several

perspectives, project sponsors and managers can confidently use the results of the study (Brinkerhoff, 2003, 2005).

Because the Success Case Method is a relatively easy, quick and inexpensive method of determining what is working and what is not, it is ideal for assessing small, specialized training initiatives with few learners. It is relatively simple to gather success stories and easy for the reader to understand (Williams & Nafukho, 2015). Moreover, it does not require the analysis of variance and other causal effects, or control groups, which would require that training be withheld from some learners (which in an already small population of learners would further decrease the validity of any statistical conclusions). Finally, the Success Case Method generally results in only a small number of documented success or non-success cases, which is enough to describe the nature and scope of any success produced by the training (Brinkerhoff, 2003).

Applying the Brinkerhoff Success Case Method to evaluate a complex training program—one that uses a blended learning approach and provides technical training that is only intended for a small number of learners (fewer than 200)—is the purpose of this study. The main question guiding this study is:

> To what extent does training transfer within an organization from a specialized, technical, blended training program, several months after the training initiative?

Supporting questions include:

SQ 1. Which skills were mastered by learners and which were not?

SQ 2. How are learners applying new skills in the months following the training initiative?

SQ 3. What factors enable or impede transfer of the training?

SQ 4. If training transfers, how do stakeholders benefit from the training initiative?

This rest of this thesis presents a study exploring these questions. The next chapter situates this study within the literature, after which the third chapter presents the methodology used to conduct this study and the fourth chapter presents the results. Finally, the fifth chapter concludes this study by describing its implications and limitations and offering suggestions for future research that builds on this study.

CHAPTER TWO: LITERATURE REVIEW

This chapter situates this study in the literature. Specifically, this chapter situates the study in four bodies of literature linked to the research questions: technical training, blended learning, training transfer, and training evaluation.

TECHNICAL TRAINING

As noted in the previous chapter, technical training refers to instruction based on a specific product or task and is generally focused on system- or tool-specific content (Williams & Nafukho, 2015). Although some researchers interpret this to mean hard skills, in contrast to soft skills such as leadership, communication, and conflict management (Wakefield, 2011; Williams & Nafukho, 2015), others argue that technical training includes both hard and soft skills. For example, Clark (2008) defines technical training as "a structured learning environment engineered to improve workplace performance in ways that are aligned with bottom-line business goals" (Clark, 2008, p.10). Technical training generally has a specialized, primary audience who will be working with a process, technical issue or product (Wakefield, 2011). It is designed to produce measurable changes in knowledge and skills related to performing those processes and working with those technical issues and products (Twitchell et al., 2000). When well designed, technical training prevents accidents, saves costs by preventing mistakes and time lost to relearning, and finally, produces a better-quality product (Wakefield, 2011). Technical training typically has the following characteristics (Clark, 2008; Wakefield, 2011):

- Content is built from existing information and specialized resources that are in short supply, such as technical experts (subject matter experts).
- It primarily covers information specific to the organization (though that might emerge from broader scientific or engineering material).

- Training is often developed at the same time as the products or services it addresses, which makes the content unstable. This increases the likelihood that revisions and adjustments (in content and scope) may be required throughout the development of the training content.

One shortcoming of technical training is that it is often specific to the organization offering it, developing skills that often do not transfer to other organizations. This creates dependencies between the organization and the worker, who develop skills that another employer might not need (Clark, 2008; Lazear, 2009).

One common subject of technical training is the use and administration of the complex, specialized information systems used within organizations, such as Learning Management Systems and Human Resource Information Systems used in training and development, and airline reservation systems, call management systems, software development systems, and similar systems used in other industries. On the one hand, new information systems should leverage the skills that workers have already developed with other similar systems, as users' past experience will shape their expectations for how the new information system should function (Stull, 2018). For example, information systems that run under Windows use a common interface, so general interactions with the information system are the same as those used with other Windows software, making it more intuitive for new users (Stull, 2018). On the other hand, new information systems perform specialized skills, so many interactions are unique to that new system and people must learn them to successfully perform work on the system.

Because information systems leverage existing knowledge, the temptation exists to let workers learn them on their own through informal learning. Informal learning can be defined as a situation where some combination of process, location, purpose and content of instruction are determined in some way by the learner, who may not even be conscious that learning occurred

(Carliner, 2012). This follows a broader trend among Canadian employers towards informal learning, on which employers have increasingly relied in the past decade (Cotsman & Hall, 2018). However, even though leveraging learners' skills and knowledge of existing technical systems is a critical success factor in technical training, DiBello & Spender (1996) argue that informal learning is not an adequate strategy when implementing a new technical system, because they are too expensive, and organizations are too reliant on them to leave mastery of them to chance. Furthermore, the technology underlying these new systems might differ from old technologies, requiring a more substantial update to workers' skills. As a result, continuing vocational training is essential for workers to remain skilled (Gashi, Pugh & Adnett, 2010; Zwick, 2005).

Part of the purpose of this study is to evaluate the impact of a technical training program on training transfer over time. Evaluating technical training should be particularly important for organizations, as the nature of the work by employees completing such training is generally critical to their very operations (Williams & Nafukho, 2015). Although Williams & Nafukho (2015) suggest that there has been little research on the subject, they cite a study by Twitchell, Holton and Trott (2000), which explored technical training evaluation practices. In this study, Twitchell et al. (2000) report that the mean percentage of technical training programs evaluated by their respondents dropped from 72.74% for Level 1 (reaction) evaluation to 30.54% for Level 3 (behavior) and 20.82% for Level 4 (results). When questioned on why so few technical training programs were evaluated at Level 3 (behavior), 44.14% of respondents indicated that it was not carried out because it was not required by the organization. This was closely followed by the cost of evaluation (36.94%) and lack of training and expertise to perform these evaluations (34.23%). To evaluate technical training programs, these challenges need to be overcome.

BLENDED LEARNING

Over the past decade and a half, interest has grown in offering training in general, and technical training in particular, through blended learning. Blended learning is the combination of different methods of teaching within a single program or collection of programs. Rossett (2019) defines blended learning as the integration of differing approaches, such as formal versus informal learning, in person versus online experiences and directed versus self-directed approaches. This could involve mixing technology-based learning, pedagogical approaches, different forms of instructional technology and integrating them to on-the-job activities. This definition evolved from a blend of classroom and elearning programs, which include both synchronous and asynchronous learning (Baldwin-Evans, 2006). It has been suggested that training initiatives that present information with different methods of teaching have the potential to reach a greater number of learners with different learning preferences (Harris, Connolly & Feeney, 2009) because a learner who might be turned off by one approach, might be very receptive to another. For example, Rossett (2019) argues that for learners who are reluctant to explore independent learning activities such as self-directed elearning, blended learning that includes a classroom (virtual or face-to-face) component can help them get used to the concept. Elsenheimer (2006) argues that blended learning should not only refer to strategies that mix different delivery methods, but rather to the "orchestrated application and integration of instruction, tools, performance support, collaboration, practice and evaluation to create a unified learning and performance environment" (Elsenheimer, 2006, p.26). To find the appropriate combination, Elsenheimer (2006) proposes the Blended Learning Analysis and Design Expediter (BLADE) tool, which includes both an analysis and design phase. As with a performance improvement campaign, this approach examines the performance environment, but with a focus

on blended learning initiatives. According to Hilliard (2015), a 2003 survey of best practices in blended learning from The Learning Guild found that 36% of participants reported using between six and ten different methodologies in their blended learning initiatives. The top five reported methods included classroom interaction, elearning, email, self-paced content and online discussions.

Advantages to a blended learning approach include the potential to support and improve educational experiences in both a cost- and resource-effective way. It can also help reduce training time, provide more consistent quality, facilitate the monitoring of participation and progress, and appeal to a variety of adult learning styles and preferences. Furthermore, when learners are spread across multiples locations and have differing commitments, time managements issues and availability, blended learning provides much needed access and flexibility (Harris et al., 2009; Holton, Coco, Lowe & Dutsch, 2006). Kim, Bonk and Oh (2008) present results of a survey of learning and development professionals that found 63% saw blended learning as a way of improving accessibility, 57% saw it as a way of improving the quality of the experience for learners and 44% saw it as a way of reducing training costs. Although Holton et al. (2006) agree that one of the most frequent reasons why organizations favour blended learning is cost-effectiveness, they warn readers that when replacing more traditional classroom activities with blended learning, designers need to ensure that learning transfer is not negatively impacted.

When designing blended learning, standardization (having a consistent message), segmentation (producing learning content in separate blocs, with different teaching approaches) and automation (approaches which require as little human intervention as possible) are well-established ways of enhancing the efficacy of the training services. By segmenting the training

initiative, the instructional designer can identify topics which can be automated or standardized into self-directed elearning (Bitzer, Söllner & Leimeister, 2016).

According to Bitzer et al. (2016), blended learning solutions are considered effective when the quality of the services rendered meets the expectations of participants and their customers in terms of the input, the processes and the quality of the results. These can only be determined through training evaluation. Harris et al. (2009) also express a need for evaluating blended learning initiatives to determine which components of blended learning are most appropriate and why, as well as when to use particular components. Harris et al. (2009) further suggest that rather than evaluating individual components in isolation, evaluation should focus on the interrelation of each method, as every blended learning design is different and a more holistic evaluation is required to properly evaluate what makes each design successful or not. Only an evaluation of training that looks at all the influences affecting performance can successfully assess whether organizations actually achieve any benefits through blended learning. The Brinkerhoff Success Case Method does so.

TRAINING TRANSFER

Salas, Smith-Jentsch, Tannenbaum and Kraiger (2012) argue that transfer of training is a central concern for both researchers and practitioners, reporting that learners often fail to transfer skills trained on the job. Although Georgenson (1982) presents anecdotal evidence that suggests only 10% of training efforts result in successfully training transfer, Saks (2002) offers more encouraging results, reporting that a survey of 150 training professionals showed approximately 50% of training investments result in increased performance for employees and organizations. Still, 50% is only halfway to 100%.

Training transfer can be defined as the degree to which the application of knowledge, skills and attitudes learned during a training initiative are "applied, generalized, and maintained over some time in the job environment" (Baldwin & Ford, 1988, p.63). Blume, Ford, Surface and Olenick (2019) add that training transfer is also about the impact of the knowledge, skills and attitudes covered in the training initiative on job performance. Gaudine and Saks (2004) argue that training transfer is a key to the influence training can have on an organization's outcomes and Huang, Ford and Ryan (2017) propose that training transfer can vary in the amount of use by a specific individual. Rather than assuming a stable extent of uptake of new skills after a training initiative, transfer should be studied as a process of change that evolves over time.

Factors Influencing Training Transfer

Because research suggests that training transfer is positively related to the performance of an organization and that without it, a return on training investment is unlikely (Saks & Burke-Smalley, 2014; Salas et al., 2012), it is in the interest of all stakeholders to put in place conditions that will positively influence training transfer.

Baldwin and Ford (1988) present a model for training transfer that relies on three main inputs: trainee characteristics, training design and work environment. The next several sub-sections explore each of these.

Trainee Characteristics. Trainee characteristics include cognitive ability, self-efficacy, motivation and the perceived utility of the training initiative (Baldwin & Ford, 1988; Grossman & Salas, 2001). According to Grossman & Salas (2011), research suggests that cognitive ability plays a key role in training transfer, where learners who have greater cognitive ability are more likely to successfully demonstrate transfer. As for self-efficacy, which can be defined as a learner's judgments about their ability to perform a task, Burke and Hutchins (2007) cite

numerous studies that found a positive relationship between self-efficacy, training transfer and skill maintenance over time. Research by Huang et al. (2017) further suggests that post-training self-efficacy can significantly predict the extent to which learners initially apply a new skill; learners who feel confidant about their new skills make early efforts to apply them on the job. Motivation to learn and transfer prior to training have both shown strong relationships to training outcomes (Al-Eisa, Furayyan & Alhemoud, 2009; Grossman & Salas, 2011). Research by Huang et al. (2017) reports that a learner's motivation to transfer significantly predicted extent of transfer over time, with motivated learners increasing the application of their new skills when compared to unmotivated learners. Additionally, Burke and Hutchins (2007) cite a 1997 study by Axtell, Maitlis, and Yearta, which found motivation to transfer to be a reliable predictor of transfer one year after training. Finally, research suggests that learners who perceive the initiative as useful are much more likely to apply the knowledge, skills and attitudes on the job than learners who do not (Burke & Hutchins, 2007; Grossman & Salas, 2011).

Training Design. The methods and approaches used to conceive and deliver a training program will impact the learning outcomes, and therefore, indirectly, the training transfer. Grossman and Salas (2011) suggest a training design factor which strongly influences training transfer is the use of a realistic training environment. For example, in the case of a technical training, this could include a simulation or software learning environment which replicates the real environment in a way which keeps it separate from any sensitive information.

Another approach to increasing retention and transfer, described by Baldwin and Ford (1988), is overlearning, which refers to the process of providing learners with repeated practice, even when they have successfully shown they can perform the task. Research demonstrates that the greater the amount of overlearning, the greater the retention over time (Baldwin & Ford,

1988). This approach works by creating automatic responses so that the learner can instead focus on more novel problems, which can be especially useful in situations where the task may be rarely used on the job (Burke & Hutchins, 2007).

Burke and Hutchins (2007) also suggest that developing clear learning objectives is significantly correlated with training transfer. They argue that learners were more likely to achieve training transfer when they were aware of what knowledge, skills and attitudes were expected and required after training.

Work Environment. A number of studies indicate that training transfer is, in part, dependent on the climate in which the learner works, with supervisor and peer support widely viewed as key variables (Baldwin & Ford, 1988; Burke & Hutchins, 2007; Grossman & Salas, 2011). Burke and Hutchins (2007) identify manager supportive behaviors that contribute to positive training transfer. These supportive behaviors include managers discussing the new learning with employees, participating in the training initiatives, and providing feedback, encouragement and coaching. Furthermore, Al-Eisa et al. (2009) argue that supervisor support plays a large role in learners' intention to transfer post-training. The opportunity to perform the skills on the job following the training initiative is also key, with Burke & Hutchins (2007) citing this lack of practice on the job as one of the greatest barriers to training transfer.

TRAINING EVALUATION

Training theory asserts that evaluation is key to determining whether a learning initiative is successful and achieves its desired results (Carliner, 2015). Despite this, research suggests that most organizations primarily focus on surveying for learner satisfaction with programs and, occasionally, assess the extent of learning immediately following the training initiative (Arthur et al., 2003; Marshall & Rossett, 2014; Srimannarayana, 2017). According to the Conference Board

of Canada's 14th edition Learning and Development Outlook, only 45% of organizations reported evaluating their learning practices and programs in 2016-2017. Of those, only 37% of organizations with strong learning cultures and 18% for those with weak learning cultures conducted evaluation at Level 3, or behavioral change, evaluation (Costman & Hall, 2018).

Marshall and Rossett (2014) report that learning professionals face organizational and individual barriers to evaluating their training initiatives beyond satisfaction surveys. This can be problematic when one considers the research, which suggests that for transfer to occur, the behaviors learned in training must be applied to the context of the job and maintained over time (Burke & Hutchins, 2007); both factors which are not considered when evaluating training during or immediately after a training initiative. This section presents enablers and barriers to training evaluation, describes the limitations of and alternatives to the Katzell-Kirkpatrick's levels of evaluation of training in general and transfer in particular, and finishes by presenting the Brinkerhoff Success Case Method of evaluation.

Barriers to Training Evaluation

Too often, organizations do not complete the evaluation of their training programs. Generally, this is not because evaluation is not valued by the organization, but rather because of a variety of organizational barriers. Marshall and Rossett (2014), compiled a list of 16 organizational and individual barriers to training evaluation. The researchers then surveyed professionals, asking them to rate these 16 barriers using a 3-point scale. Some of these potential barriers to training evaluation, validated by Marshall and Rossett's survey, include: pushback from managers when looking at the influence of learning programs (rated with a mean of 2.30); lack of requests for evidence of results by the organization (mean of 2.17); lack of access to organizational results (mean of 2.29); lack of evaluation and reporting tools and systems (mean

of 2.22); lack of support from experts in metrics (mean of 1.99); cost of evaluation (mean of 1.64); lack of internal expertise required to evaluate training (mean of 1.66) and not knowing how to report findings in an actionable way (mean of 1.77) (Berge, 2008; Marshal & Rossett, 2014; Twitchell et al., 2000).

Levels of Evaluation

The Katzell-Kiripatrick evaluation framework relies on four levels of evaluation. Reaction, the first level, looks at the satisfaction of learners following the training initiative, usually measured through a quick survey. The second level, learning, examines what the participants have learned, generally through some form of performance test. The third level, behavior, focuses on job performance over time once the training initiative is complete and is often measured through supervisor rating or an objective indicator, such as observation. Finally, the fourth level, results, assess the extent to which the organization that sponsored the training achieved the goals established for the program. These goals should be aligned with the business needs of the organization and the training initiative should be designed to address them. For example, if the organization sponsoring the training aimed to increase sales by 30% over the next quarter, one can see if these results were met following the training initiative by examining sales data collected (A better way to demonstrate L&D's ROI, 2017; Alliger & Janak, 1989; Arthur et al., 2003; Bates, 2004; Galloway, 2005; Giancredi, Carugati & Sebastiano, 2010).

Kirkpatrick argued that information about the four-level outcomes is the most valuable and descriptive information one can obtain about a training initiative (Bates, 2004). Bates (2004) suggests this framework is popular with training professionals and their sponsors due to its potential for simplifying an otherwise complex process. It presents a straightforward guide to the type of questions and criteria which should be examined, reducing the measurement demands

and greatly reducing the number of variables to consider. Furthermore, it provides the necessary vocabulary for discussing criterion of training evaluation (Alliger & Janak, 1989).

As discussed in chapter one, researchers have however argued that there are limitations to the Katzell-Kirkpatrick framework. Bates (2004) and Brinkerhoff (2005) suggest that the framework does not consider whether possible influences in the workplace which could affect the performance were also targeted by a training initiative under evaluation. Bates (2004) also argues that the framework both fails to effectively address whether the training was effective and fails identify further avenues for improvement of the training. Maybe a training solution was well received, and the learners demonstrated the desired abilities immediately following training, but if they do not apply their new skills on the job, the Katzell-Kirkpatrick framework does not look at why that might be. For example, maybe the training solutions proposed do not have managerial support and learners did not get the necessary feedback. Furthermore, there is limited research supporting the assumption of causality and intercorrelation between each of the four steps in the model (Alliger & Janak, 1989; Srimannarayana, 2017). The assumption of causality supposes that each level is a direct result of the previous level, while the assumption of intercorrelation presumes that each level is clearly linked to a previous one (Alliger & Janak, 1989). To illustrate the issue with these assumptions, Cunningham (2007) puts forth a scenario where learners responded that they were unhappy with training in a satisfaction survey but successfully demonstrated the desired change in behavior when level 3 was evaluated.

Alternatives to the Katzell-Kirkpatrick Framework

As a response to this increasing criticism, researchers have suggested alternatives to the Katzell-Kirkpatrick framework.

One such approach is Phillips' (1996) five level ROI framework. This approach adds a fifth level, return on investment (ROI), to the four levels of the Katzell-Kirkpatrick framework. Return on investment compares the monetary benefits provided by the training initiative with the costs of designing, developing, and implementing it (Phillips, 1996; Tamkin et al., 2002; Williams & Nafukho, 2015). This requires that program results be converted to monetary value, which is not always easy for organizations to do. For example, project goals related to customer and employee job satisfaction are difficult to quantify financially, even though techniques do exist to do so (Phillips, 1996).

A second alternative approach to Katzell-Kirkpatrick is the Balanced Scorecard approach, proposed by Kaplan and Norton (1996), who note that although executives often believe they only need financial measures to lead their organizations, they actually need multiple measures (both financial and non-financial). The Balanced Score Card approach offers those additional measures. Specifically, it measures these four areas:

- Financial (performance measures which define the long-term objectives, such a profitability, of the organization)
- Customer (performance measures in the targeted market segments in which the organization competes, observing satisfaction, retention, new business, profitability and market share)
- Internal business process (a perspective where executives need to identify the critical areas in which the organization must excel in order for them to meet customer needs and satisfy shareholder expectations of excellent financial returns)
- Learning and growth (a perspective where the organization must identify the necessary infrastructure for long-term development and improvement).

Kaplan and Norton (1996) suggest that measuring these four areas provides a balanced picture of current performance. Doing so also identifies future performance drivers (Kaplan & Norton, 1996; Tamkin et al., 2002).

A third alternative approach to evaluating learning was proposed by Kraiger et al. (1993). This approach emphasises the linkages between training evaluation and learning outcomes (Tamkin et al., 2002). It distinguishes between three different types of learning outcomes; cognitive (related to the extent and type of knowledge and relationships among different knowledge elements), affective (encompassing attitudes, motivation and goals relevant to the training objectives of the program observed), and skill-based (including acquisition, compilation and automaticity) (Kraiger et al., 1993). By categorizing each type of learning objective, Kraiger and his colleagues propose a taxonomy that can be used to identify potential training evaluation methods (Salas & Cannon-Bowers, 2001; Kraiger et al., 1993; Tamkin et al. 2002). For example, if someone determined that the outcomes sought are affective, they might use self-reporting measures. Although proposed as an alternative to Katzell-Kirkpatrick, Kraiger et. al.'s approach might be better characterized as a tool for selecting an evaluation methodology.

A fourth alternative approach to the Katzell-Kirkpatrick framework is Swanson and Holton's results assessment system, which provides practitioners with a process for assessing learning, learner performance and perception of the training program. To achieve this, Swanson and Holton's approach suggests three domains of outcomes, with up to two results assessment alternatives in each category. These include performance (system and financial), learning (expertise and knowledge) and perception (participants and stakeholders) results. From these domains and assessment alternatives, the practitioner needs to determine which should be assessed (Swanson & Holton, 1999; Twitchell et al., 2000; Williams & Nafukho, 2015).

Brinkerhoff Success Case Method

A fifth proposed alternative to the Katzell-Kirkpatrick framework is Brinkerhoff's Success Case Method. The Success Case Method provides stories of the success of a training initiative, (Brinkerhoff, 2005; Williams & Nafukho, 2015). Unlike the Katzell-Kirkpatrick framework, the Success Case Method explores the factors that affect performance. It does not attempt to separate learning and performance but, instead, assumes that any evidence of the impact of training is the result of both training and performance factors (Brinkerhoff, 2003, 2005). Brinkerhoff (2003, 2005) explains that the Success Case Method assesses whether the training worked or not and searches for factors that affect performance. The intent is to help all stakeholders identify what worked, what results were achieved and what can be done to improve those results in the future. Because the factors addressed in the case study are specific to the training initiative under evaluation, the Success Case Method also manages to convey the impact of learning and its value in ways which organizational leaders find both believable and relatable.

The Success Case Method is structured in two parts. The first part focuses on identifying successful and unsuccessful learners who participated in the training initiative. This identification is often achieved through surveys, which can also allow for quantitative estimates of who reported using or not using the new skills (Brinkerhoff, 2003, 2005). The second part of the Success Case Method involves interviewing participants identified in the first part. The interview starts by determining whether the participant is a case of success or non-success. Then, the interviewer probes to understand and document the success.

Success cases are a specific example of case study research, which is used by researchers to understand what is happening in a system of people (Plano Clark & Creswell, 2015). Yin (2013) defines case study research as an "in-depth inquiry into a specific and complex

phenomenon (the 'case'), set within its real-world context (Yin, 2013, p.321). The case itself is described by Plano, Clark and Creswell (2015) as a system of people that is bounded by space and time. The case can either describe a single individual, several individuals (separately or as a group) or even a program, event or activity. The researcher carries out an in-depth exploration of the case in question to address a research problem (Plano Clark and Creswell, 2015). Yin (2013) argues that to properly understand a case, it should not be considered in isolation, but should instead examine the interactions between the case and its context.

In a case study, the researcher first needs to identify the case that will be the object of the study, making sure to explain how it is bound in time and space. To provide the in-depth understanding desired, the researcher needs to collect multiples sources of data to ensure that the complexity of the case is captured. These could include surveys, interviews, pictures, and similar types of data. Next, the data collected is analyzed to identify themes and patterns. Finally, the case needs to be presented in rich detail, followed by a presentation of the themes and an interpretation of the lessons learned (Plano Clark & Creswell, 2015).

Brinkerhoff's Success Case Method employs this case study research approach (Brinkerhoff, 2003, 2005). As with case study research, the Success Case Method identifies the case that will be the object of the study, such as the successful or non-successful participants of a program or training initiative, and how that program is bound in time and space (when, how long and where). Several sources of data are also be collected, such as surveys and interviews with key different stakeholders. From this information, in-depth, credible and verifiable stories of the documented effect of training on the organization can be provided along with an interpretation of the lessons learned, such as factors that enhance or impede the effect of training on business results (Brinkerhoff, 2003, 2005).

Although organizations generally recognize that evaluation is required to determine whether a training program achieved its goals and desired results, research suggests they rarely do so past satisfaction (Level 1) and learning (Level 2). This study attempts to do so by applying the Brinkerhoff Success Case Method to evaluate transfer of a technical training program employing a blended learning approach. The next chapter describes the methodology used for this study.

CHAPTER THREE: METHODOLOGY

This chapter explains the methodology used to answer these research questions:

Main question. To what extent does training transfer within an organization from a specialized, technical, blended training program, several months after the training initiative?

Supporting questions:

SQ 1. Which skills were mastered by learners and which were not?

SQ 2. How are learners applying new skills in the months following the training initiative?

SQ 3. What factors enable or impede transfer of the training?

SQ 4. If training transfers, how do stakeholders benefit from the training initiative?

Specifically, this chapter explains the choice of a research methodology, criteria for selecting a research site and participants, how the data was collected and analyzed, and how credibility was assured.

SELECTION OF A RESEARCH METHODOLOGY

As mentioned in Chapter 1, the purpose of this study is to not only assess a specialized training program, but to do so with a method that provides specific metrics on the performance of the program and the transfer of skills, as well as the conditions that led to that performance. The Katzell-Kirkpatrick framework for evaluating training programs, which dominates in training, does not meet those needs. As noted in the previous chapters, the Katzell-Kirkpatrick framework merely provides performance metrics such as satisfaction, extent of learning, and extent of transfer; it does not explore the factors that affected that performance.

By contrast, the Success Case Method (Brinkerhoff, 2003; 2005) provides both performance metrics for the training program and an explanation for that performance. It looks at the organizational context of the training, not just the training program itself. The goal of the Success Case Method is to first assess the performance of learners by tracking the extent to which they applied their new training on the job in a way which made a significant difference to the organization (who is using the skills, what is being used, how many people are using them?). The Success Case Method also assesses the organizational context in which training occurs, such as managerial support and feedback, to identify the factors that affected the training. In addition, the data collected should provide resources for effectively and compellingly communicating the impact of the training (Brinkerhoff, 2005). According to Brinkerhoff (2003; 2005), collecting data on Success Cases involves the following:

1. Planning the case study, which involves clarifying and understanding the goal of the study and ensuring that all the steps of the study are planned out to deliver the results promised.
2. Creating an impact model, which is a projection of what success would look like for the organization if the initiative studied were to be successful. Examples of factors included in an impact model include business goals, program objectives (what are the capabilities/skills it wishes to create), critical actions (what are the desired behaviors/applications) and key results (such as job application outcomes and performance objectives) (Brinkerhoff, 2003).
3. Developing a survey or some similar quantitative instrument to identify learners who succeeded in acquiring and transferring the skills and those who did not.

4. Interviewing both more and less successful learners to gather descriptive evidence of their performance and the factors that contributed to it.
5. Sharing the findings, conclusions and recommendations with the different stakeholders such as program owners, managers and participants through case study reports or a meeting to discuss the findings.

The Success Case Method collects richly detailed qualitative data about a small number of learners who participated in the training instead of just collecting quantitative data from all the learners (Brinkerhoff, 1983).

For these reasons, Brinkerhoff's qualitative Success Case Method (1983; 2003; 2005) was selected as the methodology for this study.

CRITERIA FOR SELECTING A RESEARCH SITE AND PARTICIPANTS

This section identifies the criteria that were used to first select a research site and training initiative to study, then explains how the participants from within that organization were selected.

Selecting a Research Site and Initiative

The primary requirement for selecting a site was an organization that offers a training program and that would allow for the evaluation of its transfer to the workplace using a methodology other than the Katzell-Kirkpatrick framework. Because of the importance of technical training to many employers, if it were possible, that organization would also permit the evaluation of a technical training program. The other requirement for a program is that it could not yet have been offered, which allows for evaluation that begins before the program starts and continues long after it has completed so that its transfer can be evaluated. Because of the researcher's own personal interest as an instructional designer in blended learning (the

integration of differing approaches, such as formal versus informal, in person versus online experiences and directed versus self-directed approaches (Rossett, 2019)), if the program also could have been in that format, that would have been ideal. Also ideal would be a program that focuses on developing new technical skills rather than updates to existing technical skills.

To recruit such an organization with a program like the one sought to evaluate, the researcher would approach the manager of a training group for an organization meeting the qualifications about their willingness to participate in this study. If they agreed, they would be asked to sign an organizational participation form. Furthermore, as stated in the organizational participation form, anonymity would be provided to the organization where the study was carried out. The organization would not be named, and no information would be reported that could identify it.

Because the researcher works full time as an instructional designer and is interested in the subject of training evaluation, it is possible that the research location could be the organization where he is employed. If so, certain safeguards would need to be put in place to ensure that the researcher is not in conflict of interest. The most significant safeguard is that the researcher could not play any role in the training program that would be the focus of this study: neither serving as the designer, developer nor instructor.

Selection of Participants

Once an organization agreed to participate in the study, the manager who served as the contact and the researcher would identify a technical training program teaching new, frequently used skills, and that is taught in a blended format, for evaluation.

Learners were selected to participate in the study through purposeful sampling, in which individuals are intentionally selected to participate in the study (Plano Clark & Creswell, 2015). For this study, participants had to work in the organization studied and be required to complete the technical training as part of their jobs. Participants were recruited as follows:

1. An email message to recruit participants was sent to the mailing list of every department that would be required to complete the training program under study. These departments were identified by the training manager who gave consent for the study. See Appendix A for a sample of the email message.
2. People who were willing to participate in the study sent a response indicating so.
3. Each participant was then assigned and emailed a participant ID number (the purpose of which was to maintain confidentiality), which would allow for them to be tracked throughout the study. In each of the surveys, the participants would be asked to identify themselves with their participant ID: not their name. The participant ID numbers and the participants to whom they were assigned were kept in a private file stored on a secure Microsoft OneDrive accessible only to the researcher.
4. Participants were provided with confidentiality throughout this study. Their managers were not made aware of who participated, they would not be named in any reports, and no information would be reported that could potentially identify them.
5. Each participant would be tracked throughout the several phases of data collection in this study.

Although every worker who responded positively to the recruitment email was included in the data collection, only those participants who responded to every survey were included in the analysis and report.

HOW DATA WAS COLLECTED

To provide for a complete perspective on the effectiveness of the training program, the Success Case Method suggests collecting data at several points in time—before the training and at several points in time over the months following the training—as well as several types of data about learners' reactions and achievement of the objectives, their performance on the job, and the insights of the learners and other stakeholders on issues that affected the training. This section details the methodology used for data collection activities: (1) a pre-training survey, (2,3,4) three follow up surveys, (5) interviews and (6) job performance data. Data collection activities were aligned with the impact model developed by the researcher prior to the elaboration of the survey and interview questions.

Pre-Training Survey

Data was collected one week before the training through a pre-training survey, the purpose of which was to collect a baseline for participants before their participation in the training initiative. Using a Likert scale set of questions, the survey collected data on the following: participants' level of comfort with the existing systems with which they work; earlier experiences with training initiatives in the organization; motivation to learn; confidence that support would be available after training; confidence in their ability to perform the new tasks covered in training (self-efficacy); and intention to use the new skills. The survey also gave participants the opportunity to share their thoughts regarding the upcoming training initiative or anything else they wanted the researcher to know. See Appendix B for the survey.

Data was collected as follows:

1. The survey was created in Microsoft Forms.

2. A link to the survey was then emailed to each of the participants by the researcher asking them to complete the survey before the start of their training. To preserve confidentiality, participants could not see the other recipients' names in the email message. Because most participants worked in a call center and time was not scheduled for this activity, they completed the survey between calls.
3. Before answering any questions, participants were asked to enter their assigned participant ID (and not their name) within the Microsoft Form.
4. The survey opened with an Information and Consent Form, in which participants indicated their willingness to participate in the survey. Participants who agreed to participate in the entire study clicked a check box indicating their participation, and that approval was recorded with the Microsoft Form. See Appendix C for a copy of the Information and Consent Form.

   Note: Participants were asked to complete an Information and Consent Form with each phase of this study. Only the responses of those participants who participated in all parts of the study were analyzed and reported.
5. Next, participants completed the survey online through the form in Microsoft Forms. (As a reminder, see Appendix B for the survey.)
6. When they completed the survey, participants received a message thanking them and confirming that their answers were transmitted. Each time a new survey was completed, the researcher also received an advisory email.
7. Between the time the survey was sent and the start of the training, all participants had at least a week to complete it.

Follow-up Surveys

Two weeks after the launch of their new work tools, participants were asked to complete a follow up survey. The purpose of this survey was to attempt to answer a key question identified by Brinkerhoff for his Success Case Method: "To what extent have you used your recent training in a way that you believe has made a significant difference to the business?" (Brinkerhoff, 2005, p.8).

Before the survey questions were created, the researcher created an impact model, which identified what success would look like for the organization. See Appendix D for a copy of this model.

Based on this model, questions were created that asked participants about:

- Skills they had or had not used since the training initiative
- Resources they used to help them perform the skills
- Extent to which they were able to use their new skills

The follow up surveys also gave participants the opportunity to share anything they wanted the researcher to know following the training initiative and their application of the new skills. See Appendix E for a copy of the survey.

In addition to being distributed two weeks after the launch of the system changes, participants completed the training, the same survey was sent at six and ten weeks following the implementation of the new work tools to track learners' perceptions of training transfer over time.

Each time, the survey was administered in the exact same manner as the pre-training survey. As noted earlier, participants completed an Information and Consent Form with each

phase of this study—and each time they completed a survey. Only the responses of those participants who participated in all parts of the study were analyzed and reported.

Each survey was open for two weeks**,** giving participants who were away from work time to complete the survey. Some participants were away on vacation for more than two weeks and missed one or more of the surveys; they were excluded from the data collected.

Interviews

By reviewing responses from participants who completed all the surveys and matching them to their participant ID keys, instances of successful and unsuccessful training transfer were identified. These participants would be solicited for the next part of the study: conducting interviews.

The interviews, carried out 12 weeks after the launch of the new system changes for which training was required, specifically explored why participants who self-identified as success cases felt they were successful.

The interview guide, available in Appendix F, is designed based on Brinkerhoff's (2005) "interview buckets," a means of interviewing success cases. The interview focuses on the following:

- What the learner used that worked?
- What results did they achieve?
- What good did achieving those results do?
- What helped them achieve success?
- What suggestions did they have to increase success of future training?

Although intentionally selecting successful cases does not allow generalization of the results to all participants of the training initiative, it does provide insights into whether the

training made a difference in the long-term and how. Brinkerhoff (1983) adds that this approach is also well-suited to identifying barriers and enablers to training transfer because it identifies the factors that impeded the work of even successful learners as well as the factors that they felt made them successful (Brinkerhoff, 1983).

In addition to successful learners, other key stakeholders were interviewed, including coaches, a manager and key staff, such as a lead training adviser. The purpose of the stakeholder interviews is to collect corroborating data regarding the participants' perceived performance and potential barriers and enablers during and after training. The same interview guide used for participants was also used for these other stakeholders. But the questions were asked from the perspective of the stakeholders interviewed. For example, if a question asked learners what helped them achieve success, the other stakeholders were asked what they believed helped the learners achieve success. Furthermore, as the other stakeholders were interviewed after the learners, the researcher was able to ask additional questions based on the learners' interview responses. As a reminder, see Appendix F for that interview guide.

Data was collected as follows:

1. After reviewing all the responses from participants who completed every survey (as identified by their participant ID key), possible success cases were identified.
2. The researcher sent a recruitment email to these participants using the email addresses in the master record. See Appendix G for the recruitment email.
3. Participants responded to the researcher that they agreed to be interviewed.
4. The researcher sent an Information and Consent Form by email to every participant who agreed to be interviewed. See Appendix H for a sample of the Information and Consent Form.

5. Interviews were scheduled with the participants and an invitation was sent via Microsoft Outlook. All interviews were conducted via Microsoft Teams.
6. At the start of every interview, participants were asked to confirm they had read the Information and Consent Form and gave their consent to be interviewed and audio recorded. Verbal consent was audio recorded at the start of every interview.
7. The researcher then conducted the interviews, which lasted between 15 and 25 minutes.
8. All interviews were audio recorded on the researcher's iPhone, which is password protected.
9. Once all interviews were completed, they were manually transcribed by the researcher.

Performance Data

Work performance data was identified prior to the implementation of the training initiative to corroborate the claims of performance improvement by participants who felt that they had successfully completed the training. For example, call centers collect call monitoring data such as the length of the call and other Key Performance Indicators (KPIs) such as the number of calls for expert support and the reasons for these calls.

The actual work performance measures that would be collected were identified by the project stakeholders (project managers, change management and managers) prior to the implementation of the training initiative. Prior to this study, an agreement was reached between the researcher and project stakeholders that reports of this data would be shared, as it is data that is generally collected by the organization and that they would have access to.

Unfortunately, despite the original plan to collect work performance data and the identification of metrics and KPIs to collect prior to the implementation of the system changes, it was not possible to do so for this study, as the organization ultimately did not collect specific

metrics and KPIs related to the skills covered by the training program under study. And, as a variation on the old saying, if it isn't recorded, it can't be reported.

HOW DATA WAS ANALYZED

This section describes how data collected by the researcher was handled, organized and analyzed.

Specifically, each source of data was separately analyzed. Surveys were analyzed as qualitative data rather than quantitative data. That is, the analysis focused on strength of patterns and deeper meanings of those patterns, rather than providing descriptive or inferential statistics. This is partly because of the small number of participants in the survey; just 22.

But this approach is mostly rooted in the methodology and its purpose; the Success Case Method looks for general indications of success and the reasons underlying it in the particular context rather than definitively demonstrating the effectiveness of a particular training program with the intention of using it as-is in other organizations.

Survey data was analyzed as follows:

1. Data from the Microsoft Forms were exported into a Microsoft Excel spreadsheet by the system. Doing so facilitated analysis not only overall but by participant ID and by overall responses to individual questions.
2. The data was only analyzed once all the surveys were collected and only responses from people who participated from all four surveys were analyzed.
3. Filters were added to each column, each of which corresponded to a different survey question. This allowed the researcher to easily categorize and group survey responses for each question. For example, it was possible to categorize the replies to see how many

participants used their new skills at least once in the 10 weeks following the implementation of the system changes.

4. Based on responses to all four surveys, participants were classified as either success cases or unsuccessful cases.
    - Criteria for being considered a success included the following:
        - Confirming the use of their new skills
        - Agreeing or strongly agreeing to their ability to use their new skills efficiently
        - Agreeing or strongly agreeing to being able to use their new skills without affecting the quality of customer experience.
    - Participants were not considered to have been successful cases if any one of the following criteria were met:
        - They did not use their new skills
        - They disagreed or strongly disagreed to being able to use their new skills efficiently
        - They disagreed or strongly disagreed to being able to use their new skills without affecting the quality of customer experience.
5. The participant IDs of the successful cases were noted, and the researcher went back to consult the private file stored on the secure Microsoft OneDrive to find the contact information of the successful participants.
6. As noted in the section detailing how the data was collected, the successful participants were then contacted, and interviews were scheduled.
7. The researcher further analyzed the results for all participants in the study.

- The pre-surveys were analyzed to look at participants' intention to transfer their new skills. Participants who indicated they agreed or strongly agreed to the statements "I will be able to perform my job as efficiently or better than before the training initiative," and "I will use the new skills I learned to perform my job" were considered to have greater self-efficacy and pre-training motivation to transfer their new skills than participants who were neutral or disagreed with the statements.
- In the three post-training surveys, the researcher looked at the frequency of application of the skills and the different resources they used to help them perform their job following the training initiative (online help or systems experts).

Working from the interview transcripts, the researcher:

1. Treated each interview transcript individually, reading through them a first time to highlight the main recurring themes and identify significant information.
2. Before reading a new interview transcript, the researcher read through the interview transcript a second time, creating open codes (the development of categories from the data collected) based on the interpretation of participants' responses to the interviewer (Plano Clark & Creswell, 2015).
3. The researcher then read a new interview transcript, assigning the codes that were created with the first transcript. Where the codes did not match up, new codes were created.
4. Steps 1-3 were then repeated for every interview transcript.
5. The codes and the line number from the interview transcript (where the associated quotes were found) were then entered into a Microsoft Excel spreadsheet.

6. This initial list of codes was then refined by combining codes that represented redundant ideas (for example, *practice helped* and *learned by trial and error* were grouped into one common code called *practice helps*).
7. From this list of refined codes, the researcher then developed themes (for example, *practice helps*, *used online help*, *simulations help* and *well supported* were all grouped into a common theme; *factors enabling transfer*).
8. Patterns underlying the refined codes were then identified, and characterized according to their strength:
    - Dominant, which apply to all participants.
    - Strong, which apply to half or more of the participants.
    - Weak, which apply to a third to just below a half of the participants.
    - Interesting, which applies to fewer than a third of the participants but more than one.

ASSURING CREDIBILITY AND TRUSTWORTHINESS

This section explains how the credibility and trustworthiness of the data was assured. Because the paradigm of this study is qualitative (even the survey data was interpreted as qualitative data rather than analyzed for trends), researcher bias poses the key challenge to the credibility and trustworthiness of the study. Researcher bias can occur when their values and opinions are allowed to distort the results of a study (Galdas, 2017). This study used three approaches to address researcher bias.

The first was a frame interview with a peer instructional designer to identify any potential biases and expectations which might be held by the researcher. The 25-minute frame interview

was recorded over the researcher's iPhone and was conducted after all the surveys were returned to the researcher, but before they were analyzed. The questions addressed the following:

1. What motivated you to study this topic?
2. What is your prior work experience with the topic; how to you feel about it and why?
3. What are your expectations when data collection begins and why?
4. What challenges do you expect when conducting the study and why?
5. What conclusions are you expecting to find? Why? How would you feel if you found something different?
6. How do you expect your reputation will be affected by this study?

Before analyzing the data collected from the surveys and interviewing the participants selected, the researcher listened to the frame interview to reflect on potential biases and assumptions which might have been revealed from the interview. These included the following:

- Not all participants will reply to all the surveys or agree to be interviewed
- A lot of learners won't remember what skills were covered in the training during the interviews or they will not be able to distinguish the training program studied from other training programs which might have overlapped the study
- Most participants will say they did not see any improvements with their everyday job performance
- Based on feedback for other training programs, some more senior participants might have a negative attitude towards training
- Some participants will comment on the gap in time between training and application or on change fatigue
- Most participants will self-identify as successful cases of transfer.

In light of these potential biases, the researcher was careful not to lead the participants interviewed.

The second method used to ensure credibility and trustworthiness was methodological triangulation, which uses multiple methods to study a single issue or problem, finding supporting evidence for the same phenomenon from different sources of data or individuals (Salkind, 2010). By drawing on multiple sources of information to corroborate a theme or pattern, the researcher increases the credibility of their findings because each source of information might compensate for the limitations of the other (Plano Clark & Creswell, 2015). This study involved several participants as well as other stakeholders, such as managers, coaches and other instructional designers, who could provide their own perspectives on the program and performance of learners. Participants were asked to provide self-assessments and recollections, which may or may not be accurate. These other stakeholders could provide additional assessments and perspectives.

A third method used to assure credibility and trustworthiness was auditing, in which a third-party researcher not involved in the study was asked to review the data collection, analysis and results of the study. The data, cleared of any identifying information, was shared with the auditor to examine along with the methodology and results. The auditor assessed whether the conclusions provided aligned with the actual data collected. This assured credibility by confirming whether there is agreement in the interpretation of the data (Plano Clark & Creswell, 2015). The third-party researcher was not familiar with the organization, the training initiative or the participants studied (Given, 2008).

CHAPTER FOUR: RESULTS

This chapter presents the results of the data analysis. It first describes the research site, training initiative and participants of the study. Next, this chapter describes participants' expectations for the training prior to the initiative. It then employs the results to answer each of the research questions, starting with the supporting questions and concluding with the main research question.

RESEARCH SITE, TRAINING INITIATIVE, AND PARTICIPANTS STUDIED

This section describes where the study was conducted, the training program covered by it, and the people who participated.

About the Organization

This project studied workers in a sales and client service department in one location of a large North American financial services provider. The provider has operations in several jurisdictions and is subject to regulation, as is typical in the financial services industry. The researcher contacted the training manager of a division of the organization and worked with them to identify a training initiative that both corresponded to the requirements of the study and occurred at a time when employee participation would not negatively impact customer experience (analysts predict how busy the call center will be in the coming months and schedule training, meetings and other activities in periods they expect will not be as busy so as to not impact customer call waiting times).

At the time of the study, the department participating in the study was in the middle of two major shifts. The first involved a gradual shift from their current system to an entirely new customer service system. This new system includes billing, customer profile, quote and policy information systems. The second shift involved the product line. New products were being

introduced to gradually expand the scope of their existing product line. These system and product changes had been occurring for the past two years. As many of the different stakeholders interviewed noted, this ongoing change has made workers feel that they face a near constant state of change. The manager also explained that new systems are often introduced while the pre-existing systems remain available for certain tasks, at least until all policies are renewed on the new systems, which can take over a year. Worse, workers feel that they are in endless training. Furthermore, the organization continued the introduction of new systems and products throughout the COVID-19 pandemic, when employees worked from home full-time.

High employee turnover was also an issue, with approximately 80% of call center agents having less than two years experience. This meant that many agents were still mastering their basic skills and that any further training was potentially adding more complexity to an already stressful situation, possibly intensifying the issues of change fatigue and high turnover.

About the Training Program Studied

The training program studied was part of a larger, ongoing "Simplification" program, which was intended to simplify the different procedures, processes and system interactions carried out by the agents**.** In practical terms, this meant the organization was making changes to the customer service system every couple of months since the new system was first deployed in 2018.

The purpose of the training program studied was to train employees on how to use a particular new function of the customer service system. After employees finished their training, they should have been able to add a manual form (a type of addendum to a policy that is not automatically added by the system and needs to be completed and added by an agent) in the

customer service system, written according to the client's needs. In support of this performance, the program covered these main learning objectives:

- Using the online help, recognize when to add a manual form
- Find the appropriate manual form in the customer service system
- Using the online help, recognize the information which needs to be added to a manual form
- Using the online help, apply the procedure to add a manual form in the customer service system

Because this training addresses skills for using a major software system, it is considered to be a technical training program.

The entire training program was supposed to take 30 minutes to an hour over a week. The program was offered in a blended format, which means that it used several formats to present the data, such as a manager led presentation, self-study e-learning, online help (a performance support system), and an optional virtual classroom session with a trainer. Specifically, the program worked like this:

1. Learners participated in a 10-minute manager led presentation providing a high-level description of the system changes.
2. Learners took a 20-minute self-study elearning module, which was created in Articulate Storyline 360® (registered trademark of Articulate Global Inc.). The elearning included theory, multiple choice questions, and a simulation practice with the new manual form procedures. The simulations allowed leaners to practice adding a manual form in the customer service system. These simulations were created using mock-up screenshots provided by the software development team before the system changes were implemented.

The designer used programmed-in sensitive zones (that is, hot spots on the screen, which would simulate the actual performance of the system). Whenever learners performed an unexpected task or action in the exercises, the system would provide them with corrective feedback.

Note: Although they received formal training on the system changes, learners did not have access to a training environment, which is a system in which learners could practice with the new system using practice data, rather than real customer data. Although training environments allow learners to explore and make mistakes, they prevent these mistakes from impacting actual customer data as learners become comfortable with the updated software. Unfortunately, because of the costs associated and the short time period to prepare the updated system and develop the associated documentation and training, no time was allocated to create such a training environment.

The scenarios and simulations included in the elearning module were chosen in part because they were thought to apply to all professionals using the system. But when learners worked with the system, they worked with a production—or functioning—system and the potential to change real customer records existed.

3. If they chose to, learners could participate in a 30-minute virtual classroom session with a coach for a question-and-answer period. Within the organization, coaches are responsible for supporting employees in their personal development after training, monitoring quality of calls, and occasionally, supporting small training initiatives. The instructional designer included a virtual classroom session to give participants the opportunity to ask for additional support if any of the new procedures were unclear to them. A coach was selected to facilitate these sessions because of their technical knowhow and ability to offer support.

4. An employee responsible for communications within the organization sent an integration survey to learners each Friday for the three weeks following the launch of the updated system. This was part of the project's landing strategy and was independent from this study. Their purpose was to evaluate whether participants were able to answer knowledge-based questions about the system changes in the weeks following the training. The results from these integration surveys were then grouped by team (every employee is in a team under a team manager) and communicated to the managers.
5. If any weak points were identified when analyzing the responses to the integration survey, managers were responsible for ensuring their employees got the necessary support. For example, if the results for a specific question indicated that employees on a particular team had difficulty with the associated skill, the manager might decide to ask a system expert to come and perform a demonstration for the employees.

As the scheduled elearning was nearing completion, mere days before the target date, it was determined that the system changes would not launch on time. As the training was initially scheduled to be "just in time," most learners had already completed their training by the time the training department was made aware of the change in implementation date. The company can only launch system changes on specific, pre-set days, which in this case meant the next window for launch was a month later than the initial target date. For employees, this meant that at least a month went by after their training without them having the opportunity to practice and apply their new skills. In an attempt to address this gap, the week before the system changes were implemented, some managers asked for system experts to come to their weekly team meetings the week prior to the system implementation to remind their employees of the major changes.

Participants

This study had two types of participants: those who only completed the training and surveys, and those who also participated in the interviews. This section describes both.

Participants Who Completed the Training and the Surveys. In the scope of this study, the training was given to approximately 137 employees. Of those, 45 employees initially agreed to participate in the study. As noted in the Methodology chapter, only those employees who completed the training in its entirety and responded to all four surveys were included in the study. That left 22 participants. The drop in participation from those who agreed to participate to those who dropped out might have resulted from the fact that the training occurred during the summer of 2020, in a period where many employees were on vacation, and exacerbated by the delay of the launch of the changes.

Of those participants, they represented four roles:

- Call Center Agents respond to customers' telephone inquiries, offer quotes and sell financial services for small businesses. They also apply modifications and cancellations to existing policies. Call Center Agents use the customer service system to create new customer files, offer quotes, create new policies and manage existing policies. These actions may require the use of manual forms.
- Regional Development Managers handle larger commercial accounts. They are expected to establish and maintain a network of contacts and influence as part of a strategy to identify prospects, find new opportunities and, ultimately, land new customers (and business) for the organization. Regional Development Managers use the system to carry out the same tasks as Call Center Agents but can also rely on Renewal Agents for some support with modifications.

- Renewal Agents primarily handle the renewal of existing policies, but also assist Regional Development Managers with serving their major accounts by providing those accounts with information about modifications and updates to their policies and addressing customer retention and cancellations. They generally do not provide pricing and customer quotations but might be called on to set up new policies. Renewal Agents use the system to update customer information and modify existing policies. Although it is not as common for them as Call Center Agents and Regional Development Managers, they are occasionally called upon to perform tasks that require them to manage manual forms.
- Underwriters offer immediate phone support in the analysis and evaluation of risks associated with policies the organization is considering opening and, when required, can name the conditions for accepting risks, should they exist. Underwriters use the system to consult customer files and manage tasks assigned to them by Call Center Agents, Regional Development Managers and Renewal Agents. These tasks might require the creation or modification of manual forms.

Table 1 shows who participated in the study; organized by their role within the organization.

Table 1

Breakdown of Participation by Role

Participant Role	**Responded positively to the recruitment email**	**Responded to all surveys**
Call Center Agents	14	7
Regional Development Managers	9	3
Renewal Agents	10	5
Underwriters	11	7

Participants in the Interviews. Two groups of people were interviewed for this study. The first group came from the learners of the training initiative. From the pool of 22 participants who answered all four surveys, success cases were identified to interview. As detailed in the Methodology, participants were identified as success cases based on their answers to the post-training survey question; more specifically, the Likert scale questions asking them to rate how they agreed with the statements that they could use their new skills efficiently and that that could handle their new tasks without affecting the quality of the customer experience. Because all participants who responded to all four surveys indicated they either agreed or strongly agreed, none self-identified as non-success case. Four survey participants indicated they had not had the opportunity to apply their new skills. Out of all the successful participants identified (of various roles), eight agreed to be interviewed. Of those, two were also project ambassadors: employees who become involved early in the systems project team to become system experts. They learn how to manage the new system changes and provide support to their colleagues after a new system or changes to an existing system are launched. These ambassadors would provide a dual perspective: both as learners and as post training support for their colleagues.

Along with the learners, the other group of people interviewed for this study were stakeholders who had an interest in the success of the training initiative. These stakeholders offered an external perspective, and their responses could contribute to triangulation of the data. These other stakeholders included:

- A Call Center Agents' manager, whose interest in the success of the training was to ensure her employees had the necessary support and were able to apply their new skills on the job with little to no impact on customer service, which can impact the organization's revenue.

- Two coaches, who are also responsible for performing quality assurance on employee calls and customer interactions. One of the coaches was also responsible for supporting the voluntary question and answer period described earlier. The coaches' interest in the success of the training was directly associated to their responsibilities, which is to support frontline employees in their tasks and customer interactions.
- The Lead Training Advisor, who performed the needs analysis that determined why this program was needed and its requirements, and developed the general training strategy, was also interviewed to get her perspective and to discuss potential challenges with learning transfer.
- Note that an external instructional design consultant regularly hired by the department prepared the instructional materials used in the program rather than the Lead Training Advisor. This person was not interviewed.

Table 2 presents a list of all the people interviewed.

Table 2

Breakdown of Interviewees

Participant Role	**Agreed to be interviewed**
Call Center Agent	4
Regional Development Manager	1
Renewal Agents	1
Underwriter	2
Coach	2
Manager	1
Lead Training Advisor	1

Expectations Regarding Transfer Prior to the Training Initiative

The pre-training survey, sent out two weeks before the training initiative to all the study participants, asked about their expectations regarding the training and the transfer of the skills

developed through it. The survey included three questions requiring a Likert scale response, regarding their intention to use the skills learned, their perception that the necessary resources will be available to help them apply the skills learned (such as online help and the availability of people to answer questions), their perception that, after the training, they, the learners, will be able to perform their work as well, if not better, than before the training.

All 22 participants who responded to all four surveys, indicated they intended to use the new skills they would be learning in training, with the majority strongly agreeing. Table 3 shows the responses of these 22 participants.

Table 3

Response to Question About the Intention to Use New Skills (by the 22 participants surveyed)

Q1. "I intend to use the new skills I will be learning in the "June Simplification" training initiative"

Participant Role	**Strongly disagree**	**Disagree**	**Neutral**	**Agree**	**Strongly agree**
Call Center Agents	-	-	-	14%	86%
Regional Development Managers	-	-	-	33%	67%
Renewal Agents	-	-	-	20%	80%
Underwriting	-	-	-	-	100%

But participants felt somewhat less confident that they would have the support needed to transfer the skills and that they would be able to perform their work as well if not better. Table 4 summarizes the results to those questions.

Table 4

Response to Questions About the Support and Post-Training Performance (by the 22 participants surveyed)

Q2. "The necessary resources will be available to help me apply the skills I will be learning in training (Help tool, ambassadors, coaches, etc.)"

Participant Role	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Call Center Agents	-	-	-	14%	86%
Regional Development Managers	-	-	-	33%	67%
Renewal Agents	-	-	-	20%	80%
Underwriting	-	-	14%	-	86%

Q3. "I will be able to perform my work as well, if not better, than before the June Simplification training initiative"

Participant Role	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Call Center Agents	-	-	14%	-	86%
Regional Development Managers	-	-	-	67%	33%
Renewal Agents	-	-		60%	40%
Underwriting	-	-		57%	43%

The pre-training survey also included open-ended questions asking participants whether they had any expectations for the training and whether they wanted to share anything with the researcher prior to training. Most participants chose not to share any expectations, but among those who did, here is a sampling of their replies:

Renewal Agent #1: "I would like to see all topics included in the June simplification delivery."

Note: The training program was called June Simplification.

Call Center Agent #1: "I want exercises during training to master the content (short multiple-choice questionnaire)."

Underwriter #1: "I would like the documentation to be easily accessible. During training, we don't assimilate 100% of skills, but with the documentation in hand, we can refer back to it every time we need to."

Regional Development Manager #1: "Small groups of four people maximum (for the virtual classes where participants get to ask questions and get additional support following the elearning) would be ideal to allow participants to ask questions and to optimize exchanges."

Even though there were no strong trends in the information shared by the survey participants, for the second open question, an interesting pattern (noted by two or more participants but fewer than one-third) arose regarding the many recent changes to their client interfacing system and departments.

Renewal Agent #2: "There have been a lot of changes in a short lapse of time. For three years, we've been talking about the system and it's been constantly 'improved' or modified or simplified. A lot of work tools have been modified… or added… without mentioning the "Client View" delivery that has been postponed because of COVID and we have another big delivery coming up with the [upcoming] project…"

Note: An upcoming 2021 project will require employees start using another, slightly different, customer service system for some types of policies.

Underwriter #2: "There have been a lot of changes recently. It takes us a bit more energy and validation before completing a transaction…"

Two participants, also an interesting pattern, felt the need to share that they generally do not find the "Simplification" training initiatives to be useful for them.

Regional Development Manager #2: "Normally, I find the training for the new deliveries aren't very useful. I find that there is a lot of energy invested for these trainings that is often unnecessary."

Renewal Agent #3: "Generally, the new procedures following a Simplification don't apply much to my work as they are often aimed at new quotes, even though I work with renewals."

ANSWERS TO THE SUPPORTING RESEARCH QUESTIONS

This section provides responses to four of the supporting research questions:

SQ 1. Which skills were mastered by learners and which were not?

SQ 2. How are learners applying new skills in the months following the training initiative?

SQ 3. What factors enable or impede transfer of the training?

SQ 4. If training transfers, how do stakeholders benefit from the training initiative?

The response to each question begins by presenting the data from the surveys and interviews that was collected to address it and then suggests a response that is based on that data.

Response to SQ1. Which skills were mastered by learners and which were not?

If training transfer can be defined as the degree to which learners apply the skills learned during a training initiative in the workplace (Baldwin & Ford, 1988), it is reasonable to ask which skills were mastered by the learners. Data from the surveys and interviews with participants and stakeholders provides insights into which skills were mastered and which were not in the months following training.

Data from Participants. As the training encouraged participants to use their online help to find the procedures required to apply their new skills (participants work with two screens; their training encourages them to place the customer service system on one screen and their online help on the other screen so that they can follow the procedures therein), using their online help

was in and of itself a skill which participants were expected to master. The post-training survey questions, administered two, six, and ten weeks after the system was implemented, included a question asking participants whether they needed to refer to any additional support to apply a new skill, and if so, what resources were consulted. Their responses suggest that more than half of participants, 14 of the 22, needed to seek help with certain skills at some point following training. When more closely examined, the data indicates that all 14 participants reported using the online help for support to either determine whether a manual form was required, to find the appropriate manual form in the system, or to determine what information was required to complete the manual form.

The participant interviews support these findings and provide further insights into which skills were mastered by participants. All eight participants interviewed mentioned using online help to find answers and procedures necessary to the application of their new skills. Furthermore, every participant interviewed claimed to be able to apply the skills taught in training in the weeks and months following the training initiative. Despite this assertion, some participants did report difficulties with some skills. One of the participants reported having trouble determining when it was necessary to offer a manual form.

> **Call Center Agent #4:** "Sometimes, we always ask ourselves the question, for [manual] forms, 'when do I need to offer it?' or 'is it really necessary?'… So, it's more in that regard, I'll call my ambassador to be sure whether it's necessary or not."

Supporting this finding, one of the underwriters interviewed reported agents were sometimes referring manual form tasks to him that they should not have referred.

> **Underwriter #4:** "[agents] don't seem to understand to put the right title as such; who it's addressed to. So often, we realise that they added [the manual form] and then I see a

task go by that I normally shouldn't see, because for [this category of client], it's something which should automatically be… well, it shouldn't come through us."

Data from Other Stakeholders. The data from the other stakeholders both provides an alternative perspective and supports some of the data reported by the participants.

When asked whether her colleagues needed help with any of their new skills, the renewal agent ambassador explained that "[renewal agents] asked a lot of questions at the start, [and] it supercharged my workload…". This was interesting, because in their surveys, most of the renewal agents reported that they did not apply their new skills at all. The ambassador explained that renewal agents did not initially understand that when completing manual forms, "their text, which was pre-filled and had previously been available in a small procedure on the side, meant that now they couldn't write it as is and that the text was already pushed by the system." It was necessary to remind her colleagues on a regular basis that the texts were now different and that this was normal. She had clarified this to the Renewal Agents in a group meeting prior to the training initiative, but the ambassador suggests that "it's this little bit there that was maybe forgotten when [renewal agents] got back on the job." When asked whether this concept was covered in the e-Learning, the ambassador replied that it was not.

The coaches interviewed were unable to formally assess how well the agents were handling the system changes in the weeks and months following the training initiative. As part of their responsibilities, each coach is required to listen to three calls for each Call Center Agent every month. One coach specified that they never observed anyone using the new skills requiring a manual form, when monitoring calls. "It's not something [Call Center Agents] have to do on a regular basis – adding manual forms." The other coach added: "Manual forms, let's be honest, we don't have those in every case, so it's not a big proportion [of calls]." Because they did not

have the chance to observe situations in which learners would need to find manual forms, it was impossible for them to ascertain whether the new skills were being correctly applied on the job. However, neither one of the coaches received any negative comments or requests for assistance from learners, ambassadors or managers, which one coach believed was an indication that at the very least, no additional support was required by learners.

The interview with the Call Center Agent Manager similarly did not provide any new insights. It did however offer some supporting evidence to findings from the participant interviews. Although she was not directly involved in supporting her agents, the Manager offered anecdotal evidence, explaining that from what she heard, they "needed to break the ice once or twice," but overall, "it was very easy for them" to apply their new skills on the job following the implementation of the system changes.

Response to the Research Question. The data suggest that although learners generally mastered their new technical skills on the job in the months following the training by seeking support when required, not all skills were mastered equally. Through the surveys, 14 participants reported the use of their online help to support them in the application of their new skills, which was itself a skill encouraged in training. Furthermore, through the interviews, all participants indicated they could apply their new skills successfully in the months following the training. However, one participant reported having trouble determining when some manual forms were required, which is not an interesting pattern in and of itself, but his account was supported by an Underwriter who reported getting tasks for manual forms which should not have been escalated to him. Similarly, the Renewal Agent Ambassador suggested that she got several calls from her colleagues asking for confirmation as to what information needed to be completed in their

manual forms. These findings suggest that while most participants reported successfully applying their new skills, some of these skills were not mastered equally.

Although coaches were unable to support the participants' self-reported mastery of the skills taught in training, they did suggest that had additional support been required for learners to master their new skills, they believe they would quickly have been solicited. Furthermore, the Manager added that from what she heard from her agents and ambassadors, applying the new skills on the job was easy for them following the system change implementation.

Response to SQ2. How are learners applying new skills in the months following the training initiative?

A key characteristic of the successful transfer of training is the extent to which learners apply their new skills on the job (Baldwin & Ford, 1988), including whether they are using their new skills, the frequency of use, and the tools used to support themselves in the application of these skills. The new skills taught in the training program involved determining the need for, correctly selecting, and completing the appropriate manual form when completing a price quote or modification to an existing policy for a customer. Data from the surveys and interviews with participants and stakeholders provides insights into the extent to which learners applied these new technical skills learned in training.

Data from Participants. The post-training surveys suggest that most participants believed they had applied their new skills on the job and that pattern generally remained steady or even strengthened over the ten weeks in which the three surveys were sent. When asked whether they had the opportunity to use one of the technical skills shown in training on the job, 18 of the 22 participants who responded to all four surveys, or 82%, reported using their new skills at least once by the tenth week following the implementation of the system changes. Of the four

participants who reported having never used their new skills on the job, three were renewal agents, which amounts to 60% of all renewal agents participating in the study. Table 5 summarizes the percentage of participants, by role, who reported using their new skills in each follow up survey.

Table 5

Percentage of Participants Who Reported Applying Their New Skills

Participant Role	2 weeks post-implementation	6 weeks post-implementation	10 weeks post-implementation
Call Center Agents	71%	86%	100%
Regional Development Managers	67%	67%	67%
Renewal Agent	20%	40%	20%
Underwriting	100%	86%	86%

Responses to individual questions in the surveys provide additional insight to the responses. In response to an open-ended question asking to elaborate why they had not applied their new skills, there was a strong pattern among renewal agents (all but one participant) explaining that they were assigned only to renewals at the time the system changes were implemented. The new tasks require use of manual forms and these are generally not required when handling renewals.

Another question in the follow-up surveys asked participants whether they used any resources to aid them in the application their new skills and if so, to name them. As previously described, of the 22 participants, there was a strong pattern of 14 participants who indicated using their online help. By contrast, only two of the 22 participants, an interesting pattern, reported consulting the ambassadors or underwriters. Note that part of the Underwriters' role is to support other employees with risk analysis and underwriting rules which might determine whether a manual form were required.

The interviews with participants tell a similar story to the survey data. All eight participants interviewed reported having had the opportunity to apply their skills more than once in the months following the training initiative. Frequency of use seems to depend somewhat on the role of the participant. Although there was a strong pattern among Call Center Agents and Underwriters indicating they used their new skills at least a couple of times a week, the Regional Development Manager and Renewal Agent interviewed reported using these new skills less frequently, such as once or twice over the span of the study.

Although most participants felt they were using their new skills, the interviews with participants also revealed a weak pattern in how the skills were used; three participants described using their new skills to search for manual forms in the system:

> **Call Center Agent #4:** "We can complete searches many different ways to find [manual] forms; either by number or by type of form…"
>
> **Call Center Agent #6:** "…yes, there's the drop-down menu, but if it goes too fast or jumps pages, sometimes the [manual form] numbers go by too fast, so with CTRL-F, I find my form number right away."
>
> **Renewal Agent #1:** "… I gave either the trick to search by [manual] form number and not by the name, which often we weren't writing correctly, or too long for Help. But with the form number, it [went] really well."

Because finding and selecting a manual form was one of the objectives of the training, this pattern suggests that the training transferred.

All eight participants (a dominant pattern) also reported relying on procedures and information in their online help to apply the new skills.

Regional Development Manager #3: "With the [online help], I was able to really, well, finally, put together my file before having to call…"

Call Center Agent #4: "I always use [the online help] a little bit at the same time to make sure I'm completing [the manual form] the right way…"

Call Center Agent #6: "I refer to [the online help] to… to see if there was a premium or was there no premium, was there no deductible… that stuff I can't remember by heart; I have other things to remember."

By using the online help to assist them in the application of their new, relatively low frequency skills, participants were more autonomous and needed less support from coaches, ambassadors or their managers.

Data from Other Stakeholders. The interviews with stakeholders provide an alternate perspective on the use of the new skills on the job. The coaches failed to corroborate that participants used the new skills in the months following the training. In fact, both coaches interviewed had difficulty answering the question about use of the skills on the job.

By contrast, the Call Center Agent Manager reported that she observed that applying the new skills was easy for participants—except on the day the system changes were implemented.

Manager: "On the day of the implementation, they completely lost their bearings because they're used to the routine of their transactions from day to day, always the same way, and then we changed the functionality and then [they went] like, 'OK, I don't remember anymore.' You know, we're all human and we forget quickly."

Despite this slower start, the Manager reported that "… it went very smoothly. It was done very easily."

Their ambassador agreed with the Renewal Agents who responded to the surveys that they rarely, if ever, had to apply their new skills on the job. The ambassador noted that manual forms do not apply to renewals, which is a large part of the workload of Renewal Agents. However, she argued that some of the system changes covered in training do apply to other tasks performed by Renewal Agents, such as saving a form, which was covered in the elearning: "…in the training, we talked about how it is important to click twice to save, because otherwise the form isn't saved. I keep getting that question; that applies to everyone, whether you're in a renewal or not." It was in situations like these that Renewal Agents were, in the ambassador's words, "destabilized because they didn't expect it." She suggested, however, that one of the reasons the Renewal Agents might not have transferred the learning is that the training did not cover situations specific to their job. Including scenarios that were personalised to their role might have helped the Renewal Agents better understand how the changes applied to them when they were back on the job. The scenarios in the training program were not personalized by role; Renewal Agents are a small part of the total number of learners.

Response to the Research Question. The data suggest that learners generally applied their new technical skills on the job in the months following the training by successfully finding, selecting and completing manual forms on the job when required. Through the interviews, three participants explicitly described how they searched for the correct manual form, which indicates some transfer of their new skills.

However, the participants were more likely to feel that they applied the skills than the other stakeholders. The Manager believed training transferred occurred, but had not directly observed people practicing the skill. Coaches could not confirm these findings at all, suggesting that learners and coaches have different perspectives on the extent to which the new skills were

applied on the job. This might however be explained by the relatively low frequency of application of these new skills, which made it more unlikely for coaches to observe these activities.

Response to SQ3. What factors enable or impede transfer of the training?

One of the goals of interviewing self-reported success cases is to identify barriers and enablers to training transfer (Brinkerhoff, 1983). Identifying these barriers and enablers can help organizations improve training. Data from the surveys, and interviews with participants and stakeholders provides insights into what factors either enabled or impeded transfer on the job in the months following training.

Data from Participants. The post-training surveys revealed a potential barrier to training transfer, in which six of the 22 participants, or 27%, voluntarily reported in the open questions that they were on vacation in at least one of the three post-training surveys. These learners therefore did not have the opportunity to practice their new skills for two to three weeks in the months following the training intervention. In some cases, the vacations occurred immediately after the implementation of the system changes. Another weak pattern potentially supporting this barrier was that four of the 22 participants voluntarily responded that they did not remember the skills developed in training.

The participant interviews provided further insight into potential enablers and barriers to training transfer. As previously discussed, all eight participants reported applying their new skills in the system by relying on procedures and information obtained from their online help. Underwriter #4 explained that they "relied a lot on the [online help], which is a rather good guide, because at the start, we're not too sure if [the form] is automated or not… but with the

[online help], we look at the form number and the procedure to apply indicated is rather simple…"

Six of the eight participants, a strong pattern, also discussed the beneficial role played by practice during and after the training initiative. Call Center Agent #3 explained that "by practicing, we eventually get used to [the system changes]" and Underwriter #4 added that he will "… play in the system and try and if it doesn't work, it doesn't work, and [he will] try again." Renewal Agent #1 added that for her, the practice with the simulations in the training was helpful and that "there were a lot [of practice simulations]… you know, often we need redundancy to be able to create sense in our heads and remember. So, the fact that we had a lot [of practice] in training, well, I found that helpful."

Finally, another strong pattern was revealed in the interview data, with half of the participants who were not ambassadors mentioning that they were supported by their ambassadors:

> **Call Center Agent #4:** "… I'll call my ambassador to see whether it's necessary or not…"
>
> **Call Center Agent #5:** "… because when I followed the procedure in the [online help], I don't know what I didn't do right, but I wasn't able to save my [manual] form, and when I had the ambassador on the line, we did it together and then it worked…"

Although this ambassador support initially helped participants apply new skills in the weeks following the training initiative, the ambassadors did report that the number of calls for support with manual forms diminished rapidly as time progressed.

The interviews with participants also revealed factors which could prove to be potential barriers to training transfer. Although practice was initially discussed as an enabler, some

participants mentioned how insufficient practice in the early period following the training initiative was an issue. Three of the eight participants, a weak trend, believed that the overlap between training and summer vacation was a potential barrier to transfer.

> **Call Center Agent #3:** "… the June/July [Simplification delivery] was more difficult. In fact, we were right in the vacation period; some people didn't even have a refresh and came back from vacation and then they were lost in all that. Hmm… maybe not the best time to do that."
>
> **Renewal Agent #1:** "… vacation had an impact. The moment when [the changes] were implemented, where we had a lot of people on vacation… when we leave on vacation, we forget a little bit what happened."

Another issue that impacted learners' ability to practice their new skills in the weeks following their training was an unexpected gap between training and the implementation of the system changes. That happened because the launch of the updates addressed by the training was delayed by a month, which meant participants went weeks without practicing their new skills. Although the researcher questioned the participants about their perception of the impact of this gap in every interview, only three of the eight participants, a weak pattern, believed that the lag time was a problem.

> **Call Center Agent #5:** "… for sure there's an impact when there's a delay between training, so maybe yes, if I'd had my training just before, maybe I wouldn't have needed to call an ambassador the first time…"

The remaining five participants, a stronger pattern, expressed their belief that the gap did not impact their learning transfer. The fact that training was not offered "just in time" will be further discussed in the interviews with the other stakeholders.

Another interesting pattern discussed by two participants in their interviews was the number of recent changes and other training initiatives, which overlapped with the "June Simplification" training initiative covered by this study. Call Center Agent #3 suggested that "…it gets confusing when everything comes in at the same time!" This impression is known as change fatigue, which can be defined as an impression that there is too much change taking place (Bernerth, Walker & Harris, 2011). Change fatigue has been described as causing stress, exhaustion, burnout and feelings of powerlessness (McMillan & Perron, 2020), which could all negatively impact training transfer.

Data from Other Stakeholders. The interviews with the other stakeholders provide an alternative perspective on the barriers and enablers to training transfer discussed in the participant interviews. In their interviews, the two coaches provide further insight into learners' use of their online help, the delay between training and the implementation of the system changes and change fatigue.

In contrast to the participants' reported use of online help, one of the coaches observed that in her experience, agents prefer being told what to do over finding the procedure for themselves.

> **Coach #2:** "For everything that is new, the agents generally prefer being told [what to do]. Let's imagine that it happens, 'I don't remember how to do it,' they'll call for help. Maybe eventually the [online help] will become their reflex, but currently, we have an issue with agents… it's not everyone who looks in the [online help] before calling their ambassador or Underwriter [for support]."

As for the potential barrier of the delay between the training initiative and the implementation of the system changes, Coach #2 agreed with the five participants who did not believe the gap impacted their learning transfer.

Coach #2: "For sure, [just in time training] is never a bad thing! However, the advantage of elearning versus a [synchronous] virtual class is that if the learner asks themselves 'hey, wait a minute, how do we do that?' it's possible to [go back] and consult the elearning."

Regarding the question of change fatigue, one of the coaches agreed with the participants, suggesting she herself may also be suffering from it.

Coach #2: "Everything we change brings added complexity for the agent…" "Currently we're living a… I believe it's a mountain of training. I'm also an agent with experience. I'm going to talk about myself as a learner, because I am also a learner who needs to put this into application and because I need to show agents how to do it afterwards. It's too much information all at once. You know, to put into application things like this, as fast as this and this much at the same time, you end up forgetting some things. I believe we have a capacity for retention as humans, so it's clear that it has an impact... I need to admit that I'm not sure I'm following at all. When accompanying [an agent], I need to search a lot. I'm always going to the [online help] to try and find information. Often, I find it, but other times, more or less… so it's not easy."

The interview with the Call Center Agent Manager mostly supported the list of enablers and barriers identified by participants, including their use of online help, the importance of practice, the ambassadors, and finally change fatigue. However, she also brought up the lack of practice in a training environment, a potential barrier to training transfer only discussed by one of the participants.

As did the participants, the Call Center Agent Manager cited the online help as a factor supporting their learning transfer:

Manager: "everything is in the [online help]. As soon as there is an implementation, on top of training, there is a connection with the [online help] and there is someone who gets in touch with [the people responsible for the online help] so that everything is there on D-day. So [learners] are super well supported."

The Call Center Agent Manager also suggested practice was beneficial to training transfer: "Over time, depending on the cases they have, they'll grow with the use [of the new system]. So, from what I hear, it was easy, but you have to break the ice once or twice." She also agreed with agents that their ambassadors were a key factor enabling transfer.

Manager: "We're lucky to have ambassadors on each of our teams, so if there were occasionally [agents] who hesitated, to make sure that it was ok, they consulted their ambassador."

Concerning potential barriers to training transfer, employee change fatigue was also discussed with the Manager, who admitted that "the saturation of our people is indeed currently at its maximum." However, she suggests that it is not all her employees who are feeling overwhelmed and that she expects them to keep her informed if it is all becoming too much for them.

Manager: "I have some who are not saturated at all, at all, and others who are… so I, on my end, if I hear that someone is saturated, they have to tell me, and regularly, we go take their pulse on this topic."

The Manager discussed another potential barrier that was only brought up by one of the eight participants: the lack of application in a true training environment during training.

Manager: "We don't have a real system; we don't have practice in the real system, and we don't do it in the real system, so for us, on D-day, when it's deployed, [they are]

> really like deer in the headlights who have lost their bearings, because they haven't done it in the real system…"

Although practice in the weeks following the implementation of the system eventually overcomes the initial "deer in the headlights" reaction, the Manager suggests that practicing in a training environment during the training initiative could greatly improve, and hasten, training transfer for the learners.

An interview with the Lead Training Advisor also corroborated some of the barriers discussed by some of the participants. When asked about potential challenges to learning transfer, the lead advisor brought up both the month-long delay before the implementation of the system changes and the overlap with employees' summer vacation.

> **Lead Training Advisor:** "Just the fact that the date was postponed. So obviously, you're not training just in time. That could have an impact. The other thing is that, you know, it's June, July; it's vacation period."

She also brought up the issue of change fatigue, with overlapping training initiatives and a new target business model which would change the roles, responsibilities and management for some employees. To quote the Lead Advisor, "when you have multiple projects being deployed and activated at the same time… and it is competing topics, it obviously creates cognitive overload." She added that some employees were probably overwhelmed with the constant state of change in the organization over the previous couple of years.

> **Lead Training Advisor:** "There are so many changes, you know! There are so many changes. And I mean, at some point, you can only get tired, you can have the greatest motivation, and you could be like, super, you know, super interested and engaged. But I

mean, when it's one change after another change, after another change… it cannot not impact transfer. It cannot."

Response to the Research Question. Numerous enablers and barriers to training transfer can be identified from the data. Although all eight interviewed participants mentioned consulting online help was beneficial, six of the eight also mentioned the benefits of practice and half of the non-ambassador participants (three of six) mentioned consulting their ambassadors for support. Conversely, three participants interviewed mentioned the overlap with summer vacation was an issue, three mentioned the issue of the gap between training and application, and two brought up change fatigue. These enablers and barriers are summarized in Table 6.

Table 6

Potential Enablers and Barriers to Training Transfer

Enablers	Barriers
• Online help • Practice • Ambassadors	• Overlap with summer vacation • Training was not "just in time" • Change fatigue • Lack of a training environment

Although the interviews with coaches corroborated learners' reports of change fatigue, things were murkier when discussing issues with "just in time" training and the use of the online help, again suggesting that there were differing opinions among individual participants and coaches.

Interviews with the Call Center Agent Manager and Lead Training Advisor were more clearly aligned with the participant interviews, although the Manager brought up another interesting issue, the lack of a training environment. When prompted to discuss the issues related to the creation of a training environment (such as development time or cost), she suggested that it might be possible to give agents access to the new version of the system the week before the "switch" is turned on and the system changes are implemented for all files, giving them the

opportunity to start practicing before having to interact with any clients. The feasibility of this idea would need to be discussed with the project management and development teams involved in the implementation of these system changes.

Response to SQ4. If training transfers, how do stakeholders benefit from the training initiative?

Although the approach used in this study did not measure return on investment, it did attempt to identify tangible benefits of the training initiative for the different stakeholders, including the employees, the organization and its clients. Data from the surveys and interviews with participants and other stakeholders provide insights into the possible benefits of both the training and the system changes.

Data from Participants. Although the survey data collected did not reveal any potential benefits for the different stakeholders, the participant interviews reveal several. A strong majority of participants, six out of eight, mentioned faster treatment times on calls involving manual forms following the initiative.

> **Call Center Agent #3:** "For sure it's simpler to fill out; indeed, we have an advantage, a gain of time there."
>
> **Call Center Agent #4:** "… the pace, it's more there [that we have an advantage], we don't need to refer [for help] because we can't find something. It's especially the speed, going faster in our approach at that moment."

Reasons given for this improved treatment time varied, with some participants crediting fewer and simpler fields to complete, and others citing the fact they needed less support from underwriters and ambassadors. Another potential benefit which can be extrapolated from this

decreased need for support is that of greater personal autonomy for learners following the training and system changes.

When interviewed, three of the eight participants, a weak pattern, also mentioned making fewer mistakes.

> **Underwriter #3:** "… and fewer mistakes, in that for every [manual] form, we're told where to put it, its limitations, everything… and I don't remember all the options, but I know there will be fewer mistakes, because the procedure is really very clear in the [online help]."

The participants credited this to the clarity of the instructions provided in their online help, to pre-filled fields in the forms and to new warning messages provided by the system when a manual form was necessary.

In contrast to the benefits identified by most participants following the initiative, two of the eight participants interviewed, an interesting pattern, questioned the necessity of training.

> **Regional Development Manager #3:** "With or without training, we would have been fine. Maybe yes, a little reminder or a small exercise to tell us 'Oh well, small changes for the [manual] forms. Here are the forms, how to go get them,' but that's it. I wouldn't have done anything more than that."
>
> **Underwriter #3:** "Well, I would tell you that for the [training], it didn't really change anything for me… because in fact, it's always the forms… it's always the underwriters who fill those out, so, I would say that my way of working, it hasn't changed."

It is worth noting that both these participants hold more senior roles than the other participants interviewed. Regional Development Managers and Underwriters are generally called on to be more autonomous and are expected to find the answers to more complex situations on their own.

In fact, when complex manual forms need to be personalized, it is with underwriters that agents are expected to communicate. It is also noteworthy that none of the Call Center Agents or the ambassadors who support them questioned the pertinence of the training intervention.

Data from Other Stakeholders. The interviews with the other stakeholders, which provide an alternate perspective on any potential benefits for the employees or organization, mostly corroborated the findings discussed with the participants.

Although the interviews with the coaches did not reveal any new insights into potential benefits following the "Simplification" program, one of the two coaches did offer her impression that "… the agents will have less difficulty; they'll make fewer mistakes when they will [handle manual forms] and will have fewer referrals to underwriting." Both impressions support the potential benefits previously identified by the participants. Furthermore, in contrast to the two participants who questioned the benefit of having a training initiative for manual forms, neither one of the coaches questioned the need for the training; in fact, one of the coaches had additional suggestions for training, such as additional post implementation evaluations.

The Call Center Manager further corroborated the insights offered in the participant interviews, mentioning all three benefits identified by the learners: faster treatment time, greater autonomy, and fewer mistakes.

> **Manager:** "We diminished the treatment time for [manual forms], because we used to need to communicate a lot more with Underwriting every time it happened, because there were a lot of fields to fill in; mistakes in keying information, in [grammar], and also mistakes in 'am I using the right [manual] form?' etc."

Like the two coaches, the Call Center Agent Manager did not dispute the necessity of the training initiative, instead listing all the measures put in place to support learners and reinforce

training; meeting learners before training to present the coming changes (change management activities), validating comprehension following the training initiative with "integration" surveys, and providing ambassador feedback if the learners had difficulty with the "integration" surveys.

The Lead Training Advisor offered her perspective on why training was required for changes in handling manual forms. Like the participants who suggested the system changes were intuitive, the lead advisor initially concluded that none of the system changes required the development of particularly complex skills and that individually, communicating the changes might have been sufficient. However, her experience suggested that communication on its own was not the best approach when many technical system changes are involved, no matter their individual simplicity. She described how for one of the previous "Simplification" programs, it was decided to let the project team communicate all system changes through management meetings, emails and updates to their online help rather than through training. Unfortunately, this did not deliver the desired results, with observable issues in terms of both application and integration. The Lead Training Advisor also suggested that a significant proportion of the learners need visual support, with the ability to "play in the system," (or a simulation of the system) to properly adopt the changes. For these reasons, she believed that despite the individual simplicity of the changes, the cumulative changes justified the need for training.

Response to the Research Question. The data suggest that there are several benefits to the different stakeholders. Through the interviews, six participants claimed call treatment time was decreased, and three indicated they made fewer mistakes. These benefits affect:

- Learners, who have an easier time handling manual forms.
- Organization, which can handle more client calls
- Clients, who will get faster, more efficient services when manual forms are required.

Although two participants suggested the training initiative was unnecessary, they were in the minority. Furthermore, the coaches, Call Center Agent Manager and Lead Training Advisor did not support this assessment.

RESPONSE TO THE MAIN RESEARCH QUESTION

The main research question is: To what extent does training transfer within an organization from a specialized technical, blended training program, several months after the training initiative? As previously described, training transfer can be defined as the degree to which the knowledge, skills and attitudes learned in training are applied and maintained by learners over time on the job (Baldwin & Ford, 1988). The data from the surveys and interviews with participants and stakeholders provides some insights into the extent of training transfer in the months following the technical, blended training program.

Data from the Participants. As discussed in answer to supporting question #2, in the post-training surveys, 20 of the 22 participants who responded to all four surveys reported using their new skills with manual forms at least once in the ten weeks following the implementation of the system changes. In the same surveys, 14 of those 22 participants also indicated using the online help to support themselves, which is one of the behaviors encouraged in training.

This was further supported by the interviews, in which all eight participants described using online help to determine when to apply a manual form and which information needs to be included to complete the form. In these same interviews, conducted more than 12 weeks after training, three of the eight participants described, unprompted, how they search and select a manual form in their new system, which was an indication of successful transfer.

Some of the interview data however did indicate that some learners had difficulty with their new skills. One Call Center Agent described having a hard time determining whether a

manual form was necessary, suggesting that he had not yet mastered this skill. Furthermore, an Underwriter explained that some manual forms were referred to him that should not have been, indicating that some learners were incorrectly applying their new skills on the job.

Data from Other Stakeholders. The interviews with the other stakeholders once again add another perspective to the insights provided by the participant interviews. Although the majority of participants surveyed and all of the participants interviewed described using online help when completing a manual form, the coaches were unable to corroborate this finding and, in fact, shed some doubt on it, suggesting that in their experience, agents preferred to call and ask for help. Furthermore, because they did not have the opportunity to listen to any calls requiring the use of manual forms in monthly call quality assurance, coaches were unable to confirm learners' perceptions of successful application of the new skills. Coaches did indicate that, in their opinions, the fact that they were never solicited was a positive indication that additional support was not required by the learners.

In contrast to the Coaches, the Call Center Agent Manager claimed that from what she heard from her agents, applying their new skills was generally easy and got even easier as time went on and they got the opportunity to practice on the job.

As for the Renewal Agent's ability to apply the new skills, the Renewal Agent Ambassador agreed with the majority of those surveyed, who noted that they rarely had to apply the new skills on the job. However, she did argue that in situations in which agents did need to apply the new skills such as saving a manual form, they did not know how and were "destabilized because they didn't expect it." She suggested that this might be because the training was not personalized to the specific situations a Renewal Agent might encounter.

Response to the Research Question. The data suggests that although participants generally self-reported being able to apply new skills on the job in the months following training (with three even describing how to find the correct manual form), the extent to which transfer occurred might have been uneven for some learners, as some participants reported difficulties with certain skills, such as determining whether a manual form was required.

Furthermore, the Renewal Agent Ambassador explained how Renewal Agents were destabilized when faced with a system change in how to save a form, as they had not understood from the training how this applied to them on the job.

Although the coaches were unable to corroborate any transfer, the Call Center Agent Manager believed training transferred but was relying on what she heard from her agents. All this suggests that even though some training transfer likely did occur, learners and the other stakeholders interviewed might have different perspectives on the extent of transfer, and that the extent of transfer might vary somewhat by role.

CHAPTER 5. CONCLUSIONS

The goal of this study was to explore the longer-term impact of a technical, blended training initiative. This chapter concludes the study. It begins by presenting the conclusions, including implications for practice, research and theory, after which the limitations of the study are discussed. The chapter finally closes with suggestions for future research.

CONCLUSIONS

The conclusions discuss the implications of this study, first to practice, then to theory and research.

Implications for Practice

This section discusses several specific suggestions for improving training programs resulting from the case study. Although each of these suggestions emerges from one specific case, they transfer to other blended training programs. After doing so, the extent to which an evaluation approach outside of the Katzell-Kirkpatrick framework provides stakeholders with the information they need to assess training initiatives is explored.

Specific Suggestions for Improving Training Programs Resulting from this Case Study

This section presents several suggestions for improving training programs resulting from the findings of this case study. The first suggestion is to provide online support for performance. All participants reported that, when applying their new skills on the job, they relied on the online help, a type of performance support system used to support workers in performing work-related processes and procedures. These results, which were supported by the interviews with other stakeholders, suggest that ensuring learners have access to an up-to-date performance system such as the online help discussed could be a key factor contributing to the successful transfer of learning following a technical training initiative.

Second, training initiatives could potentially benefit from ensuring that experts be available for an extended time period during the transfer process to support learners and offer feedback when required. Support from their ambassadors in this study, who are employees who fill the same roles as their colleagues as well as experts in the system, was cited by half of the participants and most of the other stakeholders interviewed. This was also demonstrated in the pre-training survey, where a strong majority of participants expected to be well supported and intended to apply their new skills on the job. Ambassadors were contacted by learners to answer questions and by managers to offer feedback to their teams if a concept was not well understood. Research suggests that learners who feel their working environment is supportive are more likely to be motivated to learn and attend training programs (Salas et al., 2012). These findings suggest that training initiatives could benefit from making experts be available to support learners and offer feedback when required both during and after the training program.

Third, giving learners the opportunity to practice their new skills, for example through simulations and learning environments, both during and after training could be beneficial. The importance of practicing new skills was discussed by a majority of the participants and other stakeholders interviewed. Research suggests that the more learners are provided with opportunities to practice a new skill, the better the transfer will be (Salas et al., 2012). The Call Center Agent Manager and one of the participants also suggested a proper training environment would have helped learners more quickly master their new skills on the job. Practicing with the real system, which involves sensitive client information, is a risky and potentially costly way for learners to develop new skills, both monetarily and in terms of an organization's reputation. Properly designed simulations and synthetic learning environments allow learners the opportunity to explore and experiment with realistic scenarios in training, improving

performance and helping reduce the chance of errors on the job (Salas et al., 2012), which is particularly important when handling sensitive client information.

Fourth, training programs should be scheduled in such a way as to give learners the opportunity to practice as soon as possible on the job. As the training initiative was scheduled during their summer vacation, several participants were absent in the weeks following the training initiative and so did not have the opportunity to practice. Compounding this issue, there was an unexpected gap of about a month between the training initiative and the implementation of the system changes, further reducing the opportunity for participants to apply their new skills on the job in the weeks following their training, even if participants had not left for their summer vacation. If the chance to apply their new skills is limited, learners are less likely to remember what they have learned and view it as valuable (Salas et al., 2012). By scheduling training to maximise the opportunity for learners to practice as soon as possible after training, learners will be more likely to remember their new skills and properly integrate it into their jobs.

Fifth, organizations should implement change management strategies that avoid unnecessary overlap with other changes and initiatives. Organizations should also keep employees informed of coming changes and how these will impact their jobs. In their interviews, two participants and most other stakeholders discussed change fatigue, reporting how they felt overwhelmed with the number and pace recent changes and the training initiatives that overlapped with them. When organizations are in a constant state of change, employees are unable to predict what will happen next, preventing them from dealing with the unknown, which can lead to both exhaustion and intentions of withdrawal (Bernerth et al., 2011). To overcome this, an organization could implement change management activities that keep participants informed of coming changes and the impact of these on their jobs over time. Furthermore,

organizations could benefit from centralizing all planning and communications for changes, thereby avoiding unnecessary overlaps and planning long term strategies which consider the learners' capacity for change. With properly planned organizational and technological change, employees would have greater opportunity to prepare for and assimilate and integrate one change before having to face another. Bernerth et al. (2011) suggest that as organizations catch up in terms of technology and management, they should not neglect the stable core ideology which makes their company successful.

Sixth, training content should be personalized to each learner's actual role and responsibilities whenever possible. Because the training content was generalized to apply to all roles that participated in the training initiative, this meant that specific cases were not personalized to learners' particular roles. In the case of the Renewal Agents, this seemed to create an issue where some participants (the Renewal Agents) believed the system changes did not apply to them. This issue was discussed with the Renewal Agent ambassador, who expressed her belief that "if they had had such a situation [in training], I think it would have been fine." Research suggests that instructional designers need to recognize the characteristics of all learners and identify what they need to know to make the necessary adjustments to the training strategy (Salas et al., 2012). In this case, because there were role-specific tasks affected by the initiative, providing specific examples and practice cases could have helped learners avoid feeling excluded or surprised when they came across such cases on the job.

Seventh, quality assurance activities should be planned in the weeks and months following the training program to determine whether learners are correctly applying their new skills on the job. Although the coaches are responsible for performing call monitoring and quality assurance activities, neither coach interviewed was able to corroborate the participants' impressions of

successful training transfer. By randomly selecting three Call Center Agent calls per month to monitor calls, the odds of evaluating a call where manual forms were handled was slim because this is not a common task. This also meant that learners where unable to get direct feedback on the application of their new skills on the job. Research suggests that learners should be provided periodic and descriptive feedback, which could help them in adjusting their self-assessments of performance (Salas et al., 2012). To more accurately assess whether the agents were properly applying their new skills on the job, a strategy would need to be implemented whereby coaches evaluate agents on the application of their new skills in the months following a training initiative, suggesting a more thorough plan to check on whether employees have applied the new skills.

The eighth suggestion for strengthening blended technical training initiatives that results from this study is that the blending of instructional approaches should integrate different methods of teaching and communicating information. Although all participants completed the self-study elearning, none participated in the voluntary question and answer virtual class. However, most of those surveyed (14 of 22, or 64%) and all of those interviewed reported consulting the online help for guidance in applying new skills on the job, which suggests that the elearning alone would likely have been insufficient to ensure proper training transfer. Harris et al. (2009) argue that training initiatives that present information through different methods (such as elearning and online help in the case of this study) have the potential to reach a greater number of learners with different learning preferences.

Extent to Which an Evaluation Approach Outside of the Katzell-Kirkpatrick Framework Provides Stakeholders with the Information Needed to Assess Training Initiatives

The dominant Katzell-Kirkpatrick framework has some well documented limitations, starting with a singular focus on whether participants successfully applied new skills on the job

when looking at training transfer, rather than also exploring how they did so and why. Bates (2004) and Brinkerhoff (2005) specifically note the failure of the Katzell-Kirkpatrick framework to look at how influences in the workplace affect performance and, they note, the Katzell-Kirkpatrick framework does not allow for stakeholders to identify avenues for improvement to the program evaluated. In response to these limitations, alternatives such as Phillips' (1996) five level ROI framework, Kaplan and Norton's (1996) Balanced Scorecard approach and the Brinkerhoff Success Case Method (1983; 2003; 2005) have been proposed. However, to what extent do these alternative evaluation approaches provide stakeholders with the information they need to assess their training initiatives?

Based on the data collected in this study, the Brinkerhoff Success Case Method appears to address the limitations of the Katzell-Kirkpatrick framework. The type of data collected explores how participants applied their new skills on the job, potential enablers and barriers to training transfer, and potential benefits following the training program. The perspectives represented in the evaluation data were also broader than in the Katzell-Kirkpatrick framework for Level Three and included the perspectives and performance data of learners and other stakeholders like managers and supervising co-workers. The perspectives of the managers and supervising co-workers often contrasted with those of the learners and provided a more complete view of the transfer of learning.

Furthermore, the Brinkerhoff Success Case Method provides stakeholders with information on how learners applied their new skills on the job as well as the reasons for it. For example, because most participants and other stakeholders felt that support from their performance support system (the online help) and expert users (their ambassadors) was an enabler to training transfer, this approach will likely be replicated in future training programs in the organization. Moreover,

the fact that the overlap between the training program and summer vacation was identified as a potential barrier could influence whether future training programs are scheduled between June and September. Although not entirely as a result of these findings, the observations from this case study likely influenced the decision within the organization where the study took place to plan no training programs in the summer of 2021. This decision was also possibly influenced by reports of change fatigue from participants and the other stakeholders, some of whom reported feeling overwhelmed.

Although not reported by a majority of participants, reports of a lack of realistic practice both in the training program and in the period immediately following it, due to both the lack of a training environment and the unexpected lag time between training and the system changes, was another factor of interest to the program stakeholders, which will likely influence future training programs. Although not always possible due to cost and time restrictions, these findings support the argument for making a training environment available when possible. Furthermore, although just in time training is already always the objective, the results of this study highlighted the potential consequences for all stakeholders, some of whom were not even aware there had been a gap between training and implementation.

These findings would likely not have been possible had the Katzell-Kirkpatrick framework been used, where the data would instead indicate how many and to what extent learners appreciated the training, learned their new skills, applied them on the job, and whether the organization got their desired results. The performance factors influencing these observations were made available by the alternative approach used in this study, which allowed the program stakeholders not only to determine whether participants were able to apply their new skills, but also to identify possible pitfalls to avoid and future avenues for improvement.

Implications for Research and Theory

This section explores how the study supports or extends previous research. Baldwin and Ford's (1988) model for training transfer (which relies on trainee characteristics, training design and work environment) will first be discussed, followed by the effects of lag time between training transfer and application and blended learning.

First, research suggests that trainee characteristics such self-efficacy, and motivation to learn and apply new skills can positively influence training transfer (Burke & Hutchins, 2007; Grossman & Salas, 2001; Huang et al., 2017). As previously discussed, Huang et al. (2017) suggest self-efficacy can significantly predict how much effort learners will make to apply new skills on the job after training and Burke and Hutchins (2017) argue that motivation to transfer can be a reliable predictor of training transfer. When responding to the pre-training survey, 21 of 22 participants either agreed or strongly agreed with the statement "I will be able to perform my job as efficiently or better than before the training initiative," and every participant either agreed or strongly agreed to the statement "I intend to use the new skills I will be learning in the 'June Simplification' training initiative." This data suggests participants had high self-efficacy and motivation to learn and apply the new skills on the job prior to the training program. Coupled with the fact that all interviewed participants self-identified as successful cases of training transfers (which was mostly corroborated by anecdotal evidence from both ambassadors and the manager interviewed), these findings provide an example of how learner characteristics such as self-efficacy and motivation to learn may be linked to participants' perceptions of successful training transfer.

Second, previous research proposes that training design such as overlearning and realistic practice can have an impact on training transfer. Baldwin and Ford (1988) discussed the role of

overlearning, which involves providing learners with the opportunity to repeatedly practice a skill. Baldwin and Ford (1988) argue that the greater the amount of practice, the greater the retention over time. This is supported by the results of this study, with a strong majority of participants discussing the role of practice in their success.

Furthermore, Grossman and Salas (2011) suggest that the use of a realistic training environment in which to practice can have a strong influence on training transfer. This was an interesting finding also discussed with both a participant and the Call Center Agent Manager, who believed that having had a training environment would have reduced the feeling of surprise when handling their new skills for the first time on the job. The importance of realistic practice is further supported by the Renewal Agent Ambassador suggestion that the lack of scenarios specific to Renewal Agents negatively impacted their ability to successfully transfer learning on the job. This perception is supported by her perception of a greater number of support calls following the activation of the system changes. This might also explain in part why Renewal Agents in the study questioned whether the changes applied to them in their post-training surveys. All of these findings support the earlier training transfer research, which suggests that training design approaches such as overlearning and practice will positively impact training transfer.

Third, research suggests that training transfer is largely dependent on the work environment, and that managerial and peer support are widely viewed as key variables to successful training transfer (Baldwin & Ford, 1988; Burke & Hutchins, 2007; Grossman & Salas, 2011). Fully half the participants interviewed reported that support from their ambassadors was an essential aspect to their successful training transfer. Although none of the participants reported turning to their manager for support, the Call Center Agent Manager herself described a

work environment which fully supported learners, from pre-training meetings to discuss the coming changes, to post-training integration surveys and feedback when required. The learners' use of their online help is another aspect of support provided by the work environment which clearly contributed to their successful transfer of learning. These findings demonstrate how a supportive work environment can positively impact training transfer on the job.

Fourth, some previous research suggests that a lag time between training and its application on the job can negatively impact training transfer. Salas et al. (2012) argue that if the opportunity to apply their new skills is limited, learners are less likely to remember what they have learned and view it as valuable. Although the training in this study was scheduled to be just in time, circumstances like summer holidays and the one-month delay in launching the changes prevented that from happening. As a result, the data from this study suggests that having a lag time between training and application may affect transfer. But that data fails to definitively confirm this observation. Even though only three of the eight participants interviewed believed that the unexpected lag time negatively affected their ability to apply new skills on the job, the Call Center Agent Manager and Lead Training Advisor both saw this as an issue. Further research would be required to determine whether lag time before application truly has a negative impact on training transfer on the job in the months following a training program.

Finally, previous research suggests that blended learning—that is, presenting information with different methods of teaching—can potentially reach a greater number of learners (Harris et al., 2009; Rossett, 2019). Rossett (2019) argues that for learners who are reluctant to explore independently, such as through elearning, including a classroom component can help them acclimate to a concept. Although all participants had to complete the self-study elearning, none of those interviewed participated in the virtual class question and answer periods. Still, most of

the participants (and all of those interviewed) claimed to use online help, which was in itself part of the blended learning approach used in this training program. Furthermore, the Call Center Agent Manager believed that the blended approach used (manager presentation of the changes, elearning, voluntary question and answer period, integration surveys and online help) was a key part of the success of the training program. Excluding the voluntary question and answer period, which proved unpopular with learners, the fact that participants had elearning, online help and pre-training manager presentations of the changes to come provides an example of how a blended learning approach supports training transfer.

LIMITATIONS

Five limitations affect this study. The first is the lack of generalizability with case study research. Generalizability is a general concern with this type of research because the small number of cases addressed in a particular research project cannot be generalized to a larger population (Tight, 2017). This is certainly the situation with this study; it only encompasses a single program with a small number of learners, of whom even fewer participated in the study. But because it is conducted under the qualitative research paradigm, case study research is not intended to be generalizable; it is intended to be transferrable. In a research context, transferability involves providing information that enables others to determine the relevance and applicability of a study's findings to other situations (Tight, 2017). For example, the results of this study are transferrable to other organizations that have blended or technical systems training programs.

A second limitation of this study is the representativeness of the participants. In a research context, representativeness refers to the selection of participants who are typical of the general population (Plano Clark & Creswell, 2015). For example, although the proportion of participant

roles in the surveys was roughly proportional to that found in the workforce, they were not proportional when it came to the interviews (where only one renewal agent agreed to be interviewed and it was an ambassador). Furthermore, of the 22 participants who responded to all four surveys, none of those who reported that they did not use their new skills agreed to be interviewed. This meant that the overall study lacked non-examples, which could have identified further barriers to transfer.

Compounding the issue of representation by role and the lack of non-examples was the issue of COVID-19 and remote work, which might have had an impact on who volunteered to participate in the study. It is possible that employees who were having a harder time working remotely, or just keeping up, chose not to participate in the study where they might have otherwise done so had it been carried out prior to the COVID-19 pandemic.

A third limitation is that this study only explored one training initiative and that initiative developed relatively simple technical skills for end users: ones that probably were not particularly complicated to master and apply on the job. It therefore only provides perspectives on one particular type of training, within one particular category of training. The study would need to be replicated with a different type of technology, more complex skills, and for learners other than end users to provide broader insights into blended technical training. Results might therefore differ among topics, complexity, learners, and applications to the job.

A fourth limitation of this study is that it relied on learners' self-assessment of their knowledge and skills, and how learners applied them on the job. Sitzmann, Ely, Brown and Bauer (2010) report that 80% of studies evaluating the accuracy of self-assessment determined that learners' personal assessments were generally inaccurate. They argue that proper self-assessment requires learners be willing to consider all sides of their knowledge and that this is

difficult for incompetent learners because they do not have the capacity to both self-assess what they know and to understand the material. A mechanism to properly evaluate the application of their new skills on the job, such as evaluations by the coaches, would have been required to more accurately corroborate the learner self-assessments.

A fifth limitation pertains to triangulation, which uses multiple methods to study a single issue or problem to find supporting evidence for the same phenomenon from different sources of data or individuals (Salkind, 2010). Ideally, triangulation can be used to address some issues of validity in case study research (Yin, 2013). An attempt was made to triangulate the perspectives of stakeholders with those of participants on the extent to which learners applied the skills on the job. But because the people who were assigned to make that assessment—the coaches—did not have the opportunity to directly observe learners applying the new skills, they were not able to offer that additional perspective.

Outside of the scope of this study, the organization carried out its own series of integration surveys that assessed the extent to which participants retained their knowledge several weeks after the training. The surveys consisted of multiple-choice questions about the training content. Results suggested that 70 to 75% of participants could provide the correct answers. But this evaluation only indicates that most participants had retained their knowledge of the system, not whether they were able to apply their new skills on the job.

SUGGESTIONS FOR FUTURE RESEARCH

As a follow-up to this study, several other aspects of blended technical training programs could be explored. Further research could focus on a larger, more complex initiative, such as a change in the customer service system or even training for a new role, to determine whether the findings from this study could be replicated. Such a study might employ a larger sample, which

would also increase the odds that unsuccessful cases would be included in the study and participate in the interviews. That, in turn, would provide one means of strengthening the representativeness of the people studied to the general population of learners.

A second future study could specifically explore the impact of lag time between training and application on the job. Although some literature in the field promotes just-in-time training, formal system training initiatives often precede the launch of those systems and for some learners and for practical reasons, the lag in time can be a month or longer, as was the case in this study. The study could specifically explore the impacts of the break in time between learning and its application, as well as the impacts of different lag times (one week, two weeks, one month and so on).

A third future study might apply the Success Case Methodology to other types of training, such as leadership development, management and supervisory training, sales training, customer service training, occupational health and safety training, and personal and professional development training to identify broader characteristics of a training program that contribute to the transfer of skills.

A fourth future study might explore the specific impact of a training environment on transfer of technical training. As a reminder, a training environment is a system in which learners could practice with the new system but would only work with practice data. What is not clear from this study is the extent to which its availability affects the successful application of skills. Perhaps an experiment might contrast the performance of those learners who have access to a training environment with those who do not. This, in turn, might provide evidence of their importance to the successful transfer.

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APPENDIX A

Recruitment Email for Participation in the Study

Bonjour,

Mon nom est Steven Avon et je suis un concepteur pédagogique dans l'équipe de développement des compétences. Je suis aussi un étudiant à la maîtrise dans le département d'éducation à l'université de Concordia à Montréal. Je vous écris aujourd'hui pour vous inviter à participer à mon projet de recherche, où je compte évaluer les impacts du programme de formation « Simplification » de juin sur vous et votre employeur dans les 4 mois suivant la formation. Vous êtes éligible à participer à cette formation en raison de votre participation au programme de formation et de votre rôle chez notre employeur mutuel.

Si vous acceptez de participer à cette étude, vous aurez à répondre à 4 sondages rapides (5mins); un avant votre participation à la formation et trois autres 2, 6 et 10 semaines après la formation. Ces sondages auront pour objectif d'évaluer la perception de votre performance et du succès du programme de formation. Selon vos réponses aux sondages, il est possible qu'on vous demande par la suite de participer à une brève entrevue téléphonique, qui sera enregistrée. À partir de cette entrevue téléphonique, je tenterai d'évaluer les impacts de la formation sur votre performance ainsi que les éléments de la formation qui auront mené à votre succès.

Rappelez-vous que ceci est entièrement volontaire. Vous pouvez accepter ou refuser de participer à cette étude, sans pression. Veuillez noter aussi que vos réponses à tous sondages ou entrevues demeureront confidentielles. Si vous aimiez participer ou si vous aviez des questions, n'hésitez pas à me contacter !

Merci beaucoup,
Steven Avon

APPENDIX B

Pre-training Survey

Name: _____				
Please indicate your level of agreement with the following statements :				
	Strongly do not agree	**Do not agree**	**Agree**	**Strongly agree**
I am comfortable using the software required to perform my job.				
I applied the skills from previous training initiatives to perform my job.				
Past training initiatives gave me the skills required to successfully perform my job.				
I enjoy learning new skills which help me perform my job.				
Once the training initiative is complete, I expect…				
The necessary resources will be available to help me perform my job (Help, NeXTperts, 4888)				
I will be able to perform my job as efficiently or better than before the training initiative.				
I will use the new skills I learned to perform my job.				
Is there anything else you would like us to know?				

APPENDIX C

Consent Form (Integrated to Survey in Microsoft Forms)

CONSENTEMENT ÉCLAIRÉ À LA PARTICIPATION À UNE ÉTUDE
Remarque : Le masculin est utilisé pour faciliter la lecture.

Titre de l'étude : Un cas de succès d'une initiative de formation technique et mixte.
Chercheur : Steven Avon
Coordonnées du chercheur : steven.avon@dgag.ca
Professeur-superviseur : Saul Carliner, Professor in Educational Technology
Coordonnées du professeur-superviseur :
(514) 848-2424 ext. 2038
Faubourg Ste-Catherine Building,
1610 St. Catherine W.
saul.carliner@concordia.ca

Nous vous invitons à prendre part au projet de recherche susmentionné. Le présent document vous renseigne sur les conditions de participation à l'étude; veuillez le lire attentivement. Au besoin, n'hésitez pas à communiquer avec le chercheur pour obtenir des précisions.

A. BUT DE LA RECHERCHE

Cette étude a pour but d'évaluer les impacts d'une formation technique en milieu de travail. Plus spécifiquement, le transfert de la formation sera évalué afin de déterminer si les participants seront en mesure d'appliquer les tâches techniques démontrées en formation.

B. PROCÉDURES DE RECHERCHE

Si vous participez à l'étude, vous devrez :
Répondre à un court sondage en amont de la formation.
Répondre à un court sondage 2, 6 et 10 semaines après la formation.
Selon les réponses aux sondages, il est possible que vous soyez contactés pour participer à une entrevue de 15-30 minutes, 12 semaines après la formation.
Vous pouvez refuser cette entrevue en tout temps.

Somme toute, votre participation s'étendra sur 3-4 mois.

C. RISQUES ET AVANTAGES

En participant à cette étude, vous pourriez être exposé à certains risques, y compris un inconfort à partager vos succès ou échecs à la suite de la formation reçu.
Sachez que l'objectif est d'évaluer le transfert de la formation et non d'évaluer les participants. De plus, vos noms seront gardés confidentielles et ne seront pas divulguer.

Cette étude ne vise pas à vous procurer des avantages.

D. CONFIDENTIALITÉ

Dans le cadre de cette étude, nous recueillerons les renseignements suivants :
Vos réponses aux sondages de satisfactions de la formation reçu.
Vos réponses aux sondages de l'étude.
Un enregistrement de l'entrevue finale s'il y a lieu.
Une transcription le l'entrevue.

En tant que participant, vous permettez aux chercheurs d'avoir accès à des renseignements sur votre performance suite à la formation (appels du support, temps d'appel, etc.). Ceux-ci seront obtenus de vos gestionnaires et ne seront pas associés à vos réponses aux sondages. Le but de ceci sera de permettre aux chercheurs de faire un lien entre l'impact de la formation et votre performance.

Excepté les situations précisées aux présentes, seules les personnes qui mènent cette recherche auront accès aux renseignements fournis. Nous n'utiliserons l'information qu'aux fins de l'étude décrite dans ce document.

Les renseignements recueillis seront identifiables, c'est-à-dire que votre nom sera indiqué.

Nous protégerons l'information fournie en la conservant sur un serveur OneDrive à l'usage du chercheur seulement, sécurisé par un mot de passe.

Nous avons l'intention de publier les résultats de cette étude. Cependant, on ne pourra pas vous identifier dans la publication.

Nous détruirons les données cinq ans après la fin de l'étude.

F. CONDITIONS DE PARTICIPATION

Vous pouvez refuser de participer à la recherche ou vous en retirer à n'importe quel moment. Vous pouvez aussi demander que l'information que vous avez fournie ne soit pas utilisée; le cas échéant, votre choix sera respecté. Si vous prenez une décision en ce sens, vous devrez en avertir le chercheur avant la fin de la période de recherche.

Nous vous informerons de tout nouvel élément d'information susceptible d'affecter votre volonté à poursuivre votre participation à l'étude.

Vous ne subirez aucune conséquence négative si vous décidez de ne pas participer à l'étude, d'interrompre votre participation à celle-ci ou de nous demander de ne pas utiliser votre information.

Nous ne serons pas en mesure de vous dédommager si vous vous blessez au cours de la présente étude. Cependant, en signant le présent formulaire, vous ne renoncez à aucun droit légal à l'indemnisation.

G. CONSENTEMENT DU PARTICIPANT

En cochant cette boîte et en participant au sondage, je confirme que j'accepte de participer à cette étude.

☐

Si vous avez des questions sur l'aspect scientifique ou savant de cette étude, communiquez avec le chercheur. Vous trouverez ses cordonnées sur la première page. Vous pouvez aussi communiquer avec son professeur-superviseur.

Pour toute préoccupation d'ordre éthique relative à ce projet de recherche, veuillez communiquer avec le responsable de l'éthique de la recherche de l'Université Concordia au 514-848-2424, poste 7481, ou à oor.ethics@concordia.ca.

APPENDIX D

Impact Model

Capabilities	Learning objectives	Results	Business Goals
Learners able to: Use the updated customer service system to perform their tasks. Handle manual forms.	Using the online help, recognize when to add a manual form Find the appropriate manual form in the customer service system Using the online help, recognize the information which needs to be added to a manual form Using the online help, apply the procedure to add a manual form in the customer service system	Faster handling of manual forms (reduce call time). Fewer mistakes.	Improve client and employee experience through simplified operations and procedures.

APPENDIX E

Follow up Survey

Name: _____				
Please answer the following questions :				
Have you had to use any of the technical skills shown in training on the job?	**Yes**		**No**	
If so, list which technical skills you've used:				
When did you last use any of these technical skills (ex. Find, complete ou add a manual form)	**Today**	**In the last week**	**More than a week ago**	**More than a month ago**
Did you consult any resources to help you perform your job following the training initiative?	**Yes**		**No**	
If so, which ones did you consult?	**Help**	**Ambassador**	**4888**	
Are there any technical skills shown in training you haven't used on the job?	**Yes**		**No**	
If so, list these technical skills:				
Why haven't you used these technical skills?				
Please indicate your level of agreement with the following statements (check the appropriate box in each row):				
	Strongly do not agree	**Do not agree**	**Agree**	**Strongly agree**
I regularly use the technical skills taught in the learning initiative.				
I can use these technical skills efficiently.				
I can handle a task efficiently without affecting the quality of the member/customer experience.				
If there is anything else you would like to share, please do so here:				

APPENDIX F

Interview Guide

From your responses to the survey, my understanding is that following the training initiative in [month of initiative], you were able to apply the new skills successfully over the last couple months. I would like to ask you some questions regarding the for the [purpose of the training initiative].

1) **Since you completed the [name of the training initiative], how have you applied the skills you learned?**
    a) Can you name any situations where you able to use the skills?
    b) What did you use from the training that worked the most? What worked the least? Did anything not work at all?
2) **What, if any, improvements have you noticed since the training?**
    a) What was the most important benefit you got from this experience?
    b) Can you think of any benefits to the organization? What are they?
3) **What helped you achieve success following the training initiative?**
    a) *Probes*: Work environment, incentives, peer support, attitude, management support, NeXTpert support, other?
4) **What about the training initiative itself helped you?**
    a) *Probes*: The training approach/design, the reference material (Help), the facilitator/trainer, other?
5) **Do you have any suggestions for how we could increase success following this training initiative?**
    a) *Probes*: Resources, *timing*, tools, incentives, more training, support (manager, NeXTpert, peers), other?

APPENDIX G

Interview Recruitment Email

Bonjour,

À la suite de vos réponses aux sondages en lien avec l'étude des impacts de la formation « Simplification Client » sur la performance, vous avez été sélectionnés pour participer à une brève entrevue téléphonique.
À partir de cette entrevue téléphonique, je tenterai d'évaluer les impacts de la formation sur votre performance et les éléments de la formation qui ont menés à votre succès.

Rappelez-vous que ceci est entièrement volontaire. Vous pouvez toujours accepter ou refuser de participer à cette étude, sans pression. Veuillez noter que vos réponses à l'entrevue demeureront confidentielles. Si vous aimeriez participer ou si vous avez des questions, n'hésitez pas à me contacter!

Vous allez retrouver en ci-joint un formulaire de consentement à réviser et signer si vous acceptez de participer.

Merci beaucoup,
Steven Avon

APPENDIX H

Interview Consent Form

CONSENTEMENT ÉCLAIRÉ À LA PARTICIPATION À UNE ÉTUDE
Remarque : Le masculin est utilisé pour faciliter la lecture.

Titre de l'étude : Un cas de succès d'une initiative de formation technique et mixte.
Chercheur : Steven Avon
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A. BUT DE LA RECHERCHE

Cette étude a pour but d'évaluer les impacts d'une formation technique en milieu de travail. Plus spécifiquement, le transfert de la formation sera évalué afin de déterminer si les participants seront en mesure d'appliquer les tâches techniques démontrées en formation.

B. PROCÉDURES DE RECHERCHE

Si vous acceptez de continuer votre participation à l'étude, vous devrez participer à une entrevue enregistrée de 15-30 minutes, via Skype, 12 semaines après la formation.

C. RISQUES ET AVANTAGES

En participant à cette étude, vous pourriez être exposé à certains risques, y compris un inconfort à partager vos succès ou échecs à la suite de la formation reçue.

Sachez que l'objectif est d'évaluer le transfert de la formation et non d'évaluer les participants. De plus, vos noms seront gardés confidentiels et ne seront pas divulgués.

Cette étude ne vise pas à vous procurer des avantages.

D. CONFIDENTIALITÉ

Dans le cadre de cette étude, nous recueillerons les renseignements suivants :

- Un enregistrement audio de l'entrevue finale.
- Une transcription le l'entrevue finale.

En tant que participant, vous permettez aux chercheurs d'avoir accès à des renseignements sur votre performance suite à la formation (appels du support, temps d'appel, etc.). Ceux-ci seront obtenus de vos gestionnaires et ne seront pas associés à vos réponses aux sondages. Le but de ceci sera de permettre aux chercheurs de faire un lien entre l'impact de la formation et votre performance.

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Nous avons l'intention de publier les résultats de cette étude. Cependant, on ne pourra pas vous identifier dans la publication.

Nous détruirons les données cinq ans après la fin de l'étude.

F. CONDITIONS DE PARTICIPATION

Vous pouvez refuser de participer à la recherche ou vous en retirer à n'importe quel moment. Vous pouvez aussi demander que l'information que vous avez fournie ne soit pas utilisée; le cas échéant, votre choix sera respecté. Si vous prenez une décision en ce sens, vous devrez en avertir le chercheur avant la fin de la période de recherche.

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Vous ne subirez aucune conséquence négative si vous décidez de ne pas participer à l'étude, d'interrompre votre participation à celle-ci ou de nous demander de ne pas utiliser votre information.

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G. CONSENTEMENT DU PARTICIPANT

Un enregistrement audio de votre consentement verbal sera réalisé en début d'entrevue.

Si vous avez des questions sur l'aspect scientifique ou savant de cette étude, communiquez avec le chercheur. Vous trouverez ses cordonnées sur la première page. Vous pouvez aussi communiquer avec son professeur-superviseur.

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