

UNDERSTANDING LEARNING TRANSFER AS A JOURNEY OF INDIVIDUAL  
BEHAVIOR CHANGE: STAGES, TRANSITIONS, AND INFLUENCES

by

DEIDRE HARDWICK CARMICHAEL

(Under the Direction of Wendy E. A. Ruona)

ABSTRACT

Improving learning transfer in organizations remains a theoretical and practical challenge despite previous research efforts, expectations from organizational leaders, and the best-intentioned efforts from practitioners. The traditional view of transfer as a product or outcome measurable at a pre-determined time following training ignores the change process learners go through to reach the outcome and has contributed to gaps in the learning transfer literature. This study adds to the learning transfer knowledge base by examining transfer through the lens of individual behavior change and taking a long-term approach to the study of learning transfer in organizations. A supervisory training program served as the case for this single instrumental case study. Data collection methods included the Learning Transfer System Inventory, a validated instrument designed to assess the factors believed to influence learning transfer in organizations, and three semi-structured interviews with each study participant conducted over the course of one year. Thematic data analysis revealed themes across three phases of time related to the process of change and the factors that influenced this process. Themes related to the change process included: transitioning into the new role, testing the change for fit, evolving, and integration. This change process moved participants closer to transfer and the adoption of

desired work behaviors. Study findings also identified a path leading away from desired change that included stagnating and becoming disillusioned. Factors that influenced the change process included relationships with supervisors and peers, having the personal capacity for transfer, opportunity to use knowledge and skills on the job, personality traits, and job attitudes.

Conclusions drawn from the study include the applicability of individual change theories to transfer, identification of additional factors that influence the transfer system, readiness to engage in the change process as a pre-requisite for successful navigation of the transfer process, and identification of volition as an important but overlooked concept in the transfer literature. Study findings led to a proposed model of learning transfer as an individual behavior change process and implications for learning transfer theory, how researchers operationalize and measure transfer, and how practitioners intervene to improve transfer outcomes in organizations.

INDEX WORDS: learning transfer, training transfer, individual behavior change, training effectiveness, learning and development, human resource development, child welfare training

UNDERSTANDING LEARNING TRANSFER AS A JOURNEY OF INDIVIDUAL  
BEHAVIOR CHANGE: STAGES, TRANSITIONS, AND INFLUENCES

by

DEIDRE HARDWICK CARMICHAEL

ABJ, The University of Georgia, 1986

MSW, The University of Georgia, 1997

A Dissertation Submitted to the Graduate Faculty of The University of Georgia in Partial  
Fulfillment of the Requirements for the Degree

DOCTOR OF PHILOSOPHY

ATHENS, GEORGIA

2016

© 2016

Deidre Hardwick Carmichael

All Rights Reserved

UNDERSTANDING LEARNING TRANSFER AS A JOURNEY OF INDIVIDUAL  
BEHAVIOR CHANGE: STAGES, TRANSITIONS, AND INFLUENCES

by

DEIDRE HARDWICK CARMICHAEL

Major Professor: Wendy E. A. Ruona  
Committee: Karen E. Watkins  
Alberta J. Ellett

Electronic Version Approved:

Suzanne Barbour  
Dean of the Graduate School  
The University of Georgia  
May 2016

## DEDICATION

In loving memory to

Malissa LaGrand Hardwick Thompkins, my maternal grandmother

and

Atha Lee Hardwick, my mother

*Because of you I had everything I needed. I had roots. And I had wings.*

*You gave me roots.*

*You grounded me in what was important – faith, family, and a love of learning.*

*You gave me wings.*

*You allowed me to leave the nest, to see and strive for something more.*

*My roots keep me humble. My wings allow me to soar. Thank you for my roots and wings.*

*DeDe*

No matter what achievements I may earn or what privileges are afforded to me, I will never forget who I am or whose I am, or the responsibility that comes along with being your granddaughter and your daughter. One day we will be together again. What a day of rejoicing that will be!

## ACKNOWLEDGEMENTS

When I decided to enter the doctoral program, I had no idea the journey I was about to embark upon. It is almost poetic that my dissertation is about journeys, change, and development because that is certainly what I experienced in my doctoral studies. I owe a debt of gratitude to many for their support of my journey. First, to my major professor and dissertation committee chair, Dr. Wendy Ruona, thank you for the tremendous guidance and support throughout my change process. When we first met at my admissions interview, we connected over what would end up being my dissertation topic. I chose you as my advisor and it was absolutely the best decision I could have made. You encouraged me to think deeply about my scholarship and place in the discipline of Human Resource Development while also supporting my desire to remain connected to the discipline of Social Work. You understood and helped me create a bridge between those two worlds that I could only imagine. I do not understand how you manage to do all that you do, but I am thankful you chose to invest in me. To the other members of my dissertation committee, I also thank you for your guidance and support. To Dr. Karen Watkins, I admire you deeply and appreciate your scholarship. I did not understand the meaning of the word scholar until I met and began to interact with you. Thank you for the time you spent with me early in my process and for helping me to see the importance of knowing and appreciating the intellectual history of one's discipline. I am so honored you agreed to be a part of my journey. To Dr. Alberta Ellett, thank you for being a part of my journey and representing my first disciplinary home of Social Work. You and I have a love of public child welfare that only people who have worked in the field could understand. I appreciate your scholarship and

contributions to the field. I hope I can one day impact the child welfare knowledge base and practice in as significant a way as you have.

I would also like to thank other members of the Adult Education and Human Resource Development faculty who were a part of my journey: Dr. Laura Bierema, Dr. Bob Hill, Dr. Juanita Johnson-Bailey, and Dr. Lorilee Sandmann (who also served on my committee prior to her retirement). As accomplished scholars in your respective areas, each of you contributed tremendously to my learning and scholarly development. I am fortunate to have benefitted from your tutelage.

Also, thank you to the Qualitative Inquiry faculty members from whom I had the privilege of taking courses: Dr. Kathryn Roulson, Dr. Kathleen deMarrais, Dr. Jori Hall, and former faculty member Dr. Corey Johnson. Although I did not enter my doctoral studies thinking I wanted to be a qualitative researcher, I embraced Qual and Qual (through each of you) embraced me, and for that I am grateful. I am proud to say I was a part of the Interdisciplinary Qualitative Studies program.

There are also two educators who had a tremendous impact on my life, and I must acknowledge them. To my high school journalism teacher, Ms. Mary F. Scruggs, thank you for recognizing and nurturing my gift for writing. I think of you often. To Dr. Geraldine Jackson-White, my former professor, former boss, substitute mother, and life-long mentor, thank you for all of your encouragement and support throughout our years together. You were the one who encouraged me to pursue a doctorate and introduced me to the Adult Education program at UGA. You are and will always be my J-W.

To my doctoral studies village, thank you. To my work colleagues, friends, sorority sisters, church family, and fellow students and alumni of the Adult Education and Human

Resource Development program, the journey was made easier because of your encouragement and support. To my extended family – the people who loved me before a Ph.D. and will love me after and into infinity – thank you for your faithfulness to my dreams. To my maternal aunts, Ms. Lurie Ellis and Ms. Veronica West, you two are a part of my roots and helped to give me my wings. I am grateful for your love and the guidance you provided throughout my life. To my son Brandon Carmichael and my daughter-in-love Courtney Turner Carmichael, thank you for being in my corner. There is absolutely nothing in this world I am more proud of than the two of you. God answered my prayers when He gave me the best son and He answered them again when He provided the best helpmate for my son. I love you to the moon and back.

Finally, to **the** man, my best friend, my husband, Gordon Carmichael, Jr., words really are insufficient to express my thanks to you. Your support, patience, and ever-present love meant everything to me during this journey. You are my rock, my comfort, and my safe place. You are the one who knows everything there is to know about me and loves me still. Thank you for every encouraging word, every dinner cooked or paid for, every hug and listening ear, every calm response to my breakdowns, and for each time you threatened to take away my computer or turn off the electricity in my office to make me go to bed. You are **the one** – you always have been, and you always will be.

My Abba Father, all thanks and praise is due unto you.

*God can do anything, you know—far more than you could ever imagine or guess or request in your wildest dreams! He does it not by pushing us around but by working within us, His Spirit deeply and gently within us. Ephesians 20 (The Message)*

## TABLE OF CONTENTS

	Page
ACKNOWLEDGEMENTS .....	v
LIST OF TABLES .....	xii
LIST OF FIGURES .....	xiv
CHAPTER	
1 INTRODUCTION .....	1
The Transfer Problem .....	1
Transfer Models .....	3
Learning Transfer as an Individual Change Process.....	4
Statement of the Problem.....	6
Purpose of the Study .....	7
Significance of the Study .....	8
2 REVIEW OF THE LITERATURE .....	10
Transfer of Learning Theory.....	10
Transfer of Learning Models .....	28
Change as a Process of Stages and Transitions .....	41
Transtheoretical Model of Change.....	46
Concerns Based Adoption Model .....	60
Chapter Summary .....	74

3	RESEARCH DESIGN AND METHODS .....	76
	Study Conceptual Framework.....	76
	Research Design.....	79
	Sample Selection.....	84
	Data Collection .....	87
	Data Analysis and Interpretation .....	93
	Study Reliability and Validity .....	97
	Study Delimitations .....	102
	Chapter Summary .....	103
4	ORGANIZATIONAL CONTEXT, THE CASE, AND THE PARTICIPANTS .....	104
	The First Class .....	109
	The Second Class.....	129
	The Third Class.....	141
	Chapter Summary .....	153
5	FINDINGS .....	156
	Case Level LTSI Results and Overview of Qualitative Themes .....	156
	Early Stage of Change .....	162
	Middle Stage of Change.....	181
	Late Stage of Change .....	205
6	SUMMARY, CONCLUSIONS, AND IMPLICATIONS .....	223
	Study Summary.....	223
	Conclusions from the Study.....	226
	Proposed Model of Learning Transfer as an Individual Change Process.....	244

Study Limitations.....246

Implications for Learning Transfer Theory, Research, and Practice .....248

Recommendations for Future Research .....250

REFERENCES .....252

APPENDICES

A Researcher Subjectivities Statement.....280

B Permission to use the LTSI.....284

C Coding Methods Description .....286

## LIST OF TABLES

	Page
Table 1: LTSI Empirical Studies .....	38
Table 2: Comparison of Lewin's 3-stage model to TTM and CBAM.....	45
Table 3: Relationship between the Stages of Change and the Processes of Change .....	51
Table 4: TTM Empirical Studies .....	56
Table 5: CBAM Levels of Use .....	61
Table 6: CBAM Stages of Concern .....	65
Table 7: CBAM Empirical Studies.....	69
Table 8: Study Time Frames and Incentive Schedule .....	93
Table 9: Reliability and Validity Strategies.....	97
Table 10: LTSI Scales and Definitions.....	107
Table 11: Cohort One Participants.....	110
Table 12: LTSI Results: Wanda.....	114
Table 13: LTSI Results: April.....	117
Table 14: LTSI Results: Anna .....	121
Table 15: LTSI Results: Julie .....	124
Table 16: LTSI Results: Donna .....	128
Table 17: Cohort Two Participants.....	130
Table 18: LTSI Results: Mary .....	133
Table 19: LTSI Results: Beverly .....	136
Table 20: LTSI Results: Patricia.....	140

Table 21: Cohort Three Participants .....	142
Table 22: LTSI Results: Owen .....	145
Table 23: LTSI Results: Malissa.....	149
Table 24: LTSI Results: Bobbie .....	152
Table 25: Study Participants Complete Listing .....	154
Table 26: Case Level LTSI Results: Descriptive Statistics .....	157
Table 27: Case Level LTSI Results: Catalysts and Barriers.....	158
Table 28: Overview of Study Themes .....	161
Table 29: Early Stage Themes .....	162
Table 30: TTM Stages of Change in Training and Training Transfer Context .....	180
Table 31: Early Stage of Change Assessment .....	181
Table 32: Middle Stage Themes .....	182
Table 33: Middle Stage of Change Assessment .....	204
Table 34: Late Stage Themes.....	205
Table 35: Late Stage of Change Assessment.....	222
Table 36: Selected Research: Individual Change in the Training and Development Context ....	231
Table 37: Selected Research: LTSI Predictive of Transfer Outcomes .....	236

## LIST OF FIGURES

	Page
Figure 1: Baldwin and Ford Model of Training Transfer .....	29
Figure 2: Foxon Stages of the Transfer Process .....	31
Figure 3: Foxon Inhibiting and Supporting Factors Influencing Transfer Intentions.....	31
Figure 4: Kontoghiorghes Systemic Model of Learning Transfer.....	33
Figure 5: Burke and Hutchins Model of Transfer.....	35
Figure 6: Holton Learning Transfer System .....	37
Figure 7: Sample Interview Questions.....	90
Figure 8: Training Curriculum Overview .....	105
Figure 9: Process of Change Based on Study Themes .....	225
Figure 10: Integration of Change Models and Study Themes .....	228
Figure 11: Factors That Influenced the Change Process by Stage.....	238
Figure 12: Proposed Model: Transfer of Learning as Individual Behavior Change.....	246

## CHAPTER ONE

### INTRODUCTION

Workplace training is a big business industry in the United States. The 2015 *State of the Industry Report* from the Association for Talent Development (ATD), the world's largest association dedicated to workplace learning and performance professionals, stated organizations reporting their 2014 metrics spent an average of \$1,229 on direct learning expenditures per employee (Ho, 2015). This level of investment in learning comes with expectations of enhanced organizational performance (Danielson & Wiggenhorn, 2003). However, training expenditures do not guarantee training application and improved job performance. In their survey of training professionals, Saks and Belcourt (2006) found that 62% of employees apply what they learn in training immediately after attending a training program. After six months only 44% continue to apply the training material. After one year only 34% are still using what they learned in training on the job. The lack of full and sustained application of new knowledge and skill on the job has led to wide recognition of a "transfer problem" in organizations.

#### **The Transfer Problem**

Transfer of learning, often referred to as transfer of training, can be defined as the extent to which the learning that results from a training experience transfers to the job and leads to meaningful changes in work performance (Goldstein & Ford, 2002). Achieving transfer in organizations remains a theoretical and practical challenge despite previous research efforts, expectations from organizational leaders, and the best intentioned efforts from Human Resource Development (HRD) practitioners.

Researchers and practitioners have struggled with articulating the extent of the transfer problem. Estimates of transfer of learning to work performance vary based on the study cited. Indeed, some scholars have brought attention to problems with transfer estimates (Fitzpatrick, 2001; Ford, Yelon, & Billington, 2011; Saks, 2001) and the often cited 10% estimated rate of transfer (Georgenson, 1982) that has proliferated the scholarly literature. Some scholars have questioned the value of transfer estimates by suggesting these generalizations are based on several faulty assumptions, including that percentage of use is a meaningful way to represent transfer (Ford et al., 2011). The complexity of transfer, with its multiple contextual variables, makes it difficult to reduce the phenomenon to a generalization of how much of training transfers (Ford et al., 2011).

Despite the concerns with transfer estimates, whether 10%, 62%, or somewhere in between, HRD scholars and practitioners are still faced with the problem of organizations not realizing the type of sustained application of learning to job performance needed to improve organizational performance. Training can positively influence key organization performance variables such as profitability, effectiveness, and productivity and outcomes such as quality, employee retention, and employee and customer satisfaction believed to impact organization performance (Aguinis & Kraiger, 2009). Despite the potential for training to have a strategic impact on the organization, this impact cannot be assumed and is frequently inconsistent as a result of organizations not maximizing the transfer of knowledge and skills from the classroom to job performance (Saks & Belcourt, 2006). This represents an ongoing problem for HRD scholars and practitioners given that transfer of training is considered the primary mechanism through which training influences organization-level outcomes and results (Kozlowski, Brown, Weissbein, Cannon-Bowers, & Salas, 2000).

## Transfer Models

A stream of research from various disciplines and professional fields (e.g., HRD, industrial and organizational psychology, instructional technology, and human performance technology) has focused on deeply understanding what is involved in the transfer of learning to job performance. Noe (1986) promoted the idea of trainability as being a function of ability, motivation, and perceptions of the work environment. The relationship between learning and behavior change is dependent on the trainee's motivation to use learned knowledge and skills on the job and his or her perceptions of work group support and task constraints (e.g., whether the necessary equipment, rewards, or information will be provided; Noe, 1986). Baldwin and Ford's (1988) seminal review of the literature offered a model that promoted transfer as a system of factors consisting of training-input factors, training outcomes, and conditions of transfer. Since Baldwin and Ford, other researchers have proposed models of learning transfer (e.g., Burke & Hutchins, 2008; Holton, Bates, & Ruona, 2000; Kontoghiorghes, 2004) and models of training effectiveness that include factors related to transfer performance (e.g., Alvarez, Salas, & Garofano, 2004; Cannon-Bowers, Salas, Tannenbaum & Mathieu, 1995). The idea of transfer as a system of factors related to aspects of the individual, the instruction and training delivery, and the work environment is now widely accepted by researchers and practitioners.

The learning transfer system (Holton et al., 2000) has garnered significant empirical support as a model of the factors that affect learning transfer. Consistent with the transfer literature, the learning transfer system hypothesizes factors related to ability, motivation, and work environment that are believed to influence transfer. Also, the learning transfer system is the only conceptual framework operationalized through a validated instrument, the Learning Transfer System Inventory (LTSI), that assesses all of the factors hypothesized within the model.

There are other instruments designed to assess factors related to training and transfer climate (Rouiller & Goldstein, 1993; Tracey, Tannenbaum, & Kavanagh, 1995; Tracey & Tews, 2005); however, climate is only one aspect of the transfer system.

There has been significant progress in identifying factors that support and inhibit transfer; however, questions remain about the conditions under which these factors are most important to influencing changes in individual performance following training (Grossman & Salas, 2011). For example, when is each factor most important – before, during, or after training? Blume, Ford, Baldwin, and Huang (2010) suggested training research could benefit from more studies that examine transfer as a conscious choice individuals make. Questions such as why transfer is attempted, how choices are made to personalize or customize the training received, or why a choice is made not to attempt to transfer an open skill to the job have received very little attention in learning transfer research (Blume et al., 2010). Without this additional knowledge, practitioners will remain limited in their ability to effectively intervene to influence transfer.

### **Learning Transfer as an Individual Change Process**

The effort to solve the transfer problem is further hindered by a lack of attention to the individual behavior change process as a factor in learning transfer. Most studies operationalize transfer as an outcome from training that can be measured at one point in time -- either transfer occurred or it did not (Foxon, 1993). Also, transfer is typically measured at a pre-determined time following training (Blume et al., 2010). But, this view of transfer ignores the process individuals go through to reach the outcome that is being evaluated. Improvement in individual performance as a result of the application of new knowledge and skills represents a form of individual behavior change; yet, very little research has examined training and training transfer from the perspective of an individual's change process.

Behavioral, cognitive, and social theories of behavior influence the current understanding of individual behavior change (Phillips, 2005). For example, a behaviorist view suggests change is created through alterations in environmental conditions. Individuals become conditioned to behave differently as a result of these environmental stimuli. A cognitive view suggests change in an individual's thought processes and mental models is most important to promoting behavior change; whereas, a social or social cognitive view points to the individual's social environment and observations of others as important mechanisms of change. Consequently, models of individual behavior change may promote one, or various combinations, of these perspectives. Models of individual behavior change may also focus on the process of change. There is a general consensus in the literature that change is a developmental process that occurs over time. Individuals move through somewhat predictable stages or phases when moving toward adoption of new behaviors or transitioning from one state of being to another. This progression toward a new, desired, healthier, or more effective state may be helped or hindered by various factors. Several models found in the literature are representative of this developmental view of individual change. The Transtheoretical Model of Change, with over 30 years of empirical research, represents a well-researched model of developmental change.

The Transtheoretical Model (TTM), also known as the Stages of Change Model, offers a multiple theory explanation for the process of individual behavior change that incorporates elements of behavioral, cognitive, and social behavior theories. The TTM first emerged through research aimed at identifying common principles of individual change in psychotherapy (Prochaska & DiClemente, 1982). Empirical knowledge about individual change supported the idea that individuals tend to progress through a sequence of change stages (DiClemente & Prochaska, 1982). Since the early studies in the development of this model, the TTM has been

widely used in research involving health-related behaviors, including change related to the extinguishment of negative behaviors (e.g., smoking cessation) and the adoption of positive behaviors (e.g., exercise). The TTM has also been used in studies examining change within organizations. For example, Grant (2010) used TTM as a theoretical framework for examining the adoption of workplace coaching skills following management training.

Models of individual behavior change such as the TTM seek to explain the processes and conditions involved in helping individuals move from one behavior state to another. Models of learning transfer, such as the learning transfer system (Holton et al., 2000), seek to explain the factors that inhibit or promote meaningful behavior change following training. Yet, the idea of learning transfer as a personal change (Young, 2013) process has been seemingly ignored in the transfer literature. Change is the basis for improving individual, group, and organizational learning and performance in HRD. But, as a discipline, HRD has made only limited usage of empirically-tested individual change models and theories (Madsen, 2003). As a result, there is a lack of empirically-based knowledge about how the elusive, yet much desired, individual change from training actually occurs and how the learning transfer system affects this developmental process.

### **Statement of the Problem**

Despite continuing to invest heavily in employee learning and development, organizations frequently do not achieve the type and degree of improved performance expected as a result of these investments. The recognition of a “transfer problem” in organizations led to a stream of research from various disciplines. As a result, several transfer models (e.g., Baldwin & Ford, 1988; Burke & Hutchins, 2008; Holton et al., 2000; Kontoghiorghes, 2004) appear in the literature. Despite quite a bit of success at explicating the factors that support and inhibit transfer,

questions remain about the conditions under which the factors are most important to influencing changes in individual performance following training (Grossman & Salas, 2011).

Traditionally, transfer is viewed as a product or outcome – either it occurred or it did not (Foxon, 1993), and transfer is typically measured at a pre-determined time following the training (Blume et al., 2010). But, this view of transfer ignores the process learners go through to reach the outcome that is being evaluated. In order to realize a transfer outcome (i.e., improvement in individual performance), individuals must first adopt and implement changes in their work-related behaviors. Models of individual behavior change like the TTM depict change as a developmental process individuals move through in somewhat predictable stages. The individual behavior change process is a construct that has long been examined in other disciplines, but has received little to no attention in the training and training transfer literature. Lack of knowledge about the conditions under which transfer factors are most influential and lack of understanding of the process of individual change following training have hindered HRD's capacity to offer concrete and effective solutions for resolving the transfer problem in organizations.

### **Purpose of the Study**

The purpose of this study was to understand how individuals progress over time from having gained new knowledge and skills in training to achieving change in their work-related behavior and the factors that affect this change process. The following research questions guided the study:

1. How do adults involved in employer-sponsored training experience the process of individual work-related behavior change following training?
2. How do learning transfer system and other factors influence the behavior change process over time?

The learning transfer system (Holton et al., 2000) and the TTM (Prochaska & DiClemente, 1982) formed the conceptual framework for this study. The learning transfer system provides a model of the factors believed to influence the transfer of learning from the classroom to on-the-job behaviors. These factors represent potential leverages for improving transfer and training effectiveness (Holton, 2003). This model, along with the LTSI, has achieved significant empirical support. The TTM has over 30 years of empirical support for its theory of how individuals achieve behavior change. This understanding of the individual change process has proven to be consistent across a myriad of behaviors and contexts including in organizational studies (e.g., Boswell, 2011; Lyons, Swindler, & Offner, 2009; Phillips, 2005). Linking the TTM and learning transfer system could help to increase understanding of how individuals create work-related behavior change following training and provide useful insight into how to better intervene to improve learning transfer in organizations.

### **Significance of the Study**

This study has both theoretical and practical significance. First, this study advances learning transfer theory by examining transfer through the lens of individual behavior change. Although most transfer models include characteristics specific to individuals such as self-efficacy and motivation, research has yet to deeply explore and connect knowledge about individual behavior and the process of individual behavior change to learning transfer in organizations. This study provides a look into the “black box” of learning transfer. Increased understanding of what works, for whom, and under what conditions in the transition from knowledge and skill acquisition to application and improved performance will add to the transfer knowledge base. Second, this study moves transfer research in a more action-oriented direction by examining the conditions under which empirically supported transfer factors are most

influential. This additional knowledge could provide a foundation for the development of possible stage-based transfer interventions based on where trainees' are in their change process. In practice, this could shed light on how to more effectively intervene, with what types of interventions, and at what point in the transfer process. This is valuable knowledge for HRD practitioners that may help to address transfer challenges in organizations and ultimately improve HRD's strategic impact.

## CHAPTER TWO

### REVIEW OF THE LITERATURE

In this chapter, I examine the literature on learning transfer and individual behavior change that inform the study's research questions and conceptual framework. In the first section, I review the literature related to transfer of learning theory with a focus on empirical research that supports the primary factors that are believed to influence transfer. In the second section, I examine transfer models and the different ways transfer factors are conceptualized in these models. In the third section, I discuss foundational theories of individual behavior and models of individual behavior change. Finally, I review the literature on two specific individual change models that support the idea of change as a developmental process.

#### **Transfer of Learning Theory**

Transfer of learning, often referred to as transfer of training, has been studied from the perspective of various disciplines, including industrial and organizational psychology, management, and human resource development (HRD). Current definitions and descriptions of learning transfer include: a process that involves training-input factors, training outcomes, and conditions of transfer (Baldwin & Ford, 1988); the effective and continuing application, by trainees to their jobs, of the knowledge and skills gained in training – both on and off the job (Broad & Newstrom, 1992); and the extent to which the learning that results from a training experience transfers to the job and leads to meaningful changes in work performance (Goldstein & Ford, 2002). The Goldstein and Ford definition is adopted as the transfer definition for this study.

Early ideas about learning transfer referred to the ease or speed at which new information is learned considering prior learning, and transfer research was related primarily to task-to-task transfer. Accordingly, early transfer research focused primarily on factors related to the learning process or the design of instruction. For example, educational psychologist Robert Gagné's early research on learning and transfer of motor skills in the 1940s (Gagné & Foster, 1949) revealed important knowledge about how different amounts of instruction impact positive (prior learning assists in acquiring new knowledge and skills) and negative (prior learning interferes with acquiring new knowledge and skills) transfer (Fields, 2000). As Gagné refined the different aspects of his instructional theory, his early conception of transfer evolved to the more contemporary ideas of vertical and lateral transfer (Fields, 2000). Vertical transfer represents the effects of prior learning on the learning of subsequent tasks as is accounted for in Gagné's theories about cumulative learning and learning hierarchies. Lateral transfer refers to how the learning of a given task will generalize to performance of the same type of task in a different context (Gagné, 1985). The promotion of both lateral and vertical transfer continues to be a relevant issue in transfer research today. The notion of lateral transfer is directly related to the transfer of learning from the classroom to the work setting.

Industrial psychologists like Irwin Goldstein helped to create a bridge between the work of educational psychologists and the task of improving performance in business and industry. Goldstein's Instructional Systems Design (ISD) model (Goldstein, 1974) focused on the criticalness of analyzing the organizational context that impacts instructional development and delivery and performance improvement. His discrimination between *training validity* and *performance validity* reflected his ideas about the nature of training and training transfer in organizations. Training validity refers to the validity of the training program and is established

through assessment of trainee performance on training program objectives. Performance validity is the validity of the training program as measured by performance in the job setting (i.e., the transfer outcome; Goldstein, 1979). Performance validity requires consideration of training success criteria and consideration of the potential disruptive effects of organizational constraints (Goldstein, 1979).

In addition, a growing interest in training evaluation in the late 1960s (e.g., Kirkpatrick's four level model) helped to increase interest in enhancing the potential for training to actually have an impact on effectiveness back on the job. Studies began to appear that identified some of the factors thought to support learning transfer in organizational settings. For example, Baumgartel and Jeanpiere (1972), in their study of management development programs, found that people in favorable organizational climates (e.g., freedom to set personal performance goals, risk taking encouraged, growth-oriented) are most likely to apply new knowledge. Noe (1986) noted the need for training to go beyond Kirkpatrick's four levels as measures of training effectiveness and consider the attitudes, interests, and expectancies of trainees and how these enhance training effectiveness. Noe promoted the idea of trainability as being a function of ability, motivation, and perceptions of the work environment. The relationship between learning and behavior change is dependent on the trainee's motivation to use learned knowledge and skills on the job and their perceptions regarding work group support and task constraints (e.g., whether the necessary equipment, rewards, or information will be provided; Noe, 1986).

Baldwin and Ford's (1988) review of the literature pulled together early transfer research and offered a model that promoted transfer as a system of training input factors, training outcomes, and conditions of transfer. Since Baldwin and Ford's seminal review, some consensus has emerged in transfer research as to the primary factors that impact transfer of learning to job

performance. These factors can be grouped into the primary domains of trainee characteristics, training design and delivery, and work environment. The following is a review of the literature in each of these primary domains.

### **Trainee Characteristics**

The characteristics and perceptions of individual learners and the effect of these on training outcomes is a well-researched area in the training literature. There is significant empirical support for the specific factors of self-efficacy, motivation, and cognitive ability (Grossman & Salas, 2011). Other factors related to trainee personality have also been examined in training and training transfer research.

**Self-efficacy.** Derived from social cognitive theory and the work of psychologist, Albert Bandura, self-efficacy is defined as judgments trainees make about their competency to perform tasks, including the belief that they are able to change their performance when they want (Gist, 1987; Holton et al., 2000). The positive relationship between self-efficacy and learning transfer is supported across multiple studies (e.g., Chiaburu & Lindsay, 2008; Chiaburu & Marinova, 2005; Gaudin & Saks, 2004). In addition, in the Colquitt, LePine, and Noe (2000) meta-analysis examining training motivation, self-efficacy was identified as a significant predictor of both training motivation and training outcomes. Furthermore, studies involving interventions designed to improve self-efficacy have pointed to increased transfer performance being linked to improved self-efficacy (Gist, Stevens, & Bavetta, 1991; Morin & Latham, 2000). Meta-analytic findings also support self-efficacy, specifically post-training self-efficacy, as having a positive relationship with transfer (Blume et al., 2010; Huang, Blume, Ford, & Baldwin, 2015). Individuals with higher self-efficacy will be more confident in their ability to learn and perform new skills. This degree of confidence has an impact on their motivation to learn and their

motivation to transfer training (Holton, 1996) and ultimately on whether a transfer outcome is achieved.

**Motivation.** Expectancy theory provides much of the theoretical support for how motivation impacts the transfer of learning to job performance. As applied to training and performance, expectancy theory holds that participation in development activities are dependent on an individual's beliefs about effort to performance (i.e., expectancy) and performance to outcome (i.e., instrumentality) relationships and the value placed on outcomes associated with the development activity (i.e., valence; Farr & Middlebrooks, 1990). Participants must believe their effort to learn will change their performance and a change in their performance will lead to outcomes they value (Faction, Dobbins, Russell, Ladd, & Kurdish, 1995). For example, in their study of the importance of self-efficacy and training instrumentality, Chiaburu and Lindsay (2008) concluded training instrumentality, defined as an individual's belief that performing a specific behavior will lead to a desired outcome, is a primary driver of motivation to transfer, which, in turn, impacts actual transfer. In addition, equity theory (the perception that members of an organization are treated fairly in relation to others impacts motivation) and goal-setting theory (an identified object or aim of behavior an individual is trying to accomplish provides motivation) have also been noted as supporting theories for motivation to transfer (Yamhill & McLean, 2001).

There are several different applications of motivation theory found in the transfer literature. One is the construct of *perceived utility*. Trainee perceptions of the utility and practical relevance of the training have been supported as influences on trainee motivation (Axtell, Maitlis, & Yeara, 1997; Baumgartel, Reynolds, & Pathan, 1984; Lim & Morris, 2006; Ruona, Leimbach, Holton, & Bates, 2002; Velada & Caetano, 2007). Factors that influence trainee perceptions of

training utility include trainee recognition of a need to improve job performance, evaluation of the credibility of the new skills for improving their performance, beliefs that applying new learning will lead to improved performance, and perceptions about how practical the new skills are for applying them on the job (Burke & Hutchins, 2007). Second, the construct of *learner readiness*, defined as the extent to which individuals are prepared to enter and participate in training, is also believed to influence trainee motivation (Holton et al., 2000). Learner readiness can be traced to Malcolm Knowles' model of andragogy, which includes the core assumptions that adults need to know why they need to learn something before learning it, and adults typically become ready to learn when they experience a need to cope with a life situation or perform a task (Knowles, Holton, & Swanson, 1998). The related construct of *pre-training motivation*, which is defined as the learner's level of intensity and desire measured prior to the training intervention (Chiaburu & Marinova, 2005; Fecteau et al., 1995) has also been found to impact transfer outcomes.

Finally, the concept of *motivation to transfer* has received support in the empirical literature (Blume et al., 2010; Huang et al., 2015). Described as the trainee's desire to apply knowledge and skills developed in training to a real world work situation (Noe & Schmitt, 1986), motivation to transfer is considered an important precursor to employee application of new knowledge (Holton et al., 2000). For example, Axtell et al. (1997) found that trainees' motivation to transfer learned skills was a major predictor of trainee ratings of transfer one month and one year after training. Trainees who were originally more motivated were likely to put more effort into initially transferring and subsequently maintaining a high level of use of trained skills. Although there are strong reasons to believe motivation to transfer is a significant predictor of actual transfer, there have been few empirical studies (like Axtell et al., 1997) that

actually measured motivation to transfer as the independent variable that impacts transfer, and the inconsistencies in criteria and methods used to assess transfer in these studies is a weakness in the body of support for this factor (Gegenfurtner, Veermans, Festner, & Gruber, 2009). In addition to being a factor that directly influences transfer outcomes, motivation to transfer has also been examined as an outcome variable influenced by motivation to learn (Kontoghiorghes, 2002), utility reactions to training (Ruona et al., 2002), transfer climate factors (Seyler, Holton, Bates, Burnett, & Carvalho, 1998), and organizational learning culture (Egan, Yang, & Bartlett, 2004).

**Cognitive ability.** Research has shown that the individual trainee's cognitive ability or overall intelligence can impact learning and the ability to apply learning content. Noe (1986) noted that the cognitive and psychomotor skills trainees possess directly influence whether they will be able to understand and master the content of the training. Velada, Caetano, Michel, Lyons, & Kavanagh (2007) found training retention, which they related to cognitive ability, was significantly related to transfer of learning. Trainees must have the ability to retain the knowledge instilled during the training program in order to facilitate the transfer process (Velada et al., 2007). In addition, Colquitt et al. (2000) found a moderately high (.43) correlation between cognitive ability and learning transfer. Similarly, in their meta-analysis of transfer research, Blume et al. (2010) found that cognitive ability had the highest predictive factor of transfer among the trainee characteristic variables. However, most recently, meta-analytic findings revealed the impact of cognitive ability on transfer varies depending on how transfer is operationalized and the context in which transfer is evaluated (Huang et al., 2015). Given these findings, transfer researchers cannot dismiss the role that trainee intellectual ability plays in the transfer process. However, in organizational settings, practitioners cannot choose who attends

training and who does not based on intellectual ability. The learning transfer system (Holton et al., 2000) broadens the idea of ability from the trainee's cognitive ability to elements that help to enable trainees' ability to transfer learning (Holton, 1996). These ability-enabling factors are related to the design and delivery of the training and elements of the work environment.

**Personality characteristics.** In studies pre-dating the Baldwin and Ford 1988 review, only locus of control and a high need for achievement had been identified as possible personality factors affecting transfer (Baumgartel et al., 1984; Noe & Schmitt, 1986). The literature now includes studies examining the impact of the so called big five personality factors: neuroticism (sometimes referred to as emotional instability), extraversion, openness to experience, agreeableness, and conscientiousness. Several of these factors have been examined in relationship to performance motivation (Judge & Ilies, 2002), training motivation (Colquitt et al., 2000), job performance (Barrick & Mount, 1991), and transfer-related behaviors such as transfer implementation intentions (Machin & Fogarty, 2004) and motivation to improve work through learning (Naquin & Holton, 2002). In a study to test a model of the impact of specific dispositional factors on intent to transfer, only conscientiousness was significantly related to transfer intentions (Yamkovenko & Holton, 2010). When examined collectively, the dispositional variables studied accounted for only 10% of the variance in intent to transfer. Instead, the majority of the variance was attributed to environmental factors. Similarly, in the Blume et al. (2010) meta-analysis only conscientiousness and neuroticism had moderately strong relationships with transfer. Conscientiousness may be most impactful when transfer is evaluated in the context of long-term performance on the job (Huang et al., 2015). Blume et al. concluded that although there are some significant relationships between individual characteristics and transfer across studies, there are few consistently strong individual predictors of transfer. In

addition, there is no clear superiority of individual variables over situational variables, or the reverse. That is, the achievement of transfer is no more dependent upon the characteristics that individuals bring to the training situation than it is dependent upon situational variables such as the trainee's work environment or the design and delivery of the training (Blume et al., 2010). This further supports and reinforces the notion of learning transfer as a system of interdependent factors. Given these results, it seems the jury is still out on whether, and to what extent, trainee personality traits impact transfer.

### **Training Design and Delivery**

The second primary domain within learning transfer theory consists of factors associated with training design and delivery. As noted previously in this chapter, early transfer research focused primarily on factors related to the learning process or the design of instruction. Therefore, much of the theory that supports this domain is related to elements of instructional design believed to help facilitate transfer. This encompasses theories such as identical elements (i.e., how similar the training content is to the work environment conditions), principles theory (i.e., teaching general principles or rules necessary to learn a task so that the learner can apply these to problems in a different context), and stimulus variability (i.e., use of different forms of relevant training stimuli; Kozlowski & Salas, 1997). Training design and delivery factors include those related to instructional design elements, content validity, the transfer design, and trainer characteristics.

**Instructional design elements.** Different instructional strategies are associated with improved learning transfer. These include adequate practice and feedback (Holladay & Quinones, 2003; Lee & Kahnweiler, 2000), overlearning (i.e., repeated practice after initial mastery has been demonstrated; Driskell, Willis, & Copper, 1992), and behavior modeling with

the inclusion of both positive and negative models (Taylor, Russ-Eft, & Chan, 2005). In addition, the use of authentic training and practice settings, including training that mirrors the environment in which training skills will be applied, has been found to be an important factor in learning transfer across multiple studies (Grossman & Salas, 2011). This includes use of instructional techniques such as identical elements and stimulus variability that allow trainees to gain experience with multiple conditions that could possibly occur on the job, as well as the use of techniques such as simulations, role-plays, and practice scenarios that are closely aligned with the actual work environment (Grossman & Salas, 2011).

**Content validity.** The concept of *content validity* is defined as the extent to which trainees judge training content to reflect job requirements accurately (Holton et al., 2000). The validity of the training content can either support or hinder the ability of trainees to transfer learned skills to the job; and as such, should be considered an ability-enabling factor (Holton et al., 2000). Judgments about the training content can also impact trainee perceptions of the overall utility and value of the training, which, as described previously, is a significant influence on motivation to transfer learning. The relationship between content validity and learning transfer has been examined in a number of studies (e.g., Lim & Johnson, 2002; Lim & Morris, 2006; Saks & Belcourt, 2006). For example, Lim and Morris (2006) noted that trainees experienced a certain degree of need to transfer learning to their jobs and tasks when the training content and their job functions were related. In addition, trainees were more motivated both to learn and transfer learning when they expected to immediately use what they had learned in training. In other words, the relevance of the training to their current job needs played a significant role in their learning and transfer efforts. Similarly, credibility, practicality, and need were found to be

primary factors that influenced autonomous professionals to form the intent to transfer knowledge and skills (Yelon, Sheppard, Sleight, & Ford, 2004).

**Transfer design.** Defined as the extent to which training has been designed and delivered to increase ability to transfer learning to the job (Holton et al., 2000), the connection to instructional design theory is clear. However, this factor goes beyond instructional design for the training event to include specific strategies that can be added as pre or post-training interventions to enable trainees' ability to achieve transfer. Pre-training interventions such as meetings with supervisors (e.g., Brinkerhoff & Montesino, 1995) program orientations (Martin, 2010), and prior exposure to the training content (e.g., Weissbein, Huang, Ford, & Schmidt, 2011) have been shown to improve learning transfer as have post-training interventions such as relapse prevention (Burke & Baldwin, 1999; Gaudine & Saks, 2004; Tziner, Haccoun, & Kadish, 1991), goal setting (Richman-Hirsch, 2001), action planning (Cowan, Goldman, & Hook, 2010; Foxon, 1997), and supervised on-the-job practice (Heaven, Clegg, & Maguire, 2006). In a meta-analysis examining the performance impact of training alone versus training plus transfer activities, the use of transfer activities improved performance between 11 and 24% over that of training alone (Leimbach, 2010). This impact was also found in the Antle, Barbee, Sullivan, and Christensen (2009) experimental study of the impact of classroom only, classroom plus reinforcement, and no training on the performance of assessment and case planning skills. These researchers found that providing both training and reinforcement yielded a higher level of performance than training alone or no training. Despite the potential of pre and post-training transfer interventions, research demonstrating the effectiveness of specific transfer interventions has been mixed. Although some studies reported successful interventions, the overall meta-analytic effect sizes of existing transfer interventions on transfer were only small to moderate (Blume et al., 2010).

However, this does not mean that transfer interventions are not worthwhile; instead, the limited impact found may have been a result of the way the intervention was designed and implemented (Blume et al., 2010). Additional research is needed that tests transfer predictor variables in the context of the application of interventions to improve transfer (Blume et al., 2010).

**Trainer characteristics.** Although one might assume that a trainer's performance in the learning environment would impact transfer, researchers are beginning to identify specific trainer characteristics and the mechanisms through which these characteristics influence transfer. Trainer characteristics include credibility, knowledge of the subject matter, professional experience, knowledge of adult learning strategies, knowledge about the transfer of learning process, and demonstrated mental and emotional involvement with the instruction (Hutchins, 2009; Lim, 2000; Russ-Eft, Dickison, & Levine, 2010; Yelon et al., 2004). Additional research is needed on trainer characteristics and the professional development of trainers (Hutchins, Burke, & Berthelsen, 2010) to determine the impact of these factors on transfer outcomes.

**Type of training content.** The factors that influence transfer may differ based on the type of training being delivered although most research seems to assume the training content is irrelevant to transfer outcomes (Laker & Powell, 2011). There is growing evidence that soft skills (intrapersonal and interpersonal skills such as self management and management of interactions with others) are more difficult to transfer than hard skills (technical skills that involve working with equipment, data, or software; Laker & Powell, 2011). Similarly, meta analytic results revealed the relationship between several of the transfer variables and the transfer outcome was contingent on whether the trained skills were open (i.e., principles that reflect a freedom to perform as the trainee sees fit rather than a single correct way) or closed (i.e., specific skills that are to be performed identically on the job as was learned in training; Blume et al.,

2010). In their study of the use of a theory of change approach to evaluate executive leadership development programs, Watkins, Lysø, and deMarrais (2011) drew attention to the issue of transfer of open skills. They examined outcomes at different levels including changes in knowledge and skill while in the program and changes in participant behavior after the program. These researchers demonstrated the usefulness of the Critical Incident Technique as an approach for evaluating change at different levels (i.e., short-term and intermediate individual changes, organization level changes) when the nature of what is learned is not specific (Watkins et al., 2011). They also noted the need for alternative ways to assess transfer when training is more open-ended and complex (Watkins et al., 2011). Although there are some differences between the concepts of hard and soft skills and open and closed skills, both of these constructs represent important distinctions relative to the content of training. Blume et al. (2010) noted the need to include the type of training and related learning objectives in reports of transfer studies and to engage in research involving different types of training content in order to better inform the learning transfer knowledge base.

### **Work Environment**

Although transfer studies have identified different factors and varied in the degree to which these factors impacted transfer, there is significant agreement that the work environment is a critical part of the transfer equation. The factors of transfer climate, support, and opportunity to perform new skills on the job have received the most consistent support in the empirical literature (Blume et al., 2010; Grossman & Salas, 2011). There are also several emerging factors related to the work environment that should also be considered.

**Transfer climate.** In an often cited study of transfer climate, Rouiller and Goldstein (1993) found that when trainees were assigned to units that had a more positive organizational transfer climate, they were rated as better performers of the behaviors learned in training.

Characteristics of a positive transfer climate included cues that remind participants of their training or provide them with an opportunity to use their new skills on the job, positive consequences for the correct use of skills, and negative consequences for the incorrect or lack of use (Rouiller & Goldstein, 1993). Since Rouiller and Goldstein, several studies have found a direct and significant relationship between transfer climate and transfer outcomes (e.g., Bates, Holton, Seyler, & Carvalho, 2000; Kontoghiorghes, 2001; Lim & Morris, 2006; Tracey et al., 1995). The primacy of the work environment is further confirmed through meta-analyses in which transfer climate had the highest relative relationship with transfer (Blume et al., 2010) and workplace support demonstrated a moderate association ( $\rho = .22$ ) with overall transfer (Huang et al., 2015). Different factors associated with the work environment have been examined in transfer research. Of these, supervisor and peer support have received the most consistent support.

**Supervisor support.** Research has demonstrated that supervisor support increases the likelihood of transfer of learning to job performance, and conversely the lack of this support negatively impacts transfer (Chiaburu, Van Dam, & Hutchins, 2010; Clarke, 2002; Cromwell & Kolb, 2004; Gilpin-Jackson & Bushe, 2007; Lim & Johnson, 2002). Supervisor support activities examined in the literature include pre and post training discussions with trainees, supervisor involvement in training, coaching and modeling behaviors, and setting expectations for transfer. Although some studies did not confirm a strong relationship between supervisor support and transfer (e.g., Awoniyi, Griego, & Morgan, 2002; Devos, Dumay, Bonami, Bates & Holton, 2007), the evidence in support of this factor outweighs the evidence against.

**Peer support.** The specific factor of peer support is also considered a significant influence on the transfer of learning (Chiaburu & Marinova, 2005; Cromwell & Kolb, 2004;

Gilpin-Jackson & Bushe, 2007; Wehrmann, Shin, & Poertner, 2002). In one study of the effect of peer support on transfer, Martin (2010) found that trainees in a more favorable work climate and with greater peer support showed greater improvement in their work performance following training. Interestingly, trainees who had peer support, but were in a negative work climate achieved the same degree of transfer as those in a positive climate. These results suggested peer support can overcome the larger environmental climate in promoting transfer. The exact type of peer support that is most facilitative of transfer has yet to be clearly defined in the literature; however, peer support may be more about the degree to which trainees identify with the peer group that is providing support than formal peer groups that exist as a result of organizational function or structure (Cromwell & Kolb, 2004; Pidd, 2004).

**Opportunity to perform and follow up.** For training to successfully transfer, trainees need to be provided with the resources and opportunities to apply their new skills and abilities to the workplace (Cromwell & Kolb, 2004; Gilpin-Jackson & Bushe, 2007; Grossman & Salas, 2011; Holton et al., 2000; Lim & Johnson, 2002; Wehrmann et al., 2002). In addition, some form of follow up after training (e.g., additional learning opportunities, coaching and feedback) has been found to impact learning transfer outcomes (Antle et al., 2009; Heaven et al., 2006; Velada et al., 2007). Building these types of activities into the transfer design may be an effective way to help ensure trainees are provided with these needed opportunities.

**Organizational culture.** The impact of the larger organization's culture represents an emerging factor in the transfer literature. Cultural variations in organizations suggest that not every organization can or should build the same type of transfer system (Holton, Chen, & Naquin, 2003). For example, Holton et al. (2003) found significant differences across types of organizations on all but two transfer factors. Employees in the nonprofit organization had higher

motivation to transfer than those in public and private organizations. Public organizations had significantly higher resistance to new learning, and private organizations had significantly greater opportunity to apply learning. These findings suggest that, based on the organizational culture, the most effective transfer system may be one in which specific transfer factors are enhanced and managed (Holton et al., 2003). Egan (2008) found that organizational subculture was highly associated with employee motivation to transfer learning. This association was far higher in organizational subculture than the larger organizational culture. Furthermore, supportive and innovative subcultures had significant positive relationships with motivation to transfer, but bureaucratic subcultures negatively influenced this factor. Finally, transfer may be influenced by factors such as a high performance team environment, a risk taking and innovation driven culture, and a quality driven culture (Kontoghiorghes, 2004). More research is needed to clearly define what organizational culture means as applied to training effectiveness, what cultural factors have the most impact on training transfer, and how cultural factors are similar, dissimilar, inclusive, or exclusive of factors in the transfer climate.

**Accountability.** Accountability is another emerging transfer factor associated with the work environment. Accountability can be thought of as the degree to which the organization expects learners to use trained knowledge and skills on the job and holds them responsible for doing so (Brinkerhoff & Montesino, 1995; Kontoghiorghes, 2002). Burke **and** Saks (2009) offered a possible framework for promoting accountability for transfer that includes the use of a training transfer audit to help determine accountability lapses, communicate expectations, and evaluate transfer outcomes. Very few studies have included issues related to accountability for transfer; however, in the studies that have included some form of accountability mechanism, a linkage to transfer was found. For example, Saks and Belcourt (2006) found that accountability,

which was operationalized as requiring trainees to submit a post-training report or participate in an interview after attending a training program, was significantly related to transfer. Taylor et al. (2005) found transfer was greater when trainees were rewarded for using new skills or sanctioned for not using them. Integrating the use of newly learned skills into performance appraisals proved to enhance the transfer of training to the job. Finally, Saks and Burke (2012) found the frequency of training evaluation conducted within organizations and the level of training evaluation (behavior change and results) influenced the transfer of learning. Additional research is needed to further define the construct of accountability and to discover linkages between the construct and transfer outcomes.

### **The Impact of Different Transfer Conceptualizations**

The way transfer is operationalized and measured matters and can significantly affect study results (Baldwin & Ford, 1988; Blume et al., 2010). Although transfer research has led to the identification of factors believed to influence transfer as noted in the previous section, the varied conceptualizations of transfer used in research have impacted the learning transfer knowledge base. Baldwin and Ford (1988) noted various problems with the way transfer was operationalized and measured in research studies. The transfer literature has evolved to address some of the issues noted in this early review (Blume et al., 2010; Ford & Weissbein, 1997); however, problems still remain. Huang et al. (2015) attempted to bring further clarity to the operationalization of transfer by distinguishing between what they termed “maximum transfer” and “typical transfer” as different contexts for the evaluation of transfer outcomes. In a maximum transfer context, trainees are given explicit or implicit prompts to maximize effort while demonstrating the skill transfer, typically for a short period of time. In the maximum transfer context, the researcher or evaluator is measuring a “can do” construct (i.e., whether the

trainee has enhanced capacity to apply new knowledge and skills). On the other hand, in the typical transfer context, trainees transfer skills without prompts, over an extended period of time, and without knowing of, or consciously focusing on, the fact the skill transfer is being evaluated. In the typical transfer context, the measurement is a “will do” construct. That is, whether or not the trainee will apply what was learned on the job (Huang et al., 2015). The typical transfer context is the most consistent with Goldstein and Ford’s (2002) definition of transfer, which is the definition of transfer that guided this study. Huang et al. (2015) found the factors influencing the maximum and typical transfer contexts were different as hypothesized. Declarative knowledge, skill acquisition, and cognitive ability had the most influence on maximum transfer while motivation to transfer, conscientiousness, and workplace support most influenced typical transfer. This finding further strengthens the support for these factors when transfer is viewed as long-term job performance.

### **Section Summary**

Foundational and current literature point to the primary domains of trainee characteristics, training design and delivery, and work environment as being critical to influencing the transfer of learning to on-the-job performance. Within these domains, there are numerous factors believed to influence transfer. Several of these have gained significant support in empirical studies. These include self-efficacy, motivation, a positive transfer climate, and supervisor and peer support. In addition, factors such as organizational culture and climate and accountability have emerged in the literature. However, interpretation of findings from transfer studies should be examined in light of how transfer was operationalized and measured such that transfer in the learning context is clearly distinguished from transfer in the performance context. In the next section, I examine the different ways transfer factors are conceptualized in transfer models.

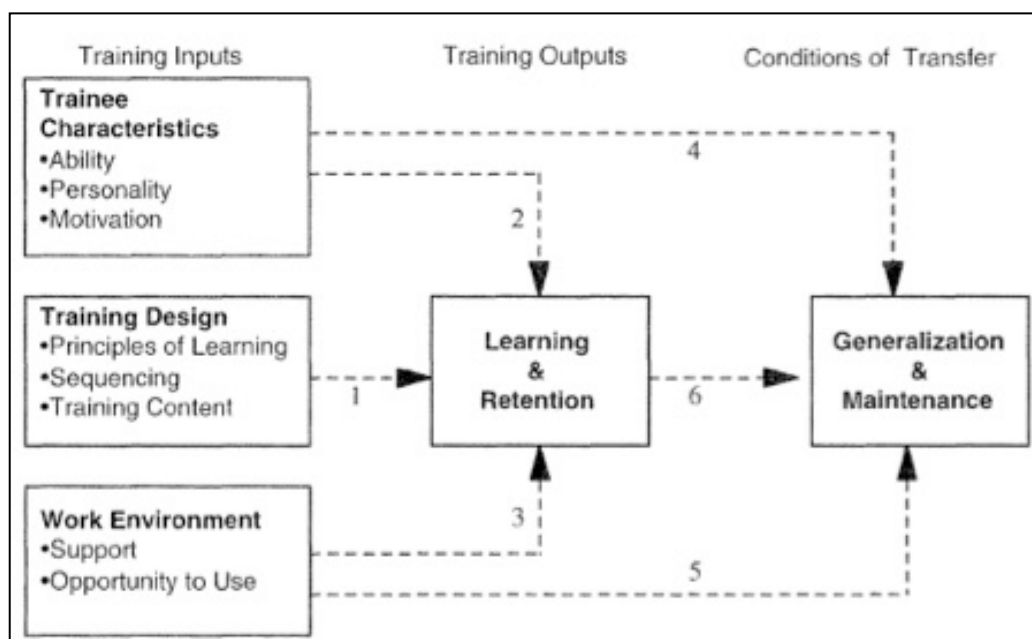
## **Transfer of Learning Models**

The idea of transfer as a system of factors related to aspects of the individual, the training design and delivery, and the work environment is widely accepted in the transfer literature and there are numerous models for understanding and managing these complex relationships. The models included in this review were chosen because of their prevalence in or relationship to HRD research and practice and their applicability to this study. The models proposed by Baldwin and Ford (1988), Foxon (1993), Kontoghiorghes (2004), Burke and Hutchins (2008), and Holton et al. (2000) are reviewed in this section.

### **Baldwin and Ford Model**

Baldwin and Ford (1988) conducted an extensive literature review that included 63 empirical studies spanning the period from 1907 to 1987. They organized their review around a conceptual model that promoted training as a system of training input factors, training outputs, and conditions of transfer. Conditions of transfer consist of generalization (the extent to which material learned in training is applied in the job context) and maintenance (the extent to which changes that result from a learning experience persist over time). Baldwin and Ford hypothesized that the conditions of transfer are directly influenced by learning and retention (the training outputs). Participants must first learn and retain the training material before transfer can occur. The training outputs are directly impacted by trainee characteristics, training design, and the work environment (the training inputs). Generalization and maintenance are also directly impacted by trainee characteristics and the work environment regardless of the initial learning during the training program or retention of the training materials. Although trainees may learn new skills, these skills may not be generalized to and maintained on the job because of individual factors such as a lack of motivation or work environment factors such as a lack of supervisor

support (Baldwin & Ford, 1988). Finally, training design directly impacts learning and retention and as a result indirectly impacts transfer outcomes. The distinction made between generalization and maintenance suggests an element of time or development within the transfer process. Figure 1 depicts the Baldwin and Ford transfer model.



*Figure 1.* Baldwin and Ford Model of Training Transfer (Baldwin & Ford, 1988)

The Baldwin and Ford (1988) model remains the most frequently cited and used as a conceptual framework for empirical studies (Brown & Sitzmann, 2011). The model has been used in studies for different purposes, including to further identify, define, and/or validate different factors believed to influence transfer (e.g., Cromwell & Kolb, 2004), to develop models applicable to transfer in international contexts (e.g., Lim & Morris, 2006), and to test for applicability in different types of organizations (e.g., Clarke, 2002). Many of the subsequent transfer models evolved from the foundation set by Baldwin and Ford.

### **Foxon Process Model of Training Transfer**

Foxon (1993) presented a unique conceptualization of transfer as a process consisting of stages through which the transfer effort can be tracked. She noted the difficulty of evaluating transfer when it is viewed as a product or an outcome, especially when dealing with intellectual or open skills. The degree and time of application of such skills will vary from person to person which complicates the evaluation of transfer (Foxon, 1993). This staged process begins with transfer intention that is formed at the end of a training course and proceeds through the stages of transfer initiation, partial transfer, and transfer maintenance, which is defined as the application of the learning to the job over a period of time, so that job performance is permanently enhanced (Foxon, 1993). Without the formation and support of transfer intention after the learner has returned to the workplace, progression toward transfer will not occur (Foxon, 1993; Machin & Fogarty, 2003). Figure 2 depicts the stages of the transfer process as promoted by Foxon.

Foxon (1993) also categorized factors influencing this process as either supporting or inhibiting movement through the stages. The intention to transfer is initially impacted by factors operating within the training environment but then is later impacted by factors operating within the immediate workplace and the larger organizational environment (Foxon, 1993). Figure 3 depicts the model of factors influencing transfer intentions. The empirical literature (e.g., Al-Eisa, Furayyan, & Alhemoud, 2009; Machin & Fogarty, 2004) on the formation of transfer intention is limited. As a result, it is difficult to determine the extent of empirical support for factors hypothesized in Foxon's model. I also found no subsequent research attempting to validate Foxon's model through empirical study. Still, this proposed model that characterizes transfer as a developmental process speaks directly to how transfer might be experienced as a process of individual change.

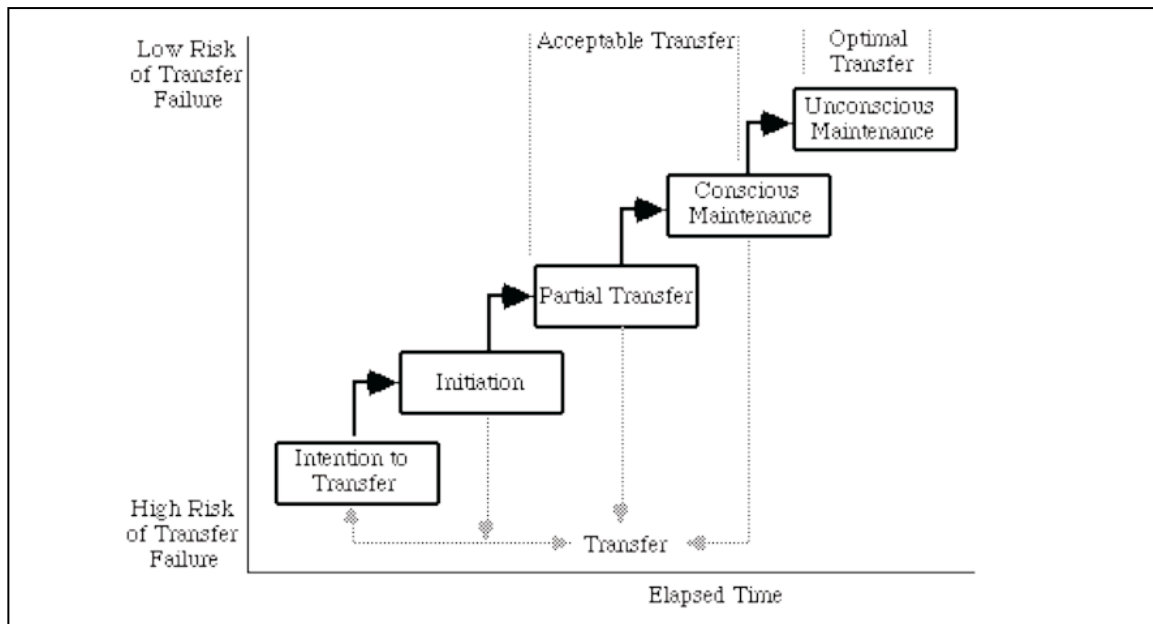


Figure 2. Foxon Stages of the Transfer Process (Foxon, 1993)

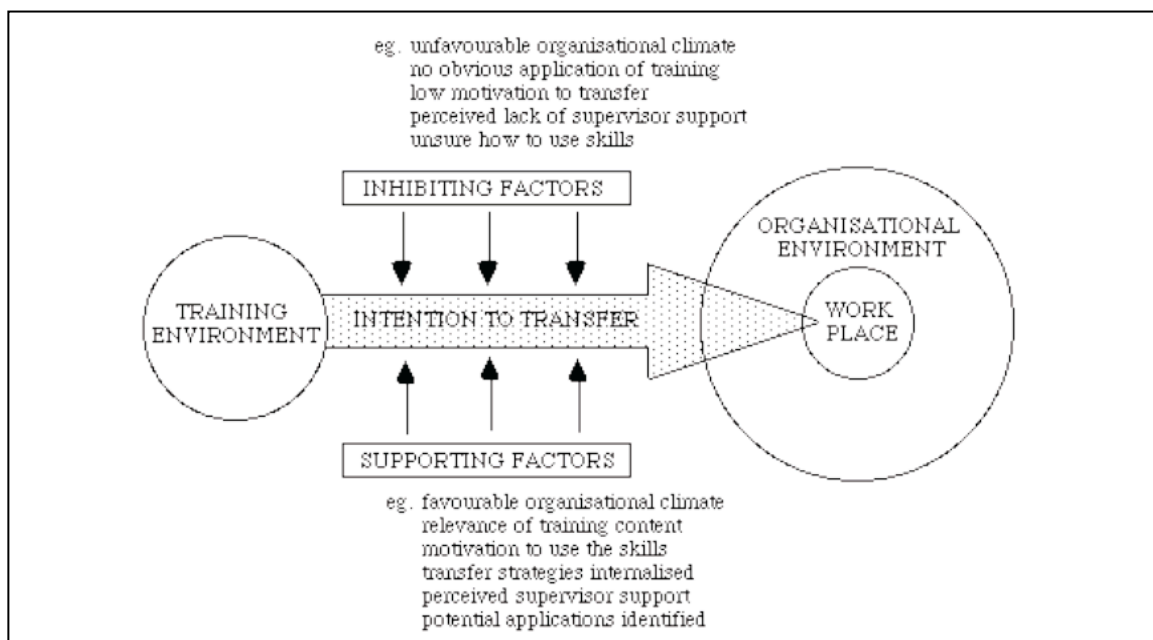


Figure 3. Foxon Inhibiting and Supporting Factors Influencing Transfer Intention

### **Kontoghiorghes Model**

Kontoghiorghes (2004) critiqued traditional models of transfer, such as the Baldwin and Ford model, for treating training and training transfer as being “a non-systemic phenomenon, independent of the variables that affect performance (Kontoghiorghes, 2004, p. 211). In traditional transfer models, the work environment domain focuses on factors related to transfer climate and ignores factors found in the larger organizational system (Kontoghiorghes, 2002, 2004). The training transfer model proposed by Kontoghiorghes incorporated organization level factors that have been found to affect employee and organizational performance; thereby, further emphasizing the connection between training and performance. Kontoghiorghes (2004) hypothesized that trainee characteristics, training design, and training transfer climate influence motivation to learn and motivation to transfer, both of which are predictors of training transfer. Training transfer then leads to individual and/or organizational performance. In this model, training transfer is depicted as an intermediate outcome that precedes attainment of individual and/or organizational performance. This is compared to Holton et al. (2000) where training transfer, or transfer performance, *is* the individual performance outcome. Finally, the Kontoghiorghes model hypothesized that the work environment influences individual and organizational performance, motivation to learn, and motivation to transfer. A work environment conducive to high performance impacts trainee beliefs that learning efforts will result in an attainable and desirable outcome, which in turn results in higher levels of motivation to learn during training and motivation to transfer learning back to the job (Kontoghiorghes, 2004). Figure 4 depicts the Systemic Model of Learning Transfer promoted by Kontoghiorghes.

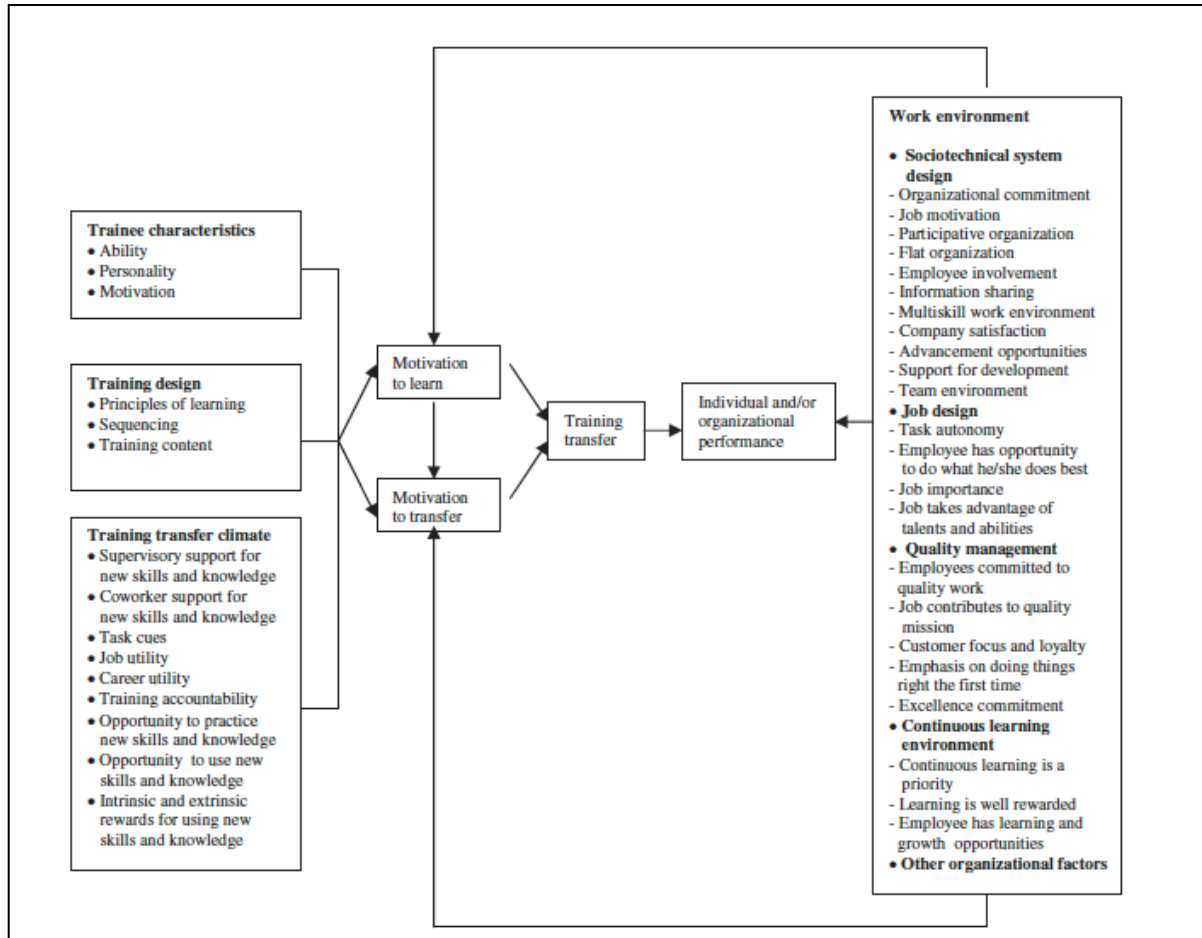


Figure 4. Kontoghiorghes Systemic Model of Learning Transfer (Kontoghiorghes, 2004)

Validation of this model was tested in a study involving 198 employees working in an information technology division of a U.S. corporation. Successful transfer was predicted by transfer climate and motivation to transfer as would be expected, but also by the work environment factors included in the study, including organizational commitment, a high performance team environment, job motivation and satisfaction, and awareness of how one's job contributes to the organization's quality mission (Kontoghiorghes, 2004). Other studies (e.g., Bates & Khasawneh, 2005; Egan, 2008) have explored the impact of organization level factors on learning transfer but not to the extent proposed in the Kontoghiorghes model.

Kontoghiorghes (2004) called for additional research to test the model constructs in varying

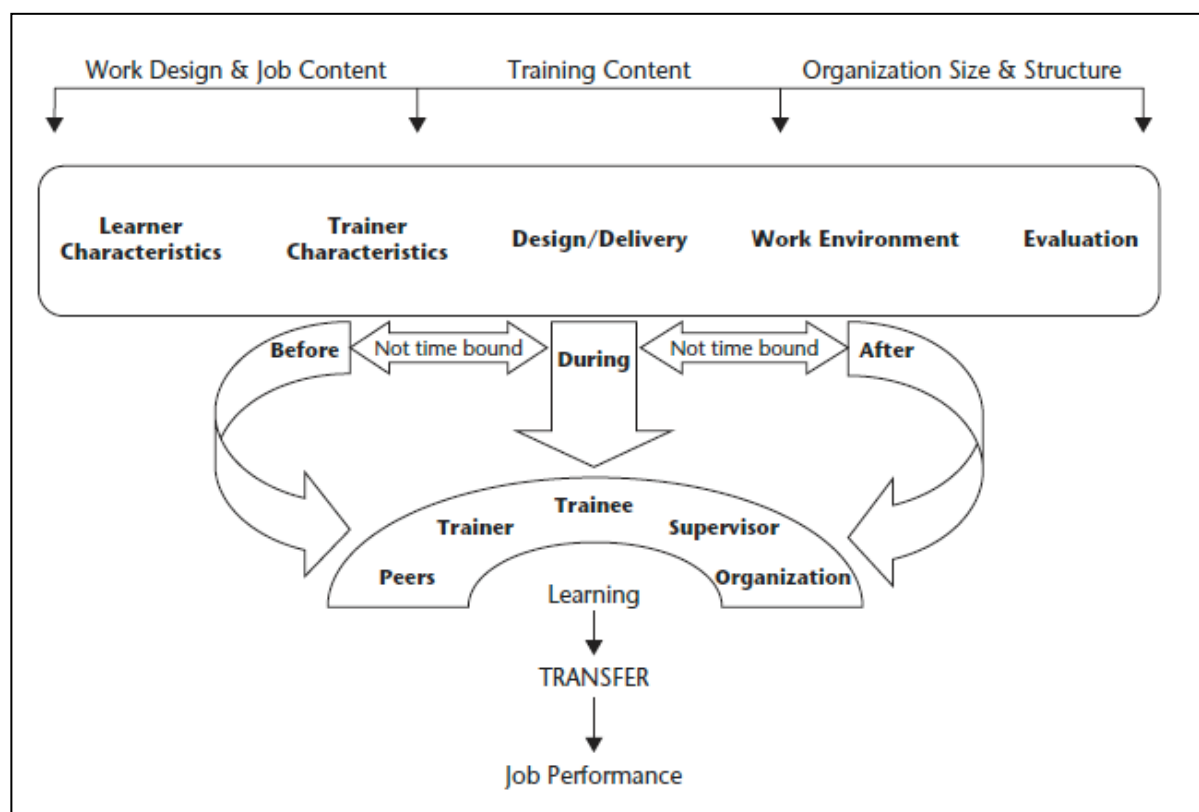
contexts and to continue the identification of organizational factors that are critical to transfer outcomes; however, no additional studies were found in the empirical literature testing this model.

### **Burke and Hutchins Model**

The Burke and Hutchins (2008) study of transfer best practices led to the development of their proposed model of transfer. Burke and Hutchins added trainer characteristics and training evaluation as major influences to learning transfer in addition to the widely accepted categories of learner characteristics, training design and delivery, and the work environment. They depicted the temporal dimensions of transfer planning and intervention as going beyond the generally accepted before, during and after taxonomy (Broad, 2005; Broad & Newstrom, 1992) to reflect that transfer strategies can work across all these phases and therefore are not time bounded (Burke & Hutchins, 2008). In addition, they expanded stakeholder partnerships (Broad, 2005; Broad & Newstrom, 1992) to include peers and the organization in general. Also unique to this model is the inclusion of moderating variables of work design and job content, training content (technical vs. interpersonal skills training), and organization size and structure. The differences in these moderating variables may influence use of new skills on the job and associated transfer interventions (Burke & Hutchins, 2008). For example, training content that is highly skill-driven or experiential may require different types of transfer interventions than training content that is more focused on cognitive outcomes (Burke & Hutchins, 2008). Finally, the Burke and Hutchins model defined the different levels of outcomes from training as learning, transfer, and job performance. This explicit statement of job performance as the ultimate goal of training and training transfer is consistent with Holton et al. (2000) and Kontoghiorghes (2004); however, in

line with Kontoghiorghes, transfer is depicted as an interim step leading to job performance.

Figure 5 depicts the Burke and Hutchins proposed model of transfer.



*Figure 5.* Burke and Hutchins Model of Transfer (Burke & Hutchins, 2008)

Burke and Hutchins (2008) stopped short of articulating specific factors included in their proposed categories of transfer influences. Instead, they point to the literature and their data on reported best practices as starting points. Burke and Hutchins called for testing of their model using a more diverse sample of the training population and verification of the identified best practices using empirical support from participants' organizations. There is some evidence of ongoing research related to different aspects of their model. For example, Hutchins et al. (2010) examined trainers' use and perceived utility of the literature to develop their knowledge of how

to support training transfer in their organization, and Saks and Burke (2012) studied the impact of training evaluation efforts on transfer outcomes.

### **The Learning Transfer System**

Building upon Noe and Schmitt's (1986) training effectiveness model, Holton's (1996, 2005) HRD Evaluation and Research Model was proposed as a comprehensive framework for diagnosing and understanding the factors that influence HRD intervention outcomes at the learning, individual performance, and organization performance levels. The learning transfer system (Holton et al., 2000) is one slice of the evaluation model. The learning transfer system, defined as "all factors in the person, training, and organization that influence transfer of learning to job performance" (Holton et al., 2000, p. 335), is based on the hypothesis that there is a direct influence between the transfer factors and the desired outcome of individual performance. The learning transfer system includes 16 factors encompassed within the primary domains of motivation, ability, and the work environment. Figure 6 depicts the learning transfer system.

The learning transfer system also includes a validated instrument, the Learning Transfer System Inventory (LTSI), which can be used to measure the factors included in the model. Initial criterion validity studies testing the ability of the learning transfer system constructs to predict transfer outcomes suggested several of the model's work environment factors, especially the interpersonal support factors, were powerful predictors of individual job performance following training (Bates, Holton, & Seyler, 1997) and were predictable of motivation to transfer (Seyler et al., 1998). Additional research (e.g., Bates et al., 2000; Bates, Kauffeld, & Holton, 2007; Devos et al., 2007; Mihalko, 2010) has contributed to the growing evidence of the learning transfer system to be predictive of some form of transfer outcome.

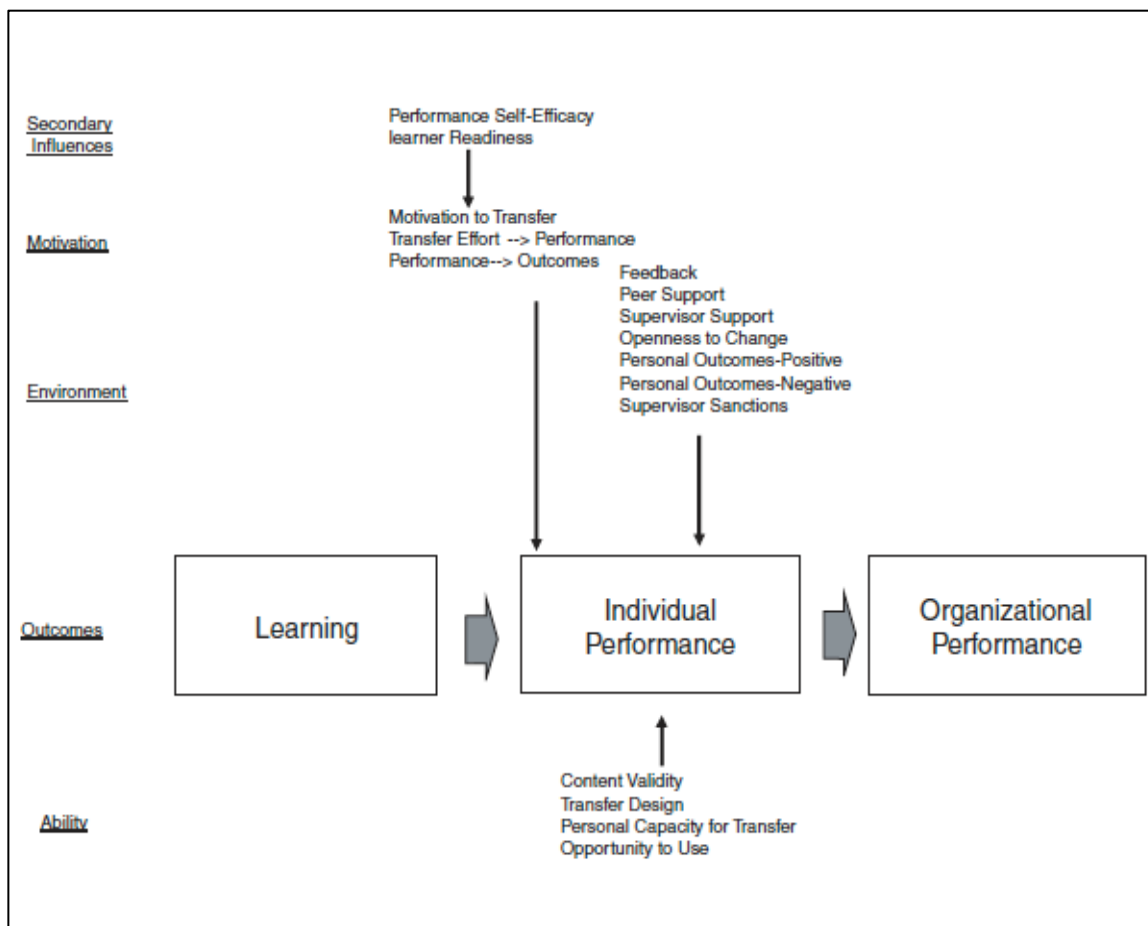


Figure 6. Holton Learning Transfer System (Holton et al., 2000)

Relevant studies that examined the ability of the LTSI to predict learning transfer outcomes are summarized in Table 1. For example, in their study of the predictability of the LTSI, Hutchins, Nimon, Bates, and Holton (2013) used the construct of intent to transfer as a proxy for the transfer outcome. Intent to transfer is based on Ajzen's (1991) theory of planned behavior and refers to an individual's willingness and purposeful aim to perform a behavior. As this theory holds, stronger intentions to act increase the likelihood of the individual actually working toward the behavioral goals. Hutchins et al. found the motivational factors (motivation to transfer, effort to performance expectations, and performance to outcomes expectations) were the most predictive of intent to transfer. This finding differed from meta-analysis results (Blume

et al., 2010) that favored the work environment factors as determinants of transfer. This strong predictability of the motivational factors may not have been found if the measure of transfer was a performance measure taken several weeks after training rather than an intention measure taken toward the end of the training program (Hutchins et al., 2013). Nevertheless, by using the construct of intent to transfer, or in other words intention to change behavior as a result of training, Hutchins et al. contributed to the call (e.g., Cheng & Hampson, 2008) for transfer research aimed at understanding more about the “psychological processes and variables involved in the transition from transfer intention to transfer behavior” (Hutchins et al., 2013, p. 259).

Table 1

*LTSI Empirical Studies*

Author and publication date	Sample	Training type	Methods and measures	Relevant findings
Bates, Holton, Seyler, & Carvalho (2000)	73 production operators	Certification in production unit standard operating procedures	Transfer climate survey Supervisor ratings of trainee job performance	Content validity, peer support, change resistance, and supervisor sanctions significant predictors of performance ratings. Interpersonal support variables contributed most to performance ratings.
Bates, Kauffeld, & Holton (2007)	579 individuals representing 117 organizations	Various, including: technical; time, project, and process management; communications; and leadership	German version of LTSI Self-report of performance gains	Motivation to transfer, personal outcomes-positive, personal capacity, content validity, peer support, learner readiness accounted for majority of variance in performance gains.

Devos, Dumay, Bonami, Bates & Holton (2007)	328 individuals from six Belgium organizations  Matched pairs design resulting in final sample of 106	Various, including: personal development, technical skills, and technical knowledge	French version of LTSI  Self-report of extent of knowledge and skills transfer to the workplace	Learner readiness, motivation to transfer, transfer design, opportunity to use, transfer to performance expectations, performance to outcomes expectations, and self-efficacy showed statistically significant correlations with transfer.  Social support variables were not significantly correlated with transfer.
Hutchins, Nimon, Bates, & Holton (2013)	235 law enforcement personnel	Leadership development	LTSI  Self report of intent to transfer	Motivation to transfer had the strongest relationship with intent to transfer, followed by transfer design and performance expectations.  The motivational factors (motivation to transfer, effort to performance expectations, and performance to outcomes expectations) were most predictive of intent to transfer.
Mihalko, 2010	378 health care professional employed in a multi-center healthcare organization	Lean Six Sigma Green Belt	LTSI  Self-report of level of transfer (intention, initiation, partial transfer, or maintenance)	Transfer factors differed significantly along the transfer continuum. Supportive work environment more likely to reach maintenance stage. Motivation to transfer, self-efficacy, and transfer design strongly correlated with maintenance stage.

---

## **Learning Transfer Summary**

Over 40 years of transfer research led to the identification of specific factors believed to influence the transfer of learning from training to the work setting. There is significant empirical support for many of these factors (e.g., trainee self-efficacy, motivation to transfer, the validity and relevance of the training content to the individual's job, and interpersonal support from supervisors and peers). Other factors believed to influence transfer (e.g., trainer characteristics and aspects of organizational culture and climate) are beginning to emerge in the transfer literature. The impact of different factors will likely vary depending on how transfer is operationalized and the context in which transfer is evaluated.

Learning transfer models depict the factors believed to influence transfer and their relationship to transfer as an outcome from training. Although the models reviewed (Baldwin & Ford, 1988; Burke & Hutchins, 2008; Foxon, 1993; Holton et al., 2000; Kontoghiorghes, 2004) reflect some divergence in the factors hypothesized to influence learning transfer, their similarities are certainly stronger than their differences. Consistent with years of transfer research, each model views transfer as a system of factors in which trainee characteristics, aspects of the training and training delivery, and the work environment serve to influence the transfer of learning from training to the job. The Kontoghiorghes (2004) model stands out for its uniqueness in the inclusion of organization level factors (e.g., job design, team environment, and quality management) beyond those generally thought of as being a part of the transfer climate. The learning transfer system (Holton et al., 2000) has received significant attention in the literature and is the only model that includes a validated instrument for assessing all of the factors hypothesized within the model.

The way transfer is defined in these models has shifted over the years. Baldwin and Ford's (1988) articulation of generalization (extent to which trained skills and behaviors are exhibited on the job) and maintenance (length of time that trained skills and behaviors continue to be used on the job) suggest a temporal aspect to transfer. Foxon (1993) explicitly casts transfer as a staged process that occurs over time. Models subsequent to Baldwin and Ford and Foxon do not suggest a developmental path leading to the transfer outcome, but instead depict transfer as an all or nothing proposition. Also, more recent transfer models are explicit in their articulation of transfer as, or leading to, desired job performance.

### **Change as a Process of Stages and Transitions**

Different schools of thought about human behavior inform efforts to understand, and potentially modify, human actions. Individual behavior theories that help to explain human behavior and underlying factors that influence behaviors can be viewed through behavioristic, cognitive, and social lenses. For example, a behaviorist explanation of human behavior suggests that human behavior is a result of interaction with the environment and individuals become molded to respond in a certain way as a result of the application of stimuli. Foundational to the behaviorist view of human behavior are theories of classical conditioning promoted by Pavlov and Skinner's work on operant conditioning and observational learning. Consequently, a behaviorist approach to individual change focuses on creating alterations in environmental conditions such that individuals become conditioned to behave differently as a result. Cognitive explanations of human behavior focus on the role an individual's perceptions, memory, knowledge processing and representation, problem solving, and development plays in behavior. Theories about cognitive human development as promoted by Piaget and Brunner, Chomsky's work on linguistics and structures underlying comprehension, as well as the structures of computer information processing helped to promote this view of behavior. A cognitive view of

individual behavior posits that change is created through adaptations in individuals' thought processes. An individual's behaviors, feelings, and thoughts are connected; therefore, change must be created in an individual's mental models to promote change in behavior. Finally, human behavior can also be viewed through a social cognitive lens. Social cognitive theory, promoted by Bandura, emphasizes the connections between internal states, the environment, and behavior. From this perspective, behavior change can happen without direct reinforcement of a person. People can learn and therefore change from the observation of others. Social cognitive theory adds the social environment as an important influence on individual behavior. Although these are certainly not the only lenses through which individual behavior and individual behavior change can be viewed, these perspectives appear to have the most influence on current models of individual behavior change.

Of primary interest to this study are individual change models that go beyond the articulation of hypothesized constructs and factors believed to influence change to actually describe how change occurs. In this review of individual change models found in the empirical literature, I distinguished between process models that focus on leading change and the actions of change agents (e.g., Kotter, 2012) or the distribution of change throughout a social system (e.g., Rogers, 2003) and those that emphasize the process of change from the perspective of the individual involved in changing. The latter is the focus of this study.

There appears to be a generally accepted understanding of the human response to change although the labels used to describe the process may differ. For example, models related specifically to grief and bereavement such as Kubler-Ross (1969) describe a process of individuals transitioning through phases of denial, anger, bargaining, and depression before finally reaching acceptance. Similarly, Bridges (1991) distinguished between change, which he

described as something that is situational and that happens *to* people and transition, which is a slower process through which people gradually come to accept their new situation and the changes that come with it. Bridges described the transition process as occurring in three phases: Ending, which is characterized by letting go and dealing with loss; the Neutral Zone, which is characterized by people re-patterning and managing both the old reality and the new reality; and the New Beginning, which is where acceptance occurs and a new sense of purpose is realized. George and Jones (2001) proposed a model of individual change within organizations focused on the cognitive and affective aspects of change. They hypothesized that individuals move through seven steps in the change process. In step one, the change process is initiated when the individual encounters an inconsistency or discrepancy with a pre-existing schema. The individual's emotional reaction to the discrepancy (step two) acts as an impetus toward change. In steps three through six, the individual must effectively direct attention to and engage in information processing of the pressing concern or opportunity and effectively deal with challenges to previous schemas. When the change cycle is complete, the individual's schema is altered as is the emotions associated with the schema (step 7). This linking of both the new cognitive state and the associated affective state serves to guide future information processing related to that schema (George & Jones, 2001).

Elrod and Tippett (2002) noted the diversity of the disciplines in which individual change process models are found. But, it is also clear that most models of the change process follow, or have been derived from, Kurt Lewin's three-phase model of change (Burnes, 2004; Elrod & Tippett, 2002). Lewin's (1947) model of Unfreezing, Moving, and Freezing was one aspect of his body of work and was intended to be used in conjunction with field theory and action research (Burnes, 2004). Lewin believed human behavior was based on a quasi-stationary

equilibrium that was supported by a field of restraining and driving forces. In order for a change in human behavior to occur, the equilibrium first needs to be destabilized or unfrozen. This unfreezing occurs as a result of some destabilizing situation. The next phase, Moving, represents the time when the individual is in the process of transitioning from one state of being to another. This movement is also influenced by a number of different forces. Finally, the individual reaches the Freezing phase, which is the establishment of a new state of quasi-equilibrium (Lewin, 1947). This idea that the process of change consists of a transition from a state of initial equilibrium through some form of disruption and then to a re-defined state of equilibrium appears to be the crux of the human change process (Elrod & Tippett, 2002). Two prominent models of the individual change process, the Transtheoretical Model of Change (Prochaska & DiClemente, 1982) and the Concerns Based Adoption Model (Hall, Wallace, & Dossett, 1973), are examples of models that demonstrate congruency with Lewin's ideas about change as a developmental process. Table 2 is a summary of the stages or phases of change in Lewin's 3-stage model, the Transtheoretical model (TTM), and the Concerns Based Adoption Model (CBAM). These models depict the process of change from the perspective of the individual involved in the change and are reflective of a multi-theoretical approach to change.

Emanating from the field of psychology, the TTM has historically been concerned with change in health related behaviors and therapeutic settings; accordingly, change is conceptualized in terms of the individual's thoughts and actions related to a specific behavior change. Since the model's conception, TTM research has expanded from its initial foci of how to stop negative behaviors to how to promote positive behavior (Madsen, 2003). Within the last decade, TTM has increasingly been used to study individual change within organizational settings. Madsen (2003) argued for the potential applicability of TTM to HRD research and

practice and noted the potential of the TTM framework to assist HRD practitioners in designing appropriate behavioral change interventions for employees, including situations in which employees have formed behavioral habits and opinions and may be unmotivated or resistant to change (Madsen, 2003).

Table 2

*Comparison of Lewin's 3-stage model to TTM and CBAM*

	Current state of equilibrium/Pre-change	Transition phase	New state/re-defined equilibrium
Lewin 3-Stage Model	Unfreezing	Moving	Freezing
Transtheoretical Model of Change	Pre-contemplation and Contemplation	Preparation and Action	Maintenance
Concerns Based Adoption Model	No Use and Orientation	Preparation and Use (mechanical, routine, refinement)	Integration and Renewal

The CBAM, which originated in the field of educational change, conceptualizes change as a “developmental process in attitudes and behaviors for individuals attempting to put new ideas and practices into use” (Anderson, 2010, p.65). This focus on the individual’s acceptance and levels of use of an innovation speaks to the role of individual change within organization improvement efforts. CBAM research has maintained a focus on educational change across different types of innovations and in both K-12 and higher education settings; however, the potential application of CBAM to learning transfer within the context of adult education programs has been noted (Young, 2013) and is consistent with the idea of learning transfer as a staged process (Foxon, 1993).

Despite these seemingly different orientations, both the TTM and the CBAM are Lewinian in their depiction of change as phases through which people transition on their way toward the adoption of new behaviors. This progression toward the desired state can be helped or hindered by various factors drawn from multiple underlying theories of individual behavior. The extensive histories of use in empirical research and practice supports the potential applicability of the TTM and the CBAM to the study of learning transfer and change in organizational settings. In the next section, I review the foundational and empirical literature on the TTM and CBAM, including applications of these models in learning, training, and development.

### **Transtheoretical Model of Change**

The TTM, also known as the Stages of Change Model, emanated from the need to offer a more integrated approach to clinical therapy (Prochaska & DiClemente, 1982). This movement toward transtheoretical therapy led to a more comprehensive understanding of the individual change process (Prochaska & DiClemente, 1982). The TTM integrates behavioral, cognitive, and affective theories of individual behavior change into a single framework focused on intentional change. The TTM hypothesizes that change is a process consisting of discrete stages an individual must move through in order to increase the likelihood of a successful change effort. At each stage of the change process, intentional decisions are made that move the individual toward or away from change. This movement through the stages is facilitated by the use of different types of interventions. The TTM framework includes four primary constructs: stages of change, the processes of change, decisional balance, and self-efficacy. The following is an overview of each of these constructs.

## Stages of Change

The TTM proposes five stages individuals move through during a change process. These stages represent the central organizing construct of the TTM. In most empirical studies, a staging algorithm (Prochaska et al., 1994) is used to assess the stage of change based on participant self-report. The researcher can adapt the algorithm to be reflective of the specific change being examined. In addition, a more formal stage of change questionnaire has been developed for different behaviors, including general health (Nigg et al., 1999) and psychotherapy (McConaughy, Prochaska, & Velicer, 1983). The five stages are generally defined as follows (Levesque, Prochaska & Prochaska, 1999; Prochaska, DiClemente, & Norcross, 1992):

1. Precontemplation - Individuals do not recognize the need for change and, therefore, have no intention of changing within the near future (within the next six months).
2. Contemplation - Individuals acknowledge there is a change to potentially be undertaken and are seriously considering changing in the near future, but have not yet made a commitment to change.
3. Preparation –Individuals are making their intentions to change clear to others and are preparing themselves for the change and its consequences. They are intending to take action within the immediate future (the next 30 days).
4. Action - Individuals modify their behavior, decisions, and actions in order to pursue change. Efforts have been made toward change at some point within the immediate past.
5. Maintenance - Individuals work to consolidate the gains attained during the action stage and to prevent relapse. Maintenance is a continuation of, not the absence of, change and is operationalized as extending out from six months.

Although communicated as a linear process, movement through the stages has been shown to be more spiral in nature for many change efforts. During the change process, individuals may relapse and return to earlier behaviors before sustained behavior change is finally achieved (Prochaska et al., 1992). This notion of deterioration after action toward change has begun is consistent with what Elrod and Tippett (2002) referred to as the valley of change. Elrod and Tippett pointed to similarities across various change models where declines in performance tend to occur during the transition phase (i.e., the moving phase) of the change process. In a foundational study of the stage of change construct, DiClemente et al. (1991) noted that when relapse occurs individuals regress to earlier stages within the process; however, most do not regress all the way back to where they began. Instead, each time they recycle through the stages, they learn from the experience and are able to try something different the next time around (DiClemente et al.). In addition, movement into action is possible regardless of the stage of change at which a person begins although individuals who enter change efforts already in the preparation stage tend to reach the action stage with greater frequency and success (DiClemente et al.).

Since the initial articulation of the stages of change construct (DiClemente & Prochaska, 1982; Prochaska & DiClemente, 1983), a prolific research agenda (e.g., DiClemente & Hughes, 1990; DiClemente, Prochaska, & Gibertini, 1985; McConaughy, DiClemente, Prochaska, & Velicer, 1989) helped to provide additional empirical support for the construct across varying types of behaviors including alcoholism, smoking, and in psychotherapy. Now into the third decade since its conception, the TTM continues to be used in empirical studies of various types of behavior change. However, the stage of change construct is not without its critics. For example, Adams and White (2005), in their study of TTM stage-based interventions for the

promotion of physical activity, noted that unlike cigarette smoking, which can easily be assessed by the stage of change framework, exercise behavior is complex and cannot be captured as a single behavior. Connor's commentary on Adams and White (Brug et al., 2005) noted that this points to a weakness in the conceptualization of the stages and the reliance on plans or intentions to act (precontemplation and contemplation) and length of time behavior is performed (action and maintenance) which are basically arbitrary criteria (Brug et al., 2005). Armitage (2009) acknowledged that some scholars have questioned the validity of the entire model (e.g., West, 2005) but explained this is likely due to the abundance of attention that has been paid to the stages of change, which is only one aspect of the TTM. Armitage suggested more attention should be given to the processes of change construct because of the potential for improving change interventions.

### **Processes of Change**

The processes of change represent potential areas of intervention within which different practices, tools, and methods may be used to facilitate movement from one stage of change to the next. The current TTM framework identifies 10 processes of change which are generally defined as follows (Levesque et al., 1999; Velicer, Prochaska, Fava, Norman, & Redding, 1998):

#### Experiential Processes:

1. Consciousness raising – Increasing awareness and gathering information to develop an understanding about the change or its benefits.
2. Dramatic relief – Experiencing and expressing feelings about the change, including negative emotions associated with failure to change and relief that comes from success.

3. Environmental reevaluation – Considering how the change will impact the social and physical environment.
4. Social liberation – Awareness of how the potential change is accepted or supported by the larger social system (e.g., the organization or society in general).
5. Self-reevaluation – Considering how one's identity, happiness, and success can be enhanced by the change.

Behavioral Processes:

6. Self-liberation – Choice and commitment to change the problem behavior, including belief in the ability to change.
7. Reinforcement management – Rewarding oneself or being rewarded by others for making changes.
8. Helping relationships – Trusting, accepting, and utilizing the support of others during the change effort.
9. Counterconditioning – Substituting new behaviors and cognitions for the old ways.
10. Stimulus control – Control of situational and other causes that can trigger old behaviors; restructuring the environment to remove cues for nonparticipation in the change and add prompts that help to trigger change behaviors.

Individuals in certain stages of change are more likely to be engaged in certain processes of change, therefore the intensity, duration, and type of intervention should be matched to the stage of change of the client (DiClemente et al., 1991). Matching of interventions to stage of change is more successful than one size fits all programs (Campbell et al., 1994; Levesque et al., 1999). For example, in a study of interventions to improve outcomes for domestic violence offenders, stage matched interventions based on the TTM processes of change were provided in

addition to the usual offender treatment. Participants in the experimental group (treatment plus TTM based interventions) achieved better outcomes than the control group on several key outcomes (Levesque, Ciavatta, Castle, Prochaska, & Prochaska, 2012). Also, research in health behaviors and psychotherapy provided some evidence that different processes of change are differentially effective in certain stages of change (Norcross, Krebs, & Prochaska, 2010; Rosen, 2000). However, meta-analytic results of 47 cross-sectional studies revealed that although there was definite variability of change processes across the stages of change, no sequence of change processes was common to all health behaviors examined (Rosen, 2000). Table 3 represents the current hypothesis of the connection between the processes of change and the stages of change. In general, the more experiential processes of change have been found to be more relevant during the early stages of change. As individuals transition through the stages and approach maintenance, behavioral related processes become more important to facilitating the change process (Prochaska et al., 1992).

Table 3

*Relationship between the Stages of Change and the Processes of Change*

Precontemplation	Contemplation	Preparation	Action	Maintenance
Consciousness raising Dramatic relief Environmental reevaluation Social liberation	Self-reevaluation		Self-liberation	Reinforcement management Helping relationships Counterconditioning Stimulus control

Similar to the stages of change, the literature includes conceptual and empirical articles that contradict or otherwise question the evidence related to stage matched interventions. For example, Adams and White (2005) concluded that, at least for the promotion of physical activity, stage matched interventions may induce stage progression and even short-term behavior change, but are not superior to non-staged based interventions in inducing longer-term behavior change. Similarly, in a review of TTM based interventions for changing seven health related behaviors, Bridle et al. (2005) found only limited evidence for the effectiveness of stage-based intervention when TTM stage-based interventions were compared with non staged-based interventions or with no intervention/ usual care. However, Bridle et al. also noted the lack of evidence in support of stage-matched interventions might have been influenced by the lack of model specification, which can lead to the use of inappropriate interventions. The TTM describes processes of change, but does not specify exactly what techniques and tools are to be employed within each process. For example, consciousness raising is an experiential process of change that should inform interventions, but the model does not specify what exactly should be the target of consciousness raising (Bridle et al., 2005).

### **Decisional Balance**

Emanating primarily from the work of Janis and Mann (1977), decisional balance is an assessment of how individuals weigh the advantages, or “pros,” of making a change versus the perceived disadvantages, or “cons,” of a particular change. Decisional balance has traditionally been measured using the Decisional Balance Inventory (Velicer, DiClemente, Prochaska, & Brandenburg, 1985). The TTM hypothesizes that the balance of pros and cons are systematically related to stage of change. The cons of changing will outweigh the pros in the precontemplation stage, the pros will surpass the cons in the middle stages, and finally the pros will outweigh the

cons in the action stage. Decisional balance has been found to be an effective and consistent predictor of future change (DiClemente et al., 1991; Levesque et al., 1999; Prochaska et al., 1994; Prochaska, 2000) across various behaviors and settings. In his critique of TTM, particularly as applied to use in addiction research and practice, West (2005) asserted that the TTM is too focused on conscious decision making and planning processes. This focus, according to West, neglects other factors of human motivation, such as the role of reward and punishment and associative learning in habit development, that are especially relevant to addictions. This critique is interesting in light of the fact that smoking cessation studies were foundational in the development of the TTM. Smoking is considered an addiction, yet the TTM has always been promoted as a model of intentional change that focuses on the decision making of the individual.

### **Self-Efficacy**

As conceptualized in the TTM, self-efficacy includes two interrelated constructs – self-efficacy and situational temptation. Self-efficacy, applied within the TTM framework, is defined as the degree to which individuals believe they have the situation specific capacity to attain a desired goal or cope with a high-risk situation. Situational temptation is conceptualized as the opposite of self-efficacy and is the degree to which individuals feel they would be enticed to not initiate or maintain a change, particularly when in difficult situations (Velicer, DiClemente, Rossi & Prochaska, 1990). Measures of both self-efficacy (DiClemente, 1981) and temptation (DiClemente, 1986) have been developed and used in TTM research. Similar to decisional balance, levels of self-efficacy and temptation have been found to vary systematically across the stages of change. Individuals in the later stages of change (action and maintenance) report higher levels of self-efficacy and lower levels of temptation (DiClemente, 1981; DiClemente et

al., 1985; Levesque et al., 1999; Plummer et al., 2001), with a shift occurring around the preparation stage when self-efficacy reports outweigh temptation reports. Self-efficacy and the decisional balance construct act as mediating variables in the TTM framework. Individual levels of these factors are believed to influence the degree to which the different processes of change can influence the behavior outcome.

### **TTM in Organizational Settings**

Since the initial articulation of the TTM, the use of this model in research studies has expanded well beyond the model's roots in psychotherapy and smoking cessation. TTM constructs have been used to explore change across different disciplines and diverse behaviors, including reducing consumer debt (Xiao et al., 2004), as a theoretical basis for career counseling (Barclay, Stoltz, & Chung, 2011), readiness to transition into work (Lam, Wiley, Siu & Emmett, 2010; McGuire, 2004), and readiness to become an adoptive parent (Prochaska et al., 2005). Research in organizational settings has explored the applicability of the TTM to change in the workplace and workplace behaviors. For example, Levesque et al. (1999) and Phillips (2005) used TTM constructs to examine individual change in the context of organizational change efforts. These studies illustrated the characteristic pattern found in health-related TTM research whereby, for individuals involved in the change, the cons of getting involved in the change outweighed the pros in the early stages of the change process, the pros and cons were essentially equal during the middle stages, and the pros outweighed the cons in the later stages. Also, employee feelings of efficacy relative to the organization change significantly increased as an employee progressed through the stages of change and feelings of temptation to not participate in the change decreased (Phillips, 2005).

The TTM has also been used to study change at the organizational level. In these studies (Levesque et al., 2001; Prochaska, 2000), the researchers hypothesized the data would show organizations change in stages just as individuals do, systematic relationships between the stages of change and the pros and cons of change, and certain processes of change were emphasized more in particular stages of change. Data on each of the key dimensions of the TTM revealed systematic relationships predicted by the TTM (Prochaska, 2000). In addition, Levesque et al. noted the overall impact of specific change management activities (i.e., interventions based on the processes of change). Study results showed the use of organizational change processes tended to increase with stage of change. In other words, organizations that were using more of the processes of change were also reaching more advanced stages of change.

### **TTM in the Context of Learning, Training, and Development**

Individual change following some form of organization-sponsored training or development effort was the primary concern of this study. The literature is limited in this area; however, there are some examples of the potential efficacy of TTM in learning, training, and development. The TTM literature includes conceptual articles that discuss the potential application of TTM to the sequencing of educational activities in ethics education (Tyler & Tyler, 2006) and increasing employee usage of e-learning resources in organization sponsored training programs (Brown & Charlier, 2013), as well as a limited number of empirical studies that use TTM constructs in the context of learning, training, or development. Table 4 is a summary of relevant TTM research in this context.

Table 4

*TTM Empirical Studies*

Author and publication date	Sample	Training type	Methods and measures	Relevant findings
Burke, Guck, Robinson, Powell & Fichtner (2006)	One teacher (instrumental case study)	Classroom management	Self-report Stage of Change assessment  Self report and Classroom observations	Teacher progressed through stages of change to achieve and maintain learned behaviors. Enabling interventions reflected TTM processes of change.
Daniels et al. (2014)	9 physicians 13 nurses from Africa and the U.S.	Leadership training	Self-assessed leadership skills  Semi-structured interviews  Participant journals	Behavior change reflected contemplation, preparation, and action stages.
Grant (2010)	99 individuals from 14 different organizations	Workplace coaching	Stage of change assessment  Self-efficacy, workplace well-being, and decisional balance s Coaching skills assessment	Relationships between variables consistent with TTM theory. Individuals in early stages had lower self-efficacy and lower coaching skills than those in the latter stages.
Harris & Cole (2007)	70 managers from one organization	Leadership development	Stage of change scale  Attitudinal variables scales  Content and instruction evaluation scale	Relationships between variables consistent with TTM theory. Individuals in precontemplation had lower organizational commitment and more negative training reactions than participants in contemplation and action.

Harris and Cole (2007) tested TTM constructs in the context of leadership development training. These researchers hypothesized that if the stages of change model was a valid approach then it should relate in predictable ways with the organizational and training variables of developmental readiness, learning motivation, organizational attitudes, perceived developmental needs, and reactions to the developmental program content and delivery. In general, the results were consistent with the hypothesized pattern of relationships among the variables (Harris & Cole, 2007). Precontemplation sentiments were associated with lower organizational commitment, lower perceived developmental need, and more negative evaluations of program content and instructors. The opposite was true for contemplation and action. Participants assessed as being in these stages tended to have higher scores on these same variables. Contrary to expectations, learning orientation was related only to the action stage, not to precontemplation or contemplation, which suggested that individuals with a learning orientation are already primed to take action regarding their own development. Harris and Cole suggested that to maximize effectiveness of leadership development efforts within organizations, efforts should be made to ensure that participants are ready for them – that is participants have at least an understanding and appreciation for the need for development and can contemplate change.

Grant (2010) examined the perceived costs and benefits of adopting workplace coaching skills. The results involving the stages of change and decisional balance reflected patterns of relationships between these variables as predicted by the TTM. For example, participants in the maintenance stage rated the cons of change significantly lower than participants in the contemplation and action stages. Interestingly, participants in the action stage (those who had been coaching for at least one month, but less than six months) perceived similarly high costs to change as the participants in the contemplation stage (those who had not yet begun to coach).

The perceived cons of the change did not drop significantly until participants had been coaching for at least six months (those assessed as being in the maintenance stage). Conversely, there were no significant differences in the pros of adopting coaching behaviors across the different stages of change, indicating that participants perceived the benefits of using coaching skills regardless of where they were in the process of actually putting these skills to use (Grant, 2010). Grant did not examine the processes of change in this context, which leaves additional questions. For example, since the pros of the change were consistent across the stages and participants could perceive the benefits of the change even while in the contemplation stage, what processes of change actually helped to move participants toward action? Grant and Franklin (2007) suggested that in the adoption of performance enhancing skills, interventions should focus on helping people reduce perceived barriers to change rather than spending significant time on highlighting the benefits of change. This same perspective on intervention may be appropriate to the adoption of workplace coaching skills (Grant, 2010).

Finally, Burke, Guck, Robinson, Powell, and Fichtner (2006) applied the TTM constructs within an instrumental case study of one teacher's experience with changing her classroom management behaviors following completion of a professional development workshop. The teacher's progression from precontemplation to maintenance was consistent with TTM theory. Her assessed stage of change prior to the workshop was precontemplation, meaning she was not seriously considering changing her classroom discipline practices during the next six months and she saw no real utility for the training. She progressed to the action stage and began to use the new classroom management skills. Use of the strategies persisted over time and at the three-year follow up she was still maintaining the new behaviors. Several processes of change as proposed by the TTM were identified in this teacher's experience.

## **TTM Summary**

The TTM, with its core constructs of stages of change, processes of change, decisional balance, and self-efficacy, represents a multi-theoretical approach to explaining and promoting the individual change process. The TTM constructs have demonstrated applicability to various types of change efforts across a diverse set of behaviors. In addition, the TTM constructs are easily adaptable to fit different research contexts. The empirical literature includes studies that used a staging algorithm (e.g., Grant, 2010; McGuire, 2004) to assess stage of change, as well as studies that adapted existing scales or developed psychometrically sound scales (e.g., LaLopa & Day, 2011; Lam et al., 2010) based on TTM theory. The processes of change have also been adapted to fit different contexts (e.g., Levesque et al., 2001; Prochaska et al., 2001), including organizational change efforts within different types of organizations and training. TTM theory suggest there is a relationship between the stages of change and the processes of change such that the effectiveness of the processes vary based on an individual's stage of change. There is some empirical support for the efficacy of staged matched interventions.

Although not without its critics (e.g., Armitage, 2009; West, 2005), the TTM continues to be utilized in a broad array of research. Although empirical research using the TTM in the context of learning, training, and development is limited, results of available studies demonstrate promise for the applicability of the TTM in this context. The TTM may have implications for “a wide range of helping professions that subscribe to the notion that change must occur for individual development” (Petrocelli, 2002, p. 27). As HRD scholars look for interdisciplinary approaches for improving HRD outcomes in organizations (Madsen, 2003), the TTM may be a useful model for promoting individual change in work-related behaviors.

### **Concerns Based Adoption Model**

The Concerns Based Adoption Model (CBAM) was developed at the University of Texas at Austin, Research and Development Center for Teacher Education. Development of the model began in the early 1970s and continued until the mid-1980s. CBAM was initially developed to examine the process of change experienced by K-12 teachers involved in implementation of new curriculum materials and instructional practices. Since that time, the model's different constructs have been used individually and in different combinations in practice, research, and evaluation and with various types of implementation efforts (Hall, 2013). The model has also been subjected to cross cultural translation and used in various educational institutions outside the United States (Hall, 2013). The CBAM includes several underpinning assumptions about the nature of change. First, change is a process, not an event. Second, change is accomplished by individuals and is a highly personal experience that involves developmental growth in feelings and skill. Finally, change can be facilitated by interventions directed toward the individual, the innovation, and the context involved (Anderson, 1997; Hall & Hord, 2011). The CBAM includes three key constructs, Levels of Use, Stages of Concern, and Innovation Configuration. The following is an overview of each of these constructs.

#### **Levels of Use**

CBAM's Levels of Use (LoU) construct describes the different levels of implementation of an innovation. LoU is concerned with behavior and portrays how people are acting with respect to a specific change (Hall & Loucks, 1977; Hall, Loucks, Rutherford & Newlove, 1975). This construct is based on the premise that, at the level of the individual employee, implementation of an innovation is not a bipolar use or nonuse phenomenon (Hall & Loucks, 1977), but instead includes varying degrees of use. LoU includes decision points that help to

further define each level. These decision points represent concrete actions, which if taken, strongly suggest that an individual has reached a certain LoU. These decision points also help to distinguish between the levels conceptually (Hall, 2013; Hall & Loucks, 1977). Similar to the TTM stages of change, these levels represent a developmental progression of change aimed at implementation of a new practice. CBAM theory holds that individuals will progress through the eight LoU if their concerns are addressed adequately. Table 5 contains descriptions of the LoUs (Hall, 2013; Hall & Loucks, 1977) with the lowest LoU listed at the bottom of the table.

Table 5

*CBAM Levels of Use*

LoU	LoU Definition	Decision point leading to the LoU
VI Renewal	The user is seeking more effective alternatives to the established use of the innovation in order to increase outcomes/impact.	Decision Point F: Begins exploring alternatives to or major modifications of the innovation presently in use
V Integration	The user is making deliberate efforts to coordinate with others in using the innovation in order to increase outcomes/impact.	Decision Point E: Initiates changes in use of the innovation for benefit of clients based on input from and in coordination with colleagues.
IVB Refinement	The user varies use of the innovation in order to increase outcomes/impact.	Decision Point D-2: Changes use of the innovation to increase client outcomes based on formal or informal evaluation.
IVA Routine	Use of the innovation is stabilized. The user is making few or no changes to the innovation and has an established pattern of use.	Decision Point D-1: Establishes a routine pattern of use.

III Mechanical Use	The user is using the innovation in a poorly coordinated manner. Efforts may result in disjointed and superficial use. User is adapting the innovation to meet the user's needs.	Decision Point C: Makes user-oriented changes.
II Preparation	Individual has definite plans to begin using the innovation; is preparing for first use of the innovation.	Decision Point B: Makes a decision to use the innovation by establishing a time to begin.
I Orientation	Individual is seeking out information about the innovation.	Decision Point A: Takes action to learn more detailed information about the innovation.
0 Non-Use	No action is being taken with respect to the innovation. The individual has little or no knowledge or interest in the innovation, no involvement with the innovation, and is doing nothing toward becoming involved.	

The LoU framework distinguishes between different types of non-users (levels 0, I, and II). Although each of these is considered non-users, their behaviors are very different; therefore, interventions developed to help move them from non-users to users should be different (Hall & Hord, 2011). The LoU framework also distinguishes between the different types of users (levels III, IVA, IVB, V, and VI). The key characteristic that distinguishes users is the type of adaptation the user is making in regard to his or her use of the innovation or the innovation itself (Hall & Hord, 2011). Individuals will not necessarily move in a straight line sequence through these different levels of use. As is consistent with other theories of individual change, including the TTM, regression happens and sometimes people decline in performance (Elrod & Tippett, 2002) before they reach the ultimate change goal. Assessing LoU within the context of a change effort is done through interviews with users. A branching interview (Loucks, Newlove, & Hall,

1975) that includes specific questions and follow-up probes may be used to get an individual to describe and provide examples of behaviors that he or she is taking in relation to the innovation (Hall & Hord, 2011). Based on this data, the interviewer then uses the decision points and LoU definitions to estimate the person's level of use of the innovation. If the LoU construct is used within the context of a research or evaluation study, the full, formalized LoU interview protocol, referred to as the LoU Focused Interview, is recommended (Hall & Hord, 2011). A three-day training and certification program is offered to prepare researchers and evaluators for using this more rigorous approach to assessing LoU.

Hall and Loucks (1977) described the processes that were undertaken to establish the reliability and validity of the LoU construct and interview process. These included the testing of inter-rater reliabilities, comparisons between results from ethnographic data gathered by researchers observing teachers in the field and the ratings assigned by the levels of use protocol, and comparisons between results from an evaluation study and assessed implementation based on LoU interviews. Since this initial work around the LoU construct, CBAM researchers have continued to promote the use of LoU framework and the interviewing protocols as rigorous methods for determining use of an innovation.

### **Stages of Concern**

The Stages of Concern (SoC) represent expressions of feelings and perceptions that individuals engaged in a change process might have and which can impact their change process. These are referred to as concerns, which are defined as “ the composite representation of the feelings, preoccupation, thought, and consideration given to a particular issue or task” (Hall & George, 1979, p. 8; Hall & Hord, 2011, p. 72). Frances Fuller's work in the 1960s on the concerns found among pre-service teachers formed the foundation for research on teacher's

concerns and resulted in the development of a concerns-based teacher education program (Fuller & Bown, 1975; Hall, 2013; Hall & George, 1979). The development the SoC construct and the full CBAM followed.

The SoC consist of six stages grouped into unrelated, self, task, and impact concerns. SoC theory posits that individuals have concerns of varying intensity and focus at different points in the change process. For example, an individual who is just learning about a change, but who has not begun to implement it, is likely to have higher awareness, informational, and personal concerns. These early stage self-focused concerns later give way to task concerns when the individual starts to try to implement the change. Task concerns later give way to impact concerns once the person becomes more skilled in the new practices (Anderson, 1997; Hall & Hord, 2011). However, individuals can, and often do, have concerns at more than one stage at a time (Hall & Hord, 2011). Similar to the processes of change articulated by the TTM, the CBAM SoC represent areas for intervening in the change process. Interventions to facilitate change should be aligned with the identified concerns of those who are engaged with the change (Hall & Hord, 2011). Table 6 presents the current SoC definitions (Hall & George, 1979; Hall & Hord, 2011) with the lowest stage of concern shown at the bottom of the table.

The SoC framework is the most widely used of the CBAM constructs in empirical studies (Hall, 2013). Most studies using the SoC framework also use the Stage of Concern Questionnaire (George, Hall, & Stiegelbauer, 2006; Hall, George, & Rutherford, 1979). The Stages of Change Questionnaire (SoCQ) is a 35-item instrument designed to assess individuals' concerns about the innovation/change. The instrument was validated through a variety of cross sectional and longitudinal studies involving both teachers in schools and college faculty (Hall, 2013). However, most empirical studies using the SoCQ involved initial implementation where

individuals primarily have stage one, two, and three concerns. As a result, there is limited knowledge about the stages of concerns at the later stages of implementation (Hall, 2013).

Table 6

*CBAM Stages of Concerns*

Concern Type	SoC	SoC Definition
Impact	6 Refocusing	Focus is on exploration of additional benefits from the innovation, how alternatives might be more effective.
	5 Collaboration	Focus is on coordination and cooperation with others regarding use of the innovation to achieve greater impact.
	4 Consequence	Focus is on the impact of the innovation on “clients” within the individual’s immediate sphere of influence.
Task	3 Management	Focus is on the processes and tasks of using the innovation. Includes concerns related to efficiency, organizing, managing, and time demands.
Self	2 Personal	Concerns about how the change will affect the individual including demands based on the innovation, role in relationship to the innovation, and personal status and financial implications.
	1 Informational	General awareness of the innovation and interest in learning more details about the innovation such as general characteristics, effects, and requirements for use.
Unrelated	0 Unconcerned	Not concerned; has little knowledge of or interest in the change. Concern about other things is more intense.

Different researchers (Bailey & Palsha, 1992; Cheung, Hattie, & Ng, 2001; Shotsberger & Crawford, 1996) have challenged the prevailing beliefs about the SoC construct and the reliability and validity of the SoCQ. Across these studies there was support for the broad assumptions underlying the CBAM and for many of the hypothesized relationships between the stages; however, the conceptualization of seven-stages was questioned, resulting in recommended changes to the items of the SoCQ. Cheung et al. (2001) noted the need for greater attention to psychometric and conceptual issues when using the SoCQ in research studies and warned researchers against the use of the model, or modified versions of the model, without examining reliability and construct validity using their own data.

In a rare study using CBAM constructs within business and industry, Sta. Marie and Watkins (2003) examined the influence of learning culture and SoC on the adoption of an organizational innovation (ISO 9000) in the public sector in Malaysia. A quantitative survey consisting of measures of learning culture adapted from the Dimensions of the Learning Organization Questionnaire (DLOQ) (Watkins & Marsick, 1996), stages of concern adapted from the SoCQ, and level of use based on the CBAM LoU concept was used to gather data from 628 individuals working in 11 different organizations. Study results revealed that individuals were indeed using the innovation. The dimensions of the learning organization explained significantly more of the variance in levels of use than did the SoC construct. The researchers hypothesized that the mandatory nature of the innovation may have resulted in individuals using the innovation despite their personal concerns and objections (Sta. Marie & Watkins, 2003).

## Innovation Configurations

Innovation Configurations (Hall & Loucks, 1981), the other major CBAM construct, was not included in the original articulation of CBAM (Hall et al., 1973), but instead emerged out of the researchers' work within school environments (Hall, 2013) and the experienced difficulties of clearly defining an innovation in practice (Hall & Loucks, 1981). Whereas LoU asks the question, "are they using it?" (i.e., the innovation), innovation configurations helps with the task of defining what "it" is (Hall & Loucks, 1981). The concept of Innovation Configurations (IC) is used to capture both the idealized innovation or change as envisioned by the developer or organization and the various forms of the change that emerge in the real world (Hall & Hord, 2011). IC supports the idea that innovations are frequently adapted and modified as a natural part of the change process (Hall & Hord, 2011; Hall & Loucks, 1981). Furthermore, the way different users put the change into practice will generally vary along a continuum from being very close to what the developer had in mind (the ideal use of the innovation) to some version that is nearly unrecognizable (an unacceptable use of the innovation; Hall & Hord, 2011). IC maps are used to describe the likely configurations of an innovation and include the key operational components of the innovation and a set of possible variations for each component. These variations can be described along a continuum (e.g., a to f) with the ideal configuration of the innovation explained as the *a variation* and the unacceptable variation explained as the *f variation*. The number of variations is dependent upon the nature of the innovation, but typically ranges from two to six (Hall & Hord, 2011). The development of IC maps is an iterative process best accomplished by a team of key informers and stakeholders (Hall, 2013; Hall & Hord, 2011).

When used as a part of the implementation process within an organization, the creation of IC maps should lead to a consensus within the organization about what the innovation should

look like when it is implemented with varying degrees of fidelity. In research and the evaluation of change initiatives, IC provides a means for assessing the extent of implementation of an innovation prior to making judgments about the efficacy of an innovation (Hall & Hord, 2011; Hall & Loucks, 1981). Research has demonstrated that the fidelity of implementation matters and can impact outcomes (Bridge, 1995; George, Hall, & Uchiyama, 2000). In one of the very few applications of IC outside of the education setting, Chinman and associates (Chinman et al., 2005; Chinman et al., 2008; Chinman et al., 2009) used both LoU and IC tools in the evaluation studies of the *Getting to Outcomes* approach for building community capacity to deliver evidence-based prevention programs. The CBAM constructs were chosen to support this large-scale evaluation effort because of the ability to tailor IC and LoU frameworks to fit any innovation (Chinman et al., 2008).

### **CBAM in the Context of Professional Development**

Of particular interest to this study are applications of the CBAM constructs in the context of training and staff/professional development. Hord and Loucks (1980) provided specific guidelines on how the CBAM constructs of SoC, LoU, and IC could be applied to the design, delivery, and evaluation of teacher professional development. These guidelines included explicit goal statements of what should be happening in the teacher's classroom after the delivery of the in-service articulated in CBAM terminology, delivery strategies appropriate to the different stages of concern, and use of baseline measures and ongoing periodic monitoring to evaluate outcomes (Hord & Loucks, 1980). A search of the literature did not reveal any studies that had used the CBAM constructs in professional development to the degree described in Hord and Loucks (1980). Most studies found in the empirical literature only used the SoC construct and the SoCQ to assess the impact of professional development activities on concerns about

implementation of a change (e.g., Chamblee, Slough, & Wunsch, 2008; Dobbs, 2004; Hope, 1997). However, two studies, Saunders (2012) and Tunks and Weller (2009), stand out for their integration of multiple CBAM constructs. Table 7 presents a summary of these two studies.

Table 7

*CBAM Empirical Studies*

Author and publication date	Sample	Training type	Methods and measures	Relevant findings
Saunders (2012)	27 teachers	Teacher professional development program	Stages of Concern Questionnaire Levels of Use interviews	Use of CBAM constructs to evaluate program revealed participants implemented the innovation and the majority of participants reached stage five (impact) concerns.  CBAM constructs facilitated understanding of teachers' responses to professional development and were useful for program evaluation.
Tunks & Weller (2009)	4 teachers	Teacher professional development Program	Survey of Concerns Levels of Use monthly observations and exit interview  Innovation Configurations checklist	Findings suggested a relationship between movement from self/task concerns to impact concerns and growth in Levels of Use over time.  Personal contact with supportive staff helped to promote implementation; contact with staff who had not attended the program hindered implementation.

Saunders (2012) examined the usefulness of CBAM in assessing professional development efforts delivered as a part of reform efforts in Australia's vocational and educational training (VET) program. Participants were 27 teachers from diverse content and vocational areas. Data were first collected through administration of the SoCQ. This was followed by LoU focused interviews. Sanders found that participants were implementing innovations in their practice at routine (Level IVA), refined (Level IVB), and integrated (Level V) levels of use and that "learning has been transferred into practice" (Saunders, 2012, p. 199). The highest level of concern for a majority (74%) of participants was Stage 5 collaboration (Impact concern), indicating that a majority of the teachers were concerned about how to best collaborate with others in order to have the most impact on student learning. This finding of a significant number of teachers with impact concerns is rare, although desirable, and indicates a well run implementation effort that made it possible for participants to move beyond self concerns to consider the potential impact of the innovation (Hall & Hord, 2011). Despite the effective use of CBAM as an evaluation tool in this study, Saunders shed little light on the factors that supported or hindered individual progress toward the desired change. This study is also limited as it presents only a snap shot of participants at one point in time rather than a longitudinal view as recommended by Hord and Loucks (1980).

Tunks and Weller (2009) is an example of a longitudinal study that incorporated all three of the CBAM constructs. In this case study, Tunks and Weller examined how 10 teachers' concerns about and levels of use of an innovation to integrate algebraic thinking into elementary school math instruction evolved during the course of an almost year long professional development program. Participant stage of concern was assessed informally at the conclusion of the summer workshop and throughout the program in conjunction with monthly observations. In

addition, a researcher-developed survey of concerns based on the SoCQ was administered to participants halfway through and at the conclusion of the program. Monthly teacher observations and exit interviews were used to track level of use of the innovation, and an innovation configuration checklist was used to assess how the innovation was being used in practice. In general, progress through the stages of concern was demonstrated within the study. Two of the teachers progressed to stage 5 and 6 concerns. Also, the teachers whose concerns moved from self/task toward impact also showed the strongest growth in levels of use across time.

Participants achieved at least a moderate level of fidelity to the components and there was evidence that participants had made concerted efforts to integrate the different components of the innovation into their classroom practices. This was particularly true for those teachers who progressed to routine levels of use and impact concerns (Tunks & Weller, 2009). This study also contributed some insight into the factors and interventions that helped to hinder or promote change. For example, participants who continued to exhibit predominantly personal/task concerns throughout the project had experiences with colleagues who were not involved in the program that were believed to have inhibited participants' use of the innovation. Interventions that helped promote implementation of the innovation included personal contact with supportive staff members in the monthly meetings, monthly observation and conference visits, support systems such as the sharing of lesson plans, and observation of student success (Tunks & Weller, 2009).

### **CBAM Summary**

The CBAM has been used in practice with different types of innovations and in diverse cultures. The model includes three important constructs: LoU, which deals with the behaviors of individuals and how people are acting with respect to a specific change; SoC, which addresses

the affective side of change including the feelings and perceptions of change from an individual's perspective; and IC, which helps to define the change and possible adaptations of the change in practice. In research and evaluation, the CBAM and its different constructs have been used to study different types of innovation implementation and how professional development impacts change efforts.

Despite the model's long history in educational practice, additional research is needed to further support the theory underlying the model (Anderson, 1997; Hall, 2013; Slough & Chamblee 2007). For example, the SoC construct is the most widely used in practice and in research; however, most studies are cross sectional where only the lower stages of concern were examined. There is a need for longitudinal studies that can examine how concerns evolve over time and how change is sustained over time such that individuals progress to higher levels of use (Hall, 2013). Furthermore, there is a lack of empirical support related to the relationships between the different constructs. LoU, SoC, and IC are viewed as independent constructs, but there are some obvious relationships between them that need to be explored in future research (Hall, 2013). Despite the call (Anderson, 1997; Hall & Hord, 1987) for more empirical research in this area, most studies using the CBAM still use only the SoC construct, therefore a gap remains about the overall validity of the model's theory. In addition, there is a need for more studies to explore how various interventions affect SoC. Song, Wang, and Liu (2011) approached this by using simulations to test the potential impact of different interventions on innovation adoption by faculty members with differing stages of concern; however, the literature is limited in this area. Finally, as it pertains to the usefulness of the framework to guide professional development and training efforts, Hord and Loucks (1980) provided a framework to promote the transfer of newly learned knowledge and skills into the teacher's instructional

practices; however, the researchers noted that their recommendations were the result of their practice experience and that there was no empirical research around the efficacy of the approach they described. Thirty plus years later and there are still very few studies that focus specifically on the use of the model in professional development efforts.

### **Comparisons and Contrasts of CBAM and TTM**

The TTM and CBAM represent two prominent models of the process of individual change from the perspective of the individual who is seeking to change or is the target of the change effort. TTM has been used primarily in studies involving change in health related behaviors, whereas CBAM has been used primarily in studies involving the implementation of innovations in K-12 schools and higher education. Despite these seemingly different orientations, the two models have much in common. Both view change as a process rather than an event and Lewin's idea of Unfreezing, Moving, and Refreezing is clearly visible in both models. Both models include aspects of behavioral, cognitive, social, and affective theories of individual behavior. The researchers associated with each model have developed instruments and interview protocols that can be used in research and evaluation studies to measure the factors influencing change as well as to assess the extent to which participants have reached the desired behavior change. In addition, underlying both models is the belief that change can be influenced through the use of strategies appropriate for the individual's current perceptions about and actions toward the change. As a reflection of this principle, both models include empirically tested constructs, TTM with the processes of change and CBAM with stages of concern, that suggest areas of intervention for promoting change.

However, unlike TTM where a significant amount of research has been conducted on the use of stage matched interventions, very little CBAM research has focused on testing the match

between change interventions and participant stage of concern. On the other hand, the CBAM model provides a construct, innovation configurations, not included in the TTM. Innovation configurations help to define what the change is in its ideal state and possible adaptations. The TTM has been critiqued for this lack of attention to clarity around the change that is being measured (e.g., Adams & White, 2005); although in studies where the TTM has been applied in organizational contexts (e.g., Levesque et al., 2001), researchers have taken steps to clarify and define the targeted change as a prelude to data collection. Finally, although the CBAM boasts a 40 year history of practice and research, CBAM research has yet to cross over to areas outside of K-12 or higher education to the same extent as has TTM research.

### **Chapter Summary**

Learning transfer is defined as the extent to which the learning that results from a training experience transfers to the job and leads to meaningful changes in work performance (Goldstein & Ford, 2002). By definition, learning transfer is about creating meaningful change, and change is the basis for improving individual, group, and organizational performance in HRD. Accordingly, much can be learned from examining learning transfer from an individual change perspective.

In over 50 years of learning transfer research, much has been learned about the factors that inhibit or support transfer. There is significant support for the concept of learning transfer as a system of factors influence by trainee characteristics, aspects of the training design and delivery, and the work environment. Models of learning transfer depict these factors and their hypothesized relationships to each other and to transfer as an outcome of training. One prominent model, the learning transfer system (Holton et al., 2000) has garnered significant support in the literature and is the only learning transfer model operationalized by an empirically

tested instrument used to measure the factors hypothesized in the model. However, gaps still remain in the learning transfer knowledge base, specifically as it relates to understanding the conditions under which transfer factors operate and are most influential in affecting transfer outcomes. Also, questions remain about the role of the individual in the transfer process.

Questions of how trainees form the intent to pursue transfer, why they choose to attempt or not attempt the transfer of open skills to the job, and how their efforts and progress toward transfer evolve over time have yet to be fully addressed.

Individual behavior change theories and models that describe the process of change from the perspective of the person involved in the change effort may help to increase understanding of the transfer and change process. The TTM (Prochaska & DiClemente, 1982) and the CBAM (Hall et al., 1973) are two change models that seek to explain the processes and conditions involved in moving individuals from one behavior state to another. These models view change as a developmental process in which individuals progress through somewhat predictable phases as they move toward achieving change in targeted behaviors. These models suggest that change can be encouraged and supported through the use of targeted interventions that address behavioral, cognitive, social, and affective considerations of change.

The literature reviewed in this chapter helped to inform this study of learning transfer examined through the lens of individual change. In the next chapter, I describe the study design and methods, including how I combined learning transfer and individual change models to form the study's conceptual framework.

## CHAPTER THREE

### RESEARCH DESIGN AND METHODS

The purpose of this study was to understand how individuals progress over time from having gained new knowledge and skills in training to achieving change in their work-related behavior and the factors that affect this change process. The following research questions guided the study:

1. How do adults involved in employer-sponsored training experience the process of individual work-related behavior change following training?
2. How do learning transfer system and other factors influence the behavior change process over time?

In this chapter, I describe the research design and methods used in this study. The chapter contains the following sections: study conceptual framework, research design, sample selection, data collection, data analysis and interpretation, study reliability and validity, and study delimitations.

#### **Study Conceptual Framework**

I created the study's conceptual framework from two different literature bases and disciplines. The first was the learning transfer system (Holton et al., 2000). As one slice of Holton's (1996, 2005) Human Resource Development Research and Evaluation model, the learning transfer system hypothesizes that learning transfer outcomes are a function of secondary influences, motivational factors, elements in the work environment, and ability-enabling influences. The 16 factors included in this model are believed to either inhibit or facilitate

transfer and influence outcomes at the individual performance level. The second was the Transtheoretical Model (TTM) of change. The TTM posits that individuals move through predictable stages of change from pre-contemplation (i.e., not considering changing in the near future) to maintenance (i.e., maintaining new behaviors for an extended time period) and that movement through these stages can be influenced through interventions that address specific processes of change (DiClemente et al., 1991). For the purpose of this study, the TTM stages of change were operationalized as follows:

- Precontemplation: Has not adopted the desired behaviors from training and does not intend to do so in the near future; no clear recognition of the need to change work behaviors.
- Contemplation: Acknowledges there is a change to potentially be made and is likely to take some action toward change in the near future. May be seeking additional information related to the knowledge and skills learned in training but has not committed to the change.
- Preparation: Has decided to adopt the desired behaviors from training. Is signaling to others readiness to begin doing things differently and/or is putting things in place to support the change.
- Action: Has begun to adopt the desired behaviors from training. Change in behavior is evident and there are early signs of job performance improvement.
- Maintenance: Adopted the desired behaviors from training. Continued application of trained knowledge and skills has contributed to recognizable improvement in job performance.

The TTM framework can be adapted to fit the change effort being studied (e.g., Boswell, 2011; Burke et al., 2006; Levesque et al., 2001). In a training and training transfer context, this means identifying the desired work-related behavior changes from the training and specifying what behaviors would be present in the workplace if the training was effectively applied on the job.

To identify the work-related behavior change for this case, I planned to use the Concerns Based Adoption Model (CBAM) construct of Innovation Configurations (IC). IC maps specify the desired change from an innovation and describe the variations that might be found in practice. IC maps describe these variations along a continuum from ideal to unacceptable and can be used to evaluate the extent of innovation implementation, or fidelity, in an organization (Hall & Hord, 2011; Hall & Loucks, 1981). My intention for using IC maps was not to evaluate fidelity to the training per se, but rather to examine participants' change process as they moved, or failed to move, closer to the desired change. Development of IC maps is an iterative process best accomplished by a team of key informers and stakeholders (Hall, 2013; Hall & Hord, 2011). Creating an accurate IC map for this study required key agency stakeholders to be a part of the design process. Unfortunately, it was not feasible to engage agency stakeholders in this process, as this was not a priority for them. Alternately, to increase my understanding of key competencies and related job practices, I reviewed the training curriculum (See Chapter Four for a detailed description of the training program), used the knowledge I gained from attending the training classes, and engaged in conversations with a classroom trainer who also served as a supervisor mentor. I used this understanding to help frame my interview structure and focus my interview questions.

## Research Design

The lack of empirical research focused on the individual change aspect of learning transfer in organizations pointed to the need for a qualitative inquiry. In her argument for the use of an eclectic and open stance to methods and philosophical paradigms within organizational research, Lincoln (2005) spoke to the importance of qualitative research within organizational contexts. She noted the usefulness of an interpretivist approach when seeking to understand and demonstrate the impact of Human Resource Development (HRD) activities within organizations. Employee actions that come as a result of activities such as training may appear to have no observable or measurable impact when only quantitative methods are used to assess impact. The only way to discover whether the participant is still processing the learning, has connected the learning to other events or contexts within the organization, or is using the learning in a different way than what was originally imagined is to explore the issue via qualitative methods (Lincoln, 2005).

Qualitative research can be viewed as a natural outgrowth of a constructivist worldview. This epistemology holds that knowledge is constructed, rather than discovered, through individuals' interpretation of the world (Stake, 1995). From this worldview, the only way to know or understand a phenomenon is through the detailed study of the interpretations of individuals involved in the phenomenon. Several qualitative research characteristics are commonly accepted in the research literature. First, qualitative research is interpretive (Creswell, 2009; Mason, 2002; Stake, 2010). It involves the study participant's interpretation of the phenomenon; the researcher's interpretations of what is seen, heard, and understood; and eventually, the interpretations of the consumers of the research (Stake, 2010). Second, qualitative research is naturalistic, situational, and holistic. It emphasizes participants'

observations of the phenomenon and strives not to intervene or otherwise arrange the context of the phenomenon. It is situational in its orientation to the unique context of the phenomenon under study (Mason, 2002; Stake, 2010). Qualitative researchers seek to describe this context in detail and to develop and communicate a holistic and complex picture of the issue under study (Creswell, 2009; Mason, 2002). Third, qualitative research is personal and seeks individuals' viewpoints and frames of reference. The researcher is the main research instrument collecting data through personal interaction with individuals in their natural context (Creswell, 2009; Stake, 2010). Given these characteristics, qualitative research is best suited for understanding a phenomenon, uncovering the meaning a situation has for those involved, or delineating how things happen (Merriam & Simpson, 2000). These were goals for this study of learning transfer and change in organizations.

### **Pilot Study**

I conducted a small interview study approximately seven months prior to the start of my dissertation research. The pilot study's purpose, research questions, and conceptual framework were the same as the dissertation study. Interviews focused on participants' experience of change following training and the factors that inhibited or facilitated their efforts toward applying the skills learned in training. The criteria set for participants in the pilot study were similar to what I would eventually use in the dissertation study. I used my personal and professional network to recruit participants. Purposeful sampling was used to select study participants based on the following criteria:

- Full-time employment in a social service organization
- Employed in the position of a direct service practitioner, supervisor, or administrator.

- Completed an employer-sponsored training program no more than six months prior to data collection.
- The employer-sponsored training program completed primarily focused on open skills (e.g., innovation/new approach to work, leadership, communications) rather than technology (e.g., software or computer training)

Three individuals participated in the pilot study. I conducted a face-to-face semi-structured 60-minute interview with each participant; audio recorded and personally transcribed each interview. I used Ruona's (2005) step-by-step procedures for using Microsoft Word to conduct the data analysis. Thematic analysis and constant comparison were the primary analytic techniques. Findings from the pilot included emerging themes that would later be reflected in the dissertation study.

Conducting the pilot served several useful purposes. First, the pilot helped me refine my interview guide for the dissertation study. Particularly, I was able to try out different approaches to gathering information about participants' stage of change. For example, in the first two interviews I asked open-ended questions about each stage of change. In the third interview, I asked open-ended questions but also provided researcher-generated categories, based on TTM theory, and asked the participant to choose a category. This latter approach resulted in a shared understanding of what was being asked and a better foundation from which I could do in-depth probing about the experiences that led to achieving that stage of change. This is the approach I used in the dissertation study. Second, the pilot gave me practice with interviewing participants with whom I share professional characteristics. Having worked in social services for the majority of my career, I consider myself to be a cultural insider with this population. Given this connection, I was concerned about the potential impact on data collection and analysis. For

example, when I listened to the recordings from the pilot study, I noticed I did not follow up on some of the participants' statements because, in the moment, I did not recognize the need for richer description. I glided over some things that, if probed more, could have moved the talk beyond the surface of what was being communicated. I attributed this to an over reliance on what I thought I already knew about these participants' context and experience. Roulston (2010) noted that in situations where the researcher knows a research participant well, it may be difficult to discuss topics and ask question because the two rely on shared knowledge and understandings. The pilot helped draw my attention to the potential for this dynamic to occur in the dissertation study.

Finally, the pilot helped me make research design decisions, including the type of case study I would conduct. In the pilot, each participant attended a different training program and one participant had recently attended several different trainings. Before we could have an in-depth conversation about their experiences with change and transfer, I had to spend interview time gaining an understanding of the training (s) they attended and getting participants to identify and focus on specific knowledge and skills to be transferred. This experience contributed to my decision to conduct a single case study of a specific training program rather than a multiple case study in which participants may have experienced various trainings.

### **Case Study Methodology**

Case study was the specific qualitative methodology used for this study. As a research methodology within the qualitative tradition, case study research is used to investigate a contemporary phenomenon in-depth, within its real-life context, using multiple sources of data collected over a period of time (Stake, 1995). Case study is best for research that asks how and why questions (Stake, 2005; Yin, 2014). It is necessarily interpretive with the researcher

making efforts to preserve the multiple realities and the different, and sometimes contradictory, views of what is happening (Stake, 1995). Merriam and Simpson (2000) compared case study research to survey research by explaining that survey research is used to study a few variables across a large number of units, whereas a case study is concerned with investigating many variables in a single unit and the interaction of significant factors that are characteristic of the phenomenon. Case study was an appropriate design for this study because of the need to investigate potential interactions between two different theories, individual behavior change and learning transfer, that have not been previously explored. There are numerous variables related to these phenomena. Examining transfer of learning through an individual change lens results in many variables of interest best explored within a clearly defined case study.

Perhaps one of the most important, and difficult, aspects of using case study as a research methodology is defining the unit of analysis, or in other words, defining the case. A case is a bounded system (Merriam & Simpson, 2000) that could consist of a person, group, an organization, a community, a project, or even relationships or decisions (Yin, 2014). The case is selected because it is an instance of some concern or issue that can represent the phenomenon or issue under study (Merriam, 1998; Yin, 2014). The case must be bounded by space/location, time, or other concrete boundaries that indicate what will and will not be studied in the research project. Also, the case is always a microcosm of a larger entity (e.g., an organization, industry, or locale); therefore, an important part of a case study is a thorough description and bounding of the context (Ellinger, Watkins, & Marsick, 2005). Stake (1995) described three different forms of case study based on intent: the single instrumental case which uses one bounded case to illustrate the issue under study, the collective or multiple case where the researcher selects several

individual cases to illustrate the issue, and the intrinsic case where the focus is on the case itself because the case represents an unusual or unique situation.

This study consisted of a single, instrumental case. The training program from which transfer of learning was desired served as the bounded case to study the phenomenon of individual change following training. Additionally, the case was bounded through the selection of a training program that occurred within a specific organization. Study participants served as embedded units of analysis (Yin, 2014). I gathered data relative to each participant, analyzed data at the individual and case level, identified case level themes, and drew conclusions about the process of transfer and change that occurred within the training program.

### **Sample Selection**

A state social services organization located in the southern United States served as the organizational context for the study. The diverse and often tacit nature of the knowledge and skills needed in this field, along with the challenging climates and cultures typical in social services organizations, made this a rich setting for this study. In my researcher subjectivities statement (Appendix A), I described my connections to the social services field and how my personal and professional experiences led me to situate the study in this context. The University of Georgia Institutional Review Board (IRB) approved the study protocol. The partnering organization's IRB also approved the study; however, to protect confidentiality, the approval letter is not included in this document.

### **Case Selection**

There are two levels of sampling in case study research (Merriam, 1998). The first is the case identification and selection. Purposeful sampling was used to identify the case for this study. The goal of purposeful sampling is to identify sources that can provide the most relevant

and useful information and from which the most can be learned about the issues that are central to the study's purpose (Merriam, 1998; Patton, 2002). Purposeful sampling requires the researcher to set and use specific criteria to identify information-rich cases (Merriam, 1998). I used the following sampling criteria to identify and select the training program that served as the case.

- Employer-sponsored. A training program is considered employer-sponsored if the organization covered the majority of the costs to deliver the training to its employees, the program was delivered by other employees (e.g., training staff) of the organization, or the program was delivered by contractors who were paid by organization. The organization may or may not be the institution that designed and developed the training curriculum.
- Currently offered classes held within the first three months of the start of the study.
- Population of potential trainees large enough to provide a viable sampling frame from which to recruit study participants.
- Designed for salaried or hourly employees of the organization.
- Explicit training goals directed at developing or improving current job skills. This is compared to training primarily used for new employee orientation, onboarding, or development for future positions/careers.
- Primarily focused on open skills. Trainees have more choice as to what and how they apply trained principles, concepts, and skills to the job. This is compared to closed skills where the trainee is taught to respond in a particular way according to a set of rules or procedures.
- Instructor led, online, or delivered as blended learning.

Based on these criteria, and in consultation with the organization and my dissertation committee, I selected a competency-based training program for agency supervisors as the study case. This three-week course was required to obtain certification as an agency supervisor. Additional information about the training program is provided in Chapter Four.

### **Participant Selection**

The second level of sampling in case study research involves selecting participants within the case (Merriam, 1998). Again, purposeful sampling was used. Study participants met the following criteria:

- Completed the supervisor training program no more than one month prior to study enrollment.
- Employed full-time in the position of casework supervisor.
- Supervisory responsibility for an assigned unit of employees.

I recruited participants from three different training cohorts. These classes were held over the course of a four-month period. I attended a portion of each cohort's classroom training, which allowed me to do in-person recruitment and gain a deeper understanding of the training content and organizational context. I made brief presentations about the study to each class and was available to answer individual questions. I also was a participant-observer in each class and spent a total of 42 hours attending class sessions. After each class session, I sent follow up e-mails to class members thanking them for allowing me to speak about the study and providing them with additional information about study enrollment. My original goal was to enroll a minimum of eight participants. Actual study enrollment was 11. The research design included three interviews with each participant. All 11 participants remained in the study through the

second round of interviews. Eight participants completed the final round of interviews that occurred almost one year following their training.

### **Data Collection**

The use of multiple sources of information is a hallmark of the case study methodology. Case study evidence may come from various sources including: documents, archival records, interviews, direct observation, participant observation, and physical artifacts (Merriam, 1998; Yin, 2014). The Learning Transfer System Inventory (questionnaire) and individual interviews were the primary sources of data for this study. Where available, documents provided by the organization and study participants were also used as data sources.

### **Learning Transfer System Inventory**

Case study research may include, or even be limited to, quantitative evidence (Yin, 2014). For example, qualitative and quantitative methods may be used concurrently for different purposes, or surveys may be followed by fieldwork or interviews to deepen understanding or test alternative explanations for a phenomenon. Consistent with the study's conceptual framework, I used the Learning Transfer System Inventory (LTSI) to measure participants' perceptions about the factors that could influence their transfer of learning. Administered within one week of the classroom training for each training cohort, LTSI results provided an early prediction of catalysts and barriers to transfer and the likelihood of transfer occurring in this case study. In the data analysis, LTSI results were compared and contrasted with qualitative data from interviews that reflect what actually occurred in the case.

The LTSI is designed to assess the 16 factors believed to influence the transfer of learning from training to the job (Holton et al., 2000). These factors are related to the hypothesized domains of motivation, ability, and work environment and are further categorized

as training specific scales (11 factors) and general scales (5 factors). I used version four of the LTSI, which consists of 48-items. Each item is measured using a five-point Likert scale: 1 = strongly disagree to 5 = strongly agree. The LTSI has been validated across multiple industry sectors and cultural groups (e.g., Bates & Holton, 2004; Bates et al., 2007; Chen, Holton, & Bates, 2005; Holton, Bates, Bookter, & Yamkovenko; 2007; Yaghi, Goodman, Holton, & Bates, 2008).

I obtained permission to use this instrument from the instrument's authors (Appendix B). With permission, (R. Bates, personal communication, September 11, 2012), I created an online version of the LTSI using Qualtrics survey software available through the University. Study participants were e-mailed a link to complete the survey. I exported questionnaire responses from Qualtrics and imported them into an Excel spreadsheet that was e-mailed to the instrument's authors. The LTSI has a proprietary algorithm that is retained by the authors of the instrument; therefore, one of the authors completed the scoring and returned the scaled scores to me as outlined in the instrument usage agreement. Individual LTSI results are reported in Chapter Four. Case level results are reported in Chapter Five.

### **Individual Interviews**

Interviews are an essential source of case study data. Interviewees can provide important insights into human affairs or behavioral events related to the phenomenon under study (Yin, 2014) and enable the researcher to find out about relevant situations that she was unable to observe herself (Stake, 2010). Research interviews can be viewed on a continuum from highly structured—similar to an oral form of a survey—to unstructured open-ended conversational formats (Merriam, 1998; Roulston, 2010). Semi-structured interviews, falling halfway between these two extremes, contain sections where a structure is followed (e.g., specific demographic

questions to ask each participant) and sections guided only by a list of questions or issues to potentially be explored. The semi-structured interview format provides the researcher with the flexibility to carve out the interview based on the information the respondent provides, including asking probing questions that ask for more details, clarification, and examples (Merriam, 1998).

I conducted semi-structured interviews that included three areas of exploration. The first portion of each interview focused on the assessment of transfer or, in other words, the degree to which the participant's job behaviors following training were reflective of the key competencies taught in training. I probed for stories, examples, activities, and accomplishments that would provide evidence of what the participant was or was not doing relative to each of the training competency areas. This portion of the interview resulted in an assessment of the participant's stage of change based on the participant's self-assessment and the supporting data uncovered during the interview. In line with the study's conceptual framework, I based the assessment of change on the TTM stages of precontemplation, contemplation, preparation, action, or maintenance. In the second portion of each interview, I focused on generating talk related to the participant's experience of change following training, including the conditions, activities, interactions, and emotions experienced. In the final portion of the interview, I explored the factors that were inhibiting or facilitating each participant's efforts toward applying the knowledge and skills learned in training. Figure 7 is a display of sample interview questions.

Over the course of the study, the general interview format remained the same, but the degree of structure and emphasis changed. The first interviews were the most unstructured. I was interested in hearing participants' stories and took the position that whatever they chose to share, spent the most time talking about, or were most emotionally connected to was likely significant to the case. After the first round of interviews and analysis, I began to identify

possible themes in the data. I explored these emerging themes in subsequent interviews while still creating space for participants to bring forth new issues. I probed for what was different in the way they were practicing, or not practicing, the skills learned in training; what had or had not changed about their experiences, relationships, and thinking about their development as supervisors; and what, if anything, had changed about the conditions or factors that were influencing their transfer efforts.

<p><b>Stage of Change</b></p>	<p>Think of a situation where you took a specific action related to administrative supervision. Tell me about it.</p> <p>What connections do you see between what you learned in training about administrative supervision and how you handled this situation?</p> <p>Think about the set of skills that were the primary focus of the <b>administrative supervision</b> section of the training. Which of the following most applies to you at this time:</p> <p>A. At present, I have no plans to use the skills I learned in training to change my work behavior</p> <p>B. I have thought about trying to use the skills I learned in training to change my work behavior, but I have not actually done anything about it yet</p> <p>C. I intend (within the next month) to deliberately use the skills I learned in training to change my work behavior, and I have taken some steps toward that goal</p> <p>D. I have consistently used the skills I learned in training for at least the last month and have changed my work behavior as a result</p> <p>Tell me why you gave yourself that rating.</p>
<p><b>Change Experiences</b></p>	<p>Tell me about any changes you've made in your work behavior as a result of what you learned in training.</p> <p>How were you able to make these changes?</p> <p>Did you leave training knowing what you wanted to do differently or did you identify these things later on?</p> <p>How did you start to sort this out?</p> <p>How have you been able to maintain the changes you've made/practices you've put into place?</p>
<p><b>Change Influences</b></p>	<p>What has helped you to apply what you learned in training to your job?</p> <p>What concerns do you have or what problems have you encountered with trying to use what you learned on the job?</p> <p>Of the issues that we discussed today, what has had <b>the most positive</b> influence on where you are <b>right now</b> with applying what you learned in training to your job?</p> <p>What has had the most <b>negative</b> influence on where you are <b>right now</b> with applying what you learned in training to your job?</p>

*Figure 7. Sample Interview Questions*

I used an online scheduling application to arrange dates and times for the first round of interviews. Second and third interviews were scheduled via e-mail. Concerned some participants might be uncomfortable meeting in their office, I encouraged participants to choose a location that would be best for them. All participants, except one, chose to meet during normal business hours in their office. One participant chose to meet on Saturdays at a mutually agreed upon location. Most interviews were 90 minutes long. The third round of interviews tended to be shorter, with most of these lasting around 60 minutes. Overall, I logged approximately 41 hours of interview time over the course of the study. All interviews were in-person except one. One participant worked 250 miles away from where I lived. We agreed I would travel to meet with her in-person for the first and final interview. We used technology, Google Hangout, to complete the second interview. Both the participant and I used webcams so that we could still see each other despite not being in the same room. I recorded the audio from each interview, including the interview conducted virtually. The audio recordings were sent to a professional transcriptionist who created a verbatim transcript of each interview.

### **Documents**

Examples of documents that may be relevant in case study research include: personal documents such as letters, memoranda, and e-mail correspondence; written reports of events such as agendas and meeting minutes; internal records such as proposals and progress reports; and media documents such as news clips or other articles appearing in the mass media (Yin, 2014). The most important use of documents is to validate and strengthen evidence from other sources (Yin, 2014). I collected and reviewed organizational documents related to the training program and personal documents from study participants. I asked participants to share relevant documents that could help to further illustrate their change experience or confirm the on-the-job

behaviors they reported in our interviews. Not every participant had or chose to share personal documents; however, what I did receive reflected an assortment of documents including e-mail correspondence, copies of meeting agendas, unit expectations, and thank you cards. In the data analysis, I considered these artifacts as further validation of the data gathered through interviews.

### **Study Procedures and Timelines**

Although initially planned as an eight-month data collection period, the actual timeframe was one week short of a year as measured from the first interview conducted to the final interview conducted. This extended time period for data collection was intentional and was consistent with the study's purpose and conceptual framework. The TTM posits that the action stage is characterized by the enactment of a change within the previous six months and that the maintenance stage is not reached until new behaviors have been sustained for at least six months (Levesque et al., 1999; Prochaska et al., 1992). Also, the reliable evaluation of knowledge and skills transfer requires a time lag between training completion and the measure of transfer (Blume et al., 2010) with one suggestion being a three to six month time period following training (Wang & Wilcox, 2006). Given that the final interviews occurred 10 to 12 months after participants completed training, I was able to explore whether the type of sustained application of training that leads to desired job performance had actually occurred in this case study.

To encourage study participation and retention, I provided incentives in the form of gift cards. Participants could receive a maximum of \$150 in the form of store and/or restaurant gift cards. This amount was prorated over the course of the study. Table 8 details the study time frames, data collection activities, and incentive schedule. These procedures and schedule was followed for each of the three training cohorts.

Table 8

*Study Time Frames and Incentive Schedule*

Activity	Timeframe	Incentive Schedule
Participant recruitment (in-class presentations and follow-up e-mails)	Varied based on class dates	N/A
LTSI administration	Within 1 week following training	N/A
First individual interview	One to two months post-training	Incentive payment \$50 gift card
Second individual interview	Four to six months post-training	Incentive payment \$50 gift card
Third individual interview	10 to 12 months post-training	Incentive payment \$50 gift card

### **Data Analysis and Interpretation**

I used thematic analysis as my guiding analytic framework. Thematic analysis is a method for identifying, analyzing, and reporting patterns or themes within data. This method is compatible with a variety of theoretical and epistemological approaches to qualitative research (Braun & Clark, 2006). I engaged in simultaneous data analysis and data collection that included reviewing LTSI results prior to the first round of interviews and doing preliminary analysis of interview data after each round of interviews. This allowed me to determine what I had learned about the case at various junctures and to use this knowledge to plan and implement the next round of data collection. In the following sections I detail the steps I took to analyze and interpret the case study data. Braun and Clark's (2006) phases of thematic analysis provide the organizing framework for this discussion.

### **Phase One: Familiarizing Myself with the Data**

For each round of analysis, I listened to each recorded interview while reading through the transcript to check for accuracy and to re-familiarize myself with the data. I made edits to the transcript as needed, including correcting and clarifying acronyms or jargon and noting important contextual or nonverbal occurrences that happened during the interviews. For example, if there were extended pauses in the talk, I added a note regarding what was happening during that time (e.g., the participant had to take a phone call or the participant stopped talking to look for a document to share with me). These were details the transcriptionist could not know, but that could have been important to me in later analysis. Also, based on my knowledge of each participant's communication style and context, I inserted bracketed text to clarify talk that may have been unclear to the transcriptionist. As a result of this phase of the analysis process, I became reacquainted with my participants and their stories and contexts and created an accurate transcript to be used in the next analysis phase.

### **Phase Two: Generating Initial Codes**

After reviewing each transcript, I loaded the final transcript into HyperRESEARCH, qualitative data analysis software, to begin the coding process. Coding is the systematic process of analyzing textual data and using tags or labels to assign units of meaning to the descriptive information gathered in the study. "A code in qualitative inquiry is most often a word or short phrase that symbolically assigns a summative, salient, essence-capturing, and/or evocative attribute for a portion of language-based or visual data (Saldaña, 2013, p. 3). I took an inductive approach to coding rather than beginning with a pre-determined start list. I used initial or open coding to break down the data into discrete parts. I was careful to code passages of data inclusively to retain relevant context (Braun & Clark, 2006). In making decisions about what to

code, I asked various questions of the data, including: What are people doing? What are they trying to accomplish? How exactly do they accomplish it? When is action occurring? How do they talk about, characterize, and understand what is going on? What connections am I seeing between the data and the study's conceptual framework? Initial codes were tentative and subject to change as more data were collected and analyzed.

### **Phase Three: Additional Coding and Constant Comparisons**

In this phase of analysis, I used several different coding methods to continue my data analysis. Use of one specific or multiple methods of coding depends on the nature and goals of the study (Saldaña, 2013). I decided I needed more than one method to effectively organize and analyze the massive amount of data generated in this study. I used attribute, structural, process, values, and evaluative coding and code mapping (Saldaña, 2013). Appendix C contains details about these methods and how I applied each one in the data analysis.

Guided by the coding scheme, I engaged in constant comparison between the data and the codes. I created new codes, re-coded segments of data, or coded additional segments of data as needed to ensure the data attached were appropriate for the code and the best conceptual label had been created to describe the code. I compared coded data across the three interviews for each participant. This allowed me to identify themes or patterns within each participant's experience. I also compared coded data based on interview/time period (i.e., round one interviews, round two interviews, round three interviews). This comparison was critical to the identification of case level themes.

### **Phase Four: Searching for Themes**

Searching for themes can be described as the collating of codes such that all relevant data is gathered together under a specific theme (Braun & Clark, 2006) and the rendering of data,

represented by codes, into larger substantive processes and theoretical interpretations (Charmaz, 2011). Data within themes should adhere together in meaningful ways and there should be identifiable distinctions between themes (Braun & Clark, 2006). To identify themes in the data, I focused on both importance to my research questions and prevalence within the data. In assessing prevalence, I considered whether the theme appeared in each data set and whether there was a significant amount of talk related to the theme in each data set. I used code mapping (Saldaña, 2013) to transform codes into organized categories, and then into higher-level themes. This phase resulted in themes (presented in Chapter Five) that reflect multiple perspectives of the study participants and are supported by specific evidence from the data.

### **Ongoing Memo Writing During Analysis**

I engaged in memo writing throughout the analysis process. Analytic memos serve an important function in helping the researcher to critically reflect on the coding process and choices, how the inquiry is taking shape, and emerging concepts, patterns, or themes (Saldaña, 2013). As described by Corbin and Strauss (2008), writing memos forced me to work with concepts and higher levels of abstraction rather than the raw data. My memos were used for open data exploration and included thoughts about the characteristics of the concept or experience, questions I was asking of the data, comparisons between incidents within the data and my knowledge about related literature, emerging themes or patterns, and ideas I wanted to follow up on in the next interview with the participant. I used the annotation function in HyperRESEARCH to create my memos, which allowed me to easily attach memos to coded text passages.

### Study Reliability and Validity

Quality in qualitative research is an ongoing debate that includes issues of terminology (e.g., validity vs. credibility vs. trustworthiness), what criteria should be used to evaluate these aspects of the research, and whether the same criteria can or should be applied across different methodologies (Corbin & Strauss, 2008). Regardless of the terminology employed, in qualitative research, the work of ensuring study quality depends largely on the skills of the researcher (Miles & Huberman, 1994; Stake, 1995). Strategies that demonstrate the rigor of the investigative process, as carried out by the researcher, are needed to address reliability and validity in case study research. In the following sections, I discuss the strategies I used to address reliability and validity in this study. Table 9 contains the listing of these strategies.

Table 9

#### *Reliability and Validity Strategies*

Strategy	Reliability	Validity
Audit trail and case study database	X	
Reporting and monitoring researcher subjectivities	X	
Clearly defined constructs		X
Multiple sources of evidence/triangulation		X
Repeated observations		X
Member checking		X
Direct commentary		X
Thick description		X

## **Reliability**

Qualitative reliability means the researcher's approach, methods, and techniques are accurate and well-documented such that another researcher could follow the same procedures to repeat the study and would achieve the same results (Mason, 2002; Merriam, 1998; Yin, 2014). The goal for qualitative research should be for research consumers to conclude that, given the data collected, the results make sense and are consistent (Merriam, 1998). Or, in other words, that the report is credible. I used two main tactics to address the issue of reliability.

**Audit trail and case study database.** I was careful to document and report the procedures used in participant recruitment, data collection, and data analysis. For example, I documented all of my interactions with each training cohort including the dates I participated in their training, when I sent follow up e-mails and the responses received, dates the LTSI was administered to each group, and scheduling of each interview with each participant. This protocol for how engagement would begin and time frames for interaction was repeated with each training cohort. I also created and maintained a case study database (Yin, 2014) to organize and store the data collected in the study. Most study related documents (transcripts, field notes, documents) were housed in HyperRESEARCH, the software I used for data analysis. As the analysis process proceeded, I made hard copies and maintained the various iterations of my codebook and coding scheme and the data excerpts examined during the constant comparison process. Case study protocols and databases help to increase reliability of case study research because, at least in principle, other investigators could review the logic of the design, the evidence collected, and the steps taken in analysis and not be limited strictly to making judgments based on the written case study report (Yin, 2014).

**Reporting and monitoring researcher subjectivities.** Attending to the subjectivities of the researcher who acts as the instrument in qualitative studies is a technique for ensuring study reliability (Merriam, 1998). This includes being transparent about the assumptions and theory behind the study and the researcher's position in relationship to the group being studied. I explored these issues in my statement of researcher subjectivities (Appendix A). I revisited this statement periodically to remind myself of my positionality and how this might be impacting my understanding and interpretation of my participants' experiences. I also audio recorded field notes immediately following interviews. In these notes, I openly reflected on my subjective reactions to and interpretations of the interaction. Listening to these audio recordings became a part of my analysis protocol as I sought to maintain a high level of self-awareness throughout the study. During the latter phases of analysis, I also revisited many of the analytical memos written earlier in the study. This was enlightening given the span of time between the first round of interviews and the final round of analysis. I was able to reflect on if, or how, my initial reactions to participants' stories had shifted over the course of the study.

### **Validity**

Qualitative validity refers to the accuracy or trustworthiness of the findings and/or inferences made about the data from the viewpoint of the researcher, the participant, or the readers of the study (Creswell & Miller, 2000). Validity deals with questions of how congruent the findings are with reality, whether the findings capture what is really "there," and whether researchers are really observing and measuring what they think they are observing and measuring (Merriam, 1998). Validity also considers how well or how likely the findings can be applied to other situations. I used five main strategies to ensure validity in the study.

**Use of clearly defined constructs.** Ensuring constructs are defined or operationalized and the construct measures match the concepts enhances the validity of case study research (Yin, 2014). The LTSI, used to assess participants' perceptions about transfer factors, previously demonstrated construct validity through an ongoing research agenda (Bates, Holton, & Hatala, 2012). To address this aspect of validity with the qualitative data, I used the key competencies taught in the training to operationalizing the change (i.e., the desired job behaviors that represent effective transfer of learning) to be measured. I also developed the stage of change assessment questions to be specific to these key competency areas.

**Multiple sources of evidence and repeated observations.** Multiple sources of evidence essentially provide multiple measures of the same phenomenon (Yin, 2014). When different sources of data or different perspectives of the data converge in support of study themes, confidence increases that the researcher has accurately captured and interpreted events (Creswell, 2009; Yin, 2014). Data sources in this study included a standardized questionnaire, semi-structured interviews, documents, and classroom observations all of which were used to identify themes within the data and determine case study findings and conclusions. Also, Merriam (1998) noted that repeated observations of the phenomenon serve to increase validity. Repeated observations were a hallmark of this study that included three interviews with each participant conducted over a period of almost one year.

**Member checking.** I used member checking to assess how well the findings resonated with participants and if participants could see themselves in the story I was constructing. Although some researchers conduct member checking by having participants read transcripts, given the volume of interview data accumulated for these participants, I believed this would not be a fruitful undertaking in this study. Creswell (2009) stressed that member checking is best

done by giving participants parts of the “polished product” (p. 191) such as themes, case analysis, or emerging theory rather than the actual transcripts. To carry out member checking, I developed individual executive summaries for each participant. In these summaries, I presented the themes from their experience based on my interpretation of the data (interviews, documents, LTSI results). I created this summary after the second round of interviews and analysis. Prior to each participant’s final interview, I e-mailed the summary to the participant and asked the participant to review it prior to our meeting. The first portion of the final interview was dedicated to reviewing the summary and getting the participant’s reaction to my interpretations. I encouraged participants to ask questions, contradict, and/or add to the content included in their summary. In addition to contributing to study validity, the member checking process led to additional talk and a deeper understanding of the themes identified in the data.

**Thick description and direct commentary.** Another form of case study validity deals with the problem of whether a study’s findings can be generalized to other settings. Although researchers using case study methodology should be careful about attempts to generalize the findings from a single case study to other case situations, some semblance of generalization may be applicable as described in Stake’s concept of naturalistic generalization. Stake (1995) noted research consumers make generalizations based on their prior experiences and knowledge and their ability to compare and contrast the research findings to similarities and differences in situations they have experienced. “To assist the reader in making naturalistic generalizations, case researchers need to provide opportunity for vicarious experience. Our accounts need to be personal, describing the things of our sensory experiences, not failing to attend to the matters that personal curiosity dictates.” (Stake, 1995, p. 86). I used rich, thick description to convey the study context and findings, including reporting direct quotes from study participants that support

the findings and conclusions reported. Thick description paints a picture of the participants, their contexts, and the conditions unique to the case so readers can understand and draw their own conclusions from the research (Freeman, deMarrais, Preissle, Roulston, & St. Pierre, 2007). By including thick description and direct commentary, I hope I have supported the reader's ability to combine what they learn from this study with their experiences of learning transfer in organizations and use these connections to transfer knowledge to other contexts.

### **Study Delimitations**

I made specific decisions regarding study design that limited the study's scope. First, the study's conceptual framework was based on a specific theory of learning transfer and a specific theory of individual change. These two represent only two out of a myriad of theories and models that could have been selected. By choosing the learning transfer system (Holton et al., 2000), I positioned the study to focus on understanding how empirically-supported transfer factors operated within the individual change process rather than on uncovering new factors. However, throughout the study I remained open to the discovery of different factors and indeed additional factors did emerge as described in the findings and conclusions. Similarly, I chose the TTM (Prochaska et al., 1994) because of its prevalence in the research literature and the empirical support for the efficacy of staged matched interventions for promoting individual behavior change. I did not set out to establish causal relationships between the learning transfer factors and the TTM stages of change, but rather to situate learning transfer in an individual change framework so that potential connections could be identified. Second, this study is limited in scope as a result of the research context I chose. My professional and personal experiences and interests heavily influenced the selection of the case and case context.

## Chapter Summary

In this chapter, I provided a detailed description of the study's research design and methods. The study purpose was to understand how individuals progress over time from having gained new knowledge and skills in training to achieving change in their work-related behavior and the factors that influence the change process. The learning transfer system and the TTM of change together formed the conceptual framework for the study. Lessons learned from a pilot study helped to inform the design of this single, instrumental case study. A supervisor training program within a public social service agency served as the study case. I used in-person recruitment and purposeful sampling to identify the eleven participants who served as embedded units of analysis. Data collection methods included the LTSI (questionnaire) and three semi-structured interviews with each participant conducted over the course of one year. Scaled scores were produced for questionnaire data and thematic analysis was used to analyze the qualitative data. I used several strategies to ensure reliability and validity of the study, including a clear audit trail, triangulation through multiple sources of data, member checks, and reporting direct commentary and rich descriptions. In the next chapter, I describe the study context and participants.

## CHAPTER FOUR

### ORGANIZATIONAL CONTEXT, THE CASE, AND THE PARTICIPANTS

A state social services organization located in the southern United States served as the organizational context of the study. This organization is responsible for various social welfare programs including the child welfare programs of child protection, foster care, and adoption. The organization has offices located throughout the state that serve citizens in the local county. These county offices are diverse in terms of geography, socio-economics, population, organizational structure, and resources. This is a large and complex organization. Employees work in an ever changing, high stress, low resource environment where the consequences of poor performance have serious ramifications for the most vulnerable citizens.

The study case (i.e., the training program) was a course on supervision. This course is mandatory for new supervisors and one of the requirements for certification as an agency supervisor. The training program spans six weeks and consists of three weeks (15 days) of classroom training. Social Work faculty at a major University in the U.S. developed the classroom curriculum as a part of a grant funded by the U.S. Department of Health and Human Services, Administration for Children and Families, Children's Bureau. State agencies are free to adapt the curriculum to fit their organizations. At the time of this study, the organization had been using its adapted version of this curriculum for approximately four years. The training curriculum addresses competencies related to three areas of supervision in a child welfare setting. Data collection and analysis focused on these primary competency areas. Figure 8 provides an overview of the topics included in the classroom training.

	<b>Administrative Supervision</b>	<b>Educational Supervision</b>	<b>Supportive Supervision</b>
<b>Focuses on:</b>	Organizational structure	Professional competence	Psychological and interpersonal climate
<b>Deals with barriers related to:</b>	Tasks and resources	Staff knowledge and skills	Emotional stressors
<b>Supervisor operates as:</b>	Executive manager	Teacher and educator	Team counselor and advisor
<b>Training Topics:</b>	Management approaches/philosophies	Identifying and addressing staff learning needs	Staff motivation
	Transitioning to supervision	Developmental approach to supervision	Trauma and burnout
	Managing change	Mentoring	Team development and functioning
	Managing for outcomes	Supervisor as practice expert	Conflict resolution
	Employee selection	Coaching and feedback	Job satisfaction and retention
	Performance management	Clinical supervision	
	Managing different generations		

*Figure 8.* Training Curriculum Overview

Use of a standardized curriculum helped to support the fidelity of the classroom training. There was also consistency in training delivery as the same two agency trainers facilitated each of the classes from which study participants were recruited. The training includes a variety of instructional methods to facilitate learning including lecture, small and large group discussions, and various experiential activities (e.g., role plays, scenarios, learner presentations, personal

reflections). The social context in the classroom also played a significant role in the learning process. The training curriculum and training delivery provided numerous opportunities for networking and sharing of experiences, information, and resources. The trainers also encouraged participants to maintain contact with each other after training. The qualitative data includes talk about the value of learning from others in the class and having a network of peers for support.

Learning was assessed through a knowledge test given at the conclusion of the third week of classroom training. Training participants must score a minimum of 80 (out of a possible 100) to pass the course. Participants in this study all achieved a passing score on the knowledge test. Test scores ranged from 86 to 100 with a mean of 94. Because the learning assessment was post-test only, it is impossible to judge learning gain pre to post or participants' degree of knowledge and skills when they entered the training program.

The training program also includes skill-building activities that are integrated between weeks of classroom meetings and field observations. The skill building activities are to be completed under the guidance of an assigned mentor and are designed to help participants transfer the knowledge learned in class to “real life” application in their county office. However, in this study, I found inconsistencies in the implementation of this aspect of the training program. Some study participants received substantive guidance from their mentors. Others had minimal interaction with their mentor and the mentor's engagement was little more than a sign off on required paperwork.

Case level results from the Learning Transfer System Inventory (LTSI), which is discussed in Chapter Five, and the qualitative data revealed the organization gave little to no attention to whether and how participants were prepared for the training experience. The learning transfer literature suggests learner readiness is an important factor that influences both learning

motivation and transfer motivation. Although test results suggested participants achieved the learning objectives, it is also possible the lack of learning readiness impacted the extent of learning and learning transfer in this case.

As discussed in Chapter Three, I recruited study participants from three training cohorts. Each participant completed the LTSI within one week of completing the training program. For easy reference, the LTSI scales and definitions are included in Table 10. In the next section, I describe each training class and the study participants. Individual LTSI results, categorized by catalysts and barriers, are included at the end of each participant profile. As a result of the class descriptions and participant profiles, I hope readers gain a greater understanding of the training and transfer context, the participants, and each participant's individual transfer story. All of these conditions informed my understanding and interpretations of the case and the phenomenon of learning transfer as individual change.

Table 10

*LTSI Scales and Definitions*

Scale	Definition
<b>Secondary Influences</b>	
Learner Readiness	The extent to which individuals are prepared to enter, participate, and profit from a training program.
Performance Self-Efficacy	An individual's general belief that he or she is able to change his or her performance when he or she wants to.
<b>Motivational Influences</b>	
Motivation to Transfer	The direction, intensity, and persistence of effort exerted toward using on the job skills and knowledge learned in training.
Transfer Effort-Performance Expectations	The expectation that effort devoted to transferring learning will lead to changes in job performance.

Performance – Outcome Expectations      The expectation that changes in job performance will lead to valued outcomes.

### **Work Environment Influences**

Personal Outcomes Positive      The degree to which applying training on the job leads to positive or desirable outcomes for the individual.

Personal Outcomes Negative      The extent to which individuals believe that if they do not apply new skills and knowledge learned in training that it will lead to outcomes that are undesirable.

Peer Support      The extent to which a trainee's peers reinforce and support use of learning on-the- job.

Supervisor Support      The extent to which the trainee's supervisors/managers support and reinforce the use of learning on the job.

\*Supervisor Opposition      The extent to which individuals perceive negative responses from supervisors when applying or attempting to apply knowledge or skills learned in training.

\*Resistance / Openness to Change      The extent to which prevailing group norms are perceived by individuals to resist or discourage the use of skills and knowledge acquired in training.

Performance Coaching      Formal and informal indicators from an organization about an individual's job performance.

### **Ability-Enabling Influences**

\*Personal Capacity for Transfer      The extent to which individuals have the time, energy, and mental space in their work lives to make changes required to transfer learning to the job.

Perceived Content Validity      The extent to which the trainees judge the training content to accurately reflect job requirements.

Transfer Design      The extent to which 1) training has been designed and delivered to give trainees the ability to transfer learning to the job, and 2) training instructions match job requirements.

Opportunity to Use      The extent to which trainees are provided with or obtain resources and tasks on the job that enable the use of new skills.

---

Note. LTSI Version 4, 2011

\*Reverse score scales.

### **The First Class**

Betty, the trainer, introduced me to class -- making what I perceived to be a big deal about me and my “very exciting” research project. Then, up to the front of the class I went. I had my notes that detailed what I planned to say. I also had my one-page study overview – complete with graphics and printed on colored paper—as a handout. I knew it was important to strike the right tone with this group. I wanted to appear credible to them. I wanted them to understand I am a child welfare person, I had been where they are right now, and I am also a researcher. I wanted them to see me as someone who understands the difficulty of their jobs and wants to hear their stories so that together we can create the possibility of making things better for those who will come after them. Betty said I could take as much time as I wanted, but I didn’t want to do too much self-promotion. Above all, I wanted to appear genuine. So, I gave my spiel, handed out my carefully prepared one-pager, and took a seat. “No pressure, just think about it and let me know if you would be interested in participating,” is how I ended my presentation to the first class.

I took my seat and tried to concentrate on being a participant-observer in this setting. The training topic that week was Supportive Supervision. I checked out the different people in the room --- predominately women, which was expected in this field; predominately African-American, which was mostly likely related to the location of the class; definitely younger than me -- people early in their careers, mostly 30 somethings. I made mental notes of individuals’ behaviors, comments, and level of participation in the class. During breaks and after class, I made myself available to people who had questions about the study or just wanted to learn more about me.

A few days after the class, I sent a follow up e-mail to members of the class. I thanked them for allowing me to share information with them about the study and issued my formal invitation to participate in the study. Over the course of the next couple of weeks, I anxiously waited for responses to roll in. Five people from the first class decided to move forward with me: Wanda, April, Anna, Julie, and Donna (pseudonyms). Table 11 contains key demographics for these participants.

Table 11

*Cohort One Participants*

Participant	Age	Highest Degree and Major	Population of County Served by Agency	Years with Organization	Length of time supervising before training
Wanda	32	Bachelor's Social Work	Metropolitan county (estimated population 213,869)	4	2 months
April	27	Master's Social Work	Major metropolitan county (estimated population 722,161)	2	Less than 1 month
Anna	37	Master's Public Administration	Major metropolitan county (estimated population 996,319)	12	6 months
Julie	30	Bachelor's Psychology	Metropolitan county (estimated population 283,379)	4	1 month
Donna	40	Bachelor's Social Work	Major metropolitan county (estimate population 877,922)	8	1 month

Note. County population data is from the U.S. Census Bureau 2014 population estimates.

**Wanda: The One Who Committed Early and Held On**

When Wanda met me in the lobby of her building for our first interview, I didn't remember her from class. I couldn't place where she had sat in class, and I couldn't recall any specific comments she made. I didn't think I had spoken to her about the study or anything for that matter. But, she was the first person to respond to my study invitation and the first participant I interviewed.

Wanda had worked for the organization previously, but left for a position at a private agency. A few years later, she returned to the organization as a case manager and then, after about four months, applied for a supervisor position. She saw this as an opportunity and wanted to gain the experience. She had been performing supervisory duties for about two months before going to supervisor training.

“So, how did you end up in child welfare?” I asked. “Everybody’s got a story about how they landed in child welfare.” Wanda shared the story of how she came to work in this field, and I was struck by her confidence and how sure she was of her life purpose. Wanda shared:

My initial major in college was accounting. I’m a numbers person, I crunch numbers. But when I got into my core classes after my first two years of college, it was like...’Okay, this is not enough people interaction for me.’ Yes, I can make a decent salary, probably more than I would in this field initially, but I’m a people person. I’ve always worked with community-based organizations. I’ve always given back to the community. I’ve always worked with people in need. My passion is people and families. When I was done with grad school, I wanted to become a Marriage and Family therapist - that is my lifelong passion. I knew as an accountant, I wouldn’t be able to fulfill that even though I’d make the money. But my passion wouldn’t be lived out; my dreams

wouldn't be lived out. And I'm more of a person who's about living a life of purpose. A very purpose driven life and my purpose in life is to help people. So, I switched my major.

Wanda was probably the most upbeat of the participants in terms of her attitude and convictions about what she wanted to accomplish in her new role. In the weeks immediately following training she made significant strides toward applying what she learned in training. The data supported that she had quickly moved beyond contemplating what changes she should make as a result of training to actually taking actions to improve her performance and the performance of her unit. She was particularly excited about the actions she had taken regarding the educational function of supervision.

At the time of our second interview (five months post-training), I noticed a change in Wanda. Her countenance was different and her energy level was much lower. In the interim between our first and second interviews, there had been a lot of changes in her office (e.g., staff and supervisor turnover, mandatory overtime to address case backlogs) and she had inherited new staff members in her unit. These conditions interfered with her momentum. She explained that the time she needed to continue with many of the efforts she'd made to apply what she learned in training had disappeared. Her middle stage of transfer was characterized by re-tooling to adjust what was realistic for her to take action on.

By our third interview, which occurred 10 months post-training, Wanda appeared to have made a recovery from the earlier chaos. The office structure had changed as had her unit's responsibilities. She also reported a shift in the culture of her office that resulted in more of an emphasis on teamwork. She had engaged in a lot of reflection resulting in changes to her approach to supervision and efforts to build more of a relationship with her staff. Her actions reflected substantial transfer of the knowledge and skills learned in training. Her unit was

exceeding the performance goals for the agency's key metrics, which also spoke to her performance as a supervisor.

Throughout the study, Wanda felt very strongly about the positive support she received from her direct supervisor and upper management. This support was the primary factor in her transfer and performance improvement efforts. Also, her motivation to use what she learned in training and improve her performance was high. Although she experienced several challenges, she insisted that these conditions did not stop her efforts. When asked whether her ability to transfer her learning and continue her development as a supervisor had been impacted she responded by saying:

Absolutely not. And I say that because just of the person that I am. I don't give up when there is a bump in the road. You find a way over the bump, smooth it out, and you keep going. That's just the approach that you take.

Wanda's LTSI results are presented in Table 12. Wanda identified more catalysts to transfer than barriers and the qualitative data provided support for this assessment. Her personal capacity score revealed she believed she would have the time, energy, and mental space in her work life to make changes required to transfer learning to the job; however, the qualitative data suggested she was very challenged in this area because of organizational conditions. Her story demonstrates how unforeseen situations in the work environment can impede or delay the transfer effort. However, Wanda's conscientiousness and job commitment helped to buffer the impact.

Table 12

*LTSI Results: Wanda*

LTSI Scale Name	Mean
<b>Catalysts for Transfer (&gt;4.01)</b>	
Personal Capacity	5.00
Supervisor Opposition	5.00
Openness to Change	5.00
<b>Weak Catalysts for Transfer (3.51-4.00)</b>	
Performance Self-efficacy	4.00
Motivation to Transfer	4.00
Transfer Effort-Performance Expectations	4.00
Peer Support	4.00
Supervisor Support	4.00
Performance Coaching	4.00
<b>Barriers to Transfer (2.5 – 3.5)</b>	
Learner Readiness	3.33
Performance-Outcome Expectations	3.33
Personal Outcomes Positive	3.33
Content Validity	3.00
<b>Severe Barriers to Transfer (&lt;2.5)</b>	
Personal Outcomes Negative	2.00

Note. Participant did not answer some of the survey questions. Therefore scale scores could not be calculated for Transfer Design and Opportunity to Use.

### **April: The One Who Wasn't Afraid to Ruffle Some Feathers**

The first time I met with April the activity in her office was non-stop and fast paced and so was she. She was a multi-tasker. During our interview, she managed to stay engaged with me while still responding to messages on her computer and phone. Her approach to her job performance was upbeat but realistic. She was ambitious and wanted to progress in her career. In addition to this new position, she entered a doctoral program during the time of the study. She was a woman on a mission.

April worked as a case manager in a different county office and with a private agency before being hired as a supervisor in her current office. She started with the agency about two months prior to attending training, but she was mostly observing and trying to help out where she could while someone else was supervising the staff she would eventually inherit. She explained how she entered child welfare after completing her undergraduate and graduate education:

I did my internships in juvenile justice. And that's where I thought I was going to go but when I started applying for jobs, I just applied wherever. And [the first county] called me. They were offering more money and they were doing immediate hiring and I was ready to graduate and these were the jobs so...I came on. I felt like it would be a great stepping stone -- a great way to make connections and network. And I felt like it was paying your dues. I feel like everybody when they graduate needs to do at least a year in public child welfare in order to appreciate it. And then you can move forward in the field of social work...I just feel like it's a great eye-opener. You learn so much and even in that short time of a year. Six months in...and people consider you a vet.

April's time immediately following training was mostly spent on gaining acceptance from her staff members and creating the systems she felt were important for her team. She had made decisions to adopt some of the behaviors learned in training and had begun to put some of these things in place with her staff; but, she also expressed how some parts of the training were not new to her and didn't make much of an impact on her. She was particularly focused on setting up systems of accountability for the work, as she perceived that her staff had gone too long without those.

At the time of our second interview, which occurred about five months after she completed training, April was still focused on accountability. She had developed a managerial

approach that promoted accountability but also instilled a sense of teamwork in her unit. She had experienced almost 100% turnover in her unit and was faring well with this new group. The data revealed evidence of transfer in all three competency areas. She was particularly proud of what she had done around supportive supervision. This was where she concentrated most of her efforts. As a result, her performance and the performance of her unit had improved. She had gotten affirmation and recognition from both her staff and upper management. In short, she was feeling pretty accomplished. Unfortunately, I did not do a third interview with April. She did not respond to my requests for scheduling the final interview. I do not know if she had a particular reason for dropping out of the study early.

In terms of factors influencing April's change process, her lack of interaction with and support from her supervisor was significant in the early weeks after training. By the time of our second interview, their relationship had improved. April learned that if she needed support she could go to her supervisor, but not to expect her supervisor to be proactively engaged. She also faced resistance to change in her work environment and was struck by what she perceived to be a lack of accountability within the agency for the application of skills following training. This seemed to be ongoing, but she explained that this pushback from other supervisors did not stop her from trying new things with her staff. One of the most helpful things for her was the connection she made in training with other new supervisors. She was able to maintain these relationships, which helped her cope with the negative transfer climate in her own office. By the time of our second interview, the support from her staff had become the most influential on her performance improvement process. When asked what would be most helpful to support her continued performance improvement, her answered reflected the impact of her determination:

I think I would need more support [from administration] but I feel like....I will continue to do it whether I'm supported or not. It might make some people angry....it might ruffle a few feathers but if I feel like this is what is going to be better for my team, I'm going to do it. I would want to be supported and hope that I'd be supported....but I'm going to do it regardless.

Table 13 presents April's LTSI results. It is interesting that the catalysts to transfer were all factors related to individual motivation or effort. Even early in the process, April perceived a lack of work environment supports for transfer. The qualitative data support this perception. April is an example of the impact of individual characteristics such as personality, values, and motivation on the transfer of learning process.

Table 13

*LTSI Results: April*

LTSI Scale Name	Mean
Catalysts for Transfer (>4.01)	
None	
Weak Catalysts for Transfer (3.51-4.00)	
Performance Self-efficacy	4.00
Motivation to Transfer	4.00
Transfer Effort-Performance Expectations	4.00
Personal capacity	4.00
Barriers to Transfer (2.5 – 3.5)	
Transfer Design	3.33
Opportunity to Use	3.33
Supervisor Opposition	3.33
Content Validity	3.00
Peer Support	3.00
Personal Outcomes Positive	2.67
Severe Barriers to Transfer (<2.5)	
Supervisor Support	2.33
Resistance/Openness to Change	2.33
Performance Coaching	2.33

Learner Readiness	2.00
Performance-Outcome Expectations	1.67
Personal Outcomes Negative	1.33

---

### **Anna: The Veteran Who Stayed Because She Loves Her Job**

Anna was one of the calmest people I had ever met. She was definitely passionate about her work, but she wasn't frantic. Her easygoing approach to work, and to life, had probably served her well in the 12 years she worked in child welfare. Our exchange about how she came to be in child welfare, went like this:

Deidre: So, what brought you into child welfare?

Anna: One of the programs that I was doing [at the hospital] was going throughout the state to teach child care providers about child health and safety issues. And we didn't get a big grant. And I just started applying to the state and this was one of the first jobs that I got and so I was comfortable. I already knew I wanted to be in government and I was going to do ten years and so it didn't matter to me--- that was my long-term plan. And so it just worked out that way.

Deidre: And then you stayed?

Anna: I stayed (laughs).

Anna was being groomed for supervision although she didn't realize it at the time. A previous supervisor gave her additional responsibilities. Then, she was the lead worker for her next supervisor. After this supervisor left the agency, she was in the role of supervisor (taking on many supervisor tasks while still maintaining her own caseload) without the actual title. Then, she was officially promoted to supervisor of the unit.

The weeks immediately following training were mostly business as usual for Anna. She experienced some anxiety about her transition into supervision because she was concerned about how her former peers would perceive her now that she was the unit supervisor. At the time of our first interview, Anna had not had many opportunities to apply what she learned in training. She was still holding on to a lot of her cases and appeared to be stuck between the two worlds of doing the work and supervising the work. Also, unlike most of the other participants, her unit was already in place and performing well. She was mostly focused on dealing with her transition and supporting her team and was not as focused on improving her own performance.

During the middle phase of her journey, Anna was presented with different work situations that gave her more opportunities to apply what she learned in training. She shared that it actually took her doing the work to be able to see the real relevance and value of the training. Data from our second interview included specific actions and behaviors that Anna engaged in related to the training competency areas.

By the time of our third interview, Anna had gone through an organization restructure and had another new supervisor. This supervisor gave Anna a directive to re-assign the cases she still had to her staff. Holding on to these cases was probably a holdover from her initial anxiety about supervising her peers. Anna didn't want to face resistance or questions from them about more work, so instead she continued to do the work herself. At this point, Anna fully experienced being a supervisor. Perhaps the best example of her training application was the work she did with administrative supervision. Her unit achieved some significant accomplishments, including completing a successful record audit and acknowledgements from upper management about the quality of their work.

The training and her prior work experience had the most influence on Anna's ability to use what she learned to improve her performance. She had "worked her way up" and was the most prepared to perform in this new role. She explained it by saying: "I know what kind of worker I was and then once I had the training piece and added that to my skills, then I think that all of that combined is what put me where I am." By the end of the study, Anna had experienced three different supervisors. The interactions she had or didn't have with these supervisors were influential. Her original supervisor met with Anna to discuss the training and what she was learning. This supervisor had also attended the same course when she was a new supervisor, which made it easier for Anna to connect with her. Unfortunately, this supervisor left and there was a period of time after Anna completed training that she was without a direct supervisor. Being without supervisor support in these early weeks probably contributed to a slower transfer process for Anna. Finally, Anna's attitude about the job – her organizational commitment and job involvement - was a significant factor in her change effort. When asked what motivates her to continue to try to apply what she learned in training and improve her performance as a supervisor, she said:

My love for people, period. Yeah, I thoroughly love my job. I do. I have loved it for a very long time...This is a calling, definitely not a job, everybody cannot do it...I guess my motivation is just the families and kids...And the staff, when you have a good bunch under you -- or working with you...it makes it a whole lot easier.

Anna's LTSI results are presented in Table 14. Anna perceived very few barriers to transfer in her work environment and the qualitative data supports this assessment.

Organizational issues, like the restructuring Anna experienced, didn't appear to have a

significant impact on Anna. Perhaps her prior work experience and her job commitment served to provide a buffer to these challenges.

Table 14

*LTSI Results: Anna*

LTSI Scale Name	Mean
<b>Catalysts for Transfer (&gt;4.01)</b>	
Personal Capacity	5.00
Personal Outcomes Positive	5.00
Supervisor Opposition	5.00
Transfer Effort-Performance Expectations	4.67
Transfer Design	4.67
Opportunity to Use	4.67
Motivation to Transfer	4.33
<b>Weak Catalysts for Transfer (3.51-4.00)</b>	
Performance Self-efficacy	4.00
Content Validity	4.00
Peer Support	4.00
Supervisor Support	4.00
Performance-Outcome Expectations	3.67
Personal Outcomes Negative	3.67
<b>Barriers to Transfer (2.5 – 3.5)</b>	
Resistance/Openness to Change	3.00
Performance Coaching	2.67
<b>Severe Barriers to Transfer (&lt;2.5)</b>	
Learner Readiness	2.33

**Julie: The Survivor Who Moved On**

Articulate, outspoken, and funny, Julie seemed like the type of person who would have a lot to say. During my class participation/observation, I could tell she was a leader by the way she interacted with others in the class. Her answer to my first question was a foretelling of the rest of our first interview, which would be full of metaphors, funny anecdotes, and self-deprecating humor.

Deidre: So, how long have you been with the agency?

Julie: I've been with the agency since June 14 of 2010. I started as a temp or a contract worker in the dark times.

Deidre: The dark times? What was dark about that time?

Julie: There were about seven regular staff and 30 temp workers...It was a bad time for the agency, a lot of people got let go or quit and so there was no staff...Then in September they let go of like 28 temps and there were only five of us left....At the end of November the contract expired. The five of us who stayed were asked to stay on as part-time employees. One of them lasted one day as a regular employee and one of them just didn't show up and so there was just three of us. And I think out of those three, there is only one other still working for the agency and she's now in a different county. And I am still here.

Deidre: So, only the strong survive?

Julie: Or the foolish. I've yet to determine which one I am.

Julie's transition into supervision included some trepidation. She wasn't thrilled with the idea of being in the office all day and being "away from the action." She experienced a sense of loss of the familiar and it was a process for her to let go of her old identity as a caseworker. The initial weeks following training, Julie was focused on identifying the training content that was most important to her and adapting those things to fit her personality and context. Trial and error was a significant part of her practice during this stage. She experienced a lot of ah-ha moments and admits to making a lot of mistakes with her staff in these early days.

In the middle phase of her journey, Julie focused on examining her practices. She learned from her mistakes and worked on improving her effectiveness. She became more strategic and

gained the ability to pick and choose the right approach to meet the work situations she encountered. The data include specific actions she took on each of the training competency areas. Perhaps the best example is the work she did in supportive supervision with developing a positive team culture within her unit. The overall performance of her unit and different accolades received (employees of the month, unit awards, having one of her staff members promoted to supervisor) also supported her effectiveness as a supervisor. Ironically, she received a disappointing performance evaluation despite the achievements of her unit. She submitted a rebuttal to the evaluation but believed she would not get a response.

When we met for our final interview things had changed for Julie. She had been assigned to a different program area and was supervising a different unit of people who were all new staff. She had not requested this transfer and the explanation she received from upper management was less than satisfactory. She was “not happy” and management knew it. As a result of this situation, she realized she had to change her approach to supervision. Her managerial style changed. She became more focused on accountability and she had to be more active in ensuring this new unit had the knowledge and skills they needed to work independently. She tapped into knowledge and skills from her training that she had not used previously. She changed “begrudgingly,” but afterwards she realized the change was necessary and this was actually what she was supposed to be doing as a supervisor.

Julie experienced several barriers to transfer related to the resistance to change and lack of support in her work environment. Julie described an office culture where people get negative feedback when they are doing well. The focus on data and outcomes set up rivalry and competition. Rather than people supporting innovative work, often there was a backlash. She did not have a consistent mentor although this was supposed to be a part of the training program. As

a result, she received very little coaching and feedback. Organizational issues such as a high turnover rate and constant changes in the agency structure impacted her. Her job commitment and self-efficacy drove her improvement efforts.

At our last interview, Julie informed me she was leaving the county office to take a state level administrative position. After barely a year in the supervisory role, she was moving on. Although I was happy for her and sincerely wished her well, I could not help but feel sad for the staff in her office. Reflecting on this decision, she shared this with me:

I like working here. I love this job. I really do. I love the work itself...For the most part, I love the people I work with. I could do something else. I don't want to. But you can always do something else within this agency. So it was just kind of like okay, I can stay here--in this-- and be miserable and try to fix it...Or you can do what you said you were going to do and move on and transition in your career, and maybe you can make it better but from a different seat. You need to go to a different seat.

Julie's LTSI results are presented in Table 15. Julie believed she could change her performance through her own efforts but would not receive much support in her work environment. The qualitative data from Julie's experiences supports this perception.

Table 15

*LTSI Results: Julie*

LTSI Scale Name	Mean
Catalysts for Transfer (>4.01)	
None	
Weak Catalysts for Transfer (3.51-4.00)	
Performance Self-efficacy	4.00
Transfer Effort-Performance Expectations	4.00
Personal Capacity	4.00
Transfer Design	4.00
Opportunity to Use	4.00

Supervisor Opposition	4.00
<b>Barriers to Transfer (2.5 – 3.5)</b>	
Motivation to Transfer	3.33
Personal Outcomes Positive	3.33
Performance-Outcome Expectations	3.00
Learner Readiness	2.67
Peer Support	2.67
Supervisor Support	2.67
Performance Coaching	2.67
<b>Severe Barriers to Transfer (&lt;2.5)</b>	
Content Validity	2.00
Personal Outcomes Negative	2.00
Resistance/Openness to Change	2.00

### **Donna: The Ambitious One Who Moved Up Quickly**

I met Donna before she became a supervisor. She had been a participant in a class that I taught. I was happy to learn she was still with the agency and had been promoted. Donna was intellectually curious and reflective. She was one of those people who likes to learn. She also talks a mile a minute. My interviews with her always ran over time despite my attempts to keep things moving or wrap things up. Her story about how she came to be in child welfare gives a picture of her ambition:

I got my AA degree when I lived in [another state] and I initially went for psychology...When I moved to this state, I got a job with [the agency] doing Food Stamps and Medicaid... I always like a field where I have options. I didn't want to be honed down to a certain population or be limited in the job that I could do. So, I always like to be in some type of learning where I feel like I am continuing to grow and develop and so I looked and Social Work was the thing. So I went [back to school] and received my BSW while still working for the agency. I graduated and interviewed here and then started working as a CPS investigator. I started my MSW but I haven't finished because

the work just became so overwhelming that it just took over and so I kind of put a pause on that.

The weeks following training, Donna was focused on deciding what to transfer from training to improve her and her unit's performance. She was supervising the unit before she went to the training, so she also entered training with a keen awareness of the unit's needs and her own gaps in knowledge and skills. She kept a list of things she wanted to learn and that she actually learned in training. Donna was intentional about her transfer effort. She described how she frequently refers to her training materials for guidance and to spark ideas for things she wanted to implement with her team. At our first interview, there was evidence she was already acting on several of the things she learned in training.

When we met for our second interview, Donna was struggling to find balance in her work. She described how organizational challenges such as high turnover and changes in her work unit composition and duties had impacted her ability to apply what she learned in training and keep the momentum she had gained with her unit. She was working lots of extra hours to meet the standard she set for herself and her team. But, this trial under pressure served to increase her competency and confidence. Again, she could recount the different things she had put into place that she connected to what she learned in training. She was particularly proud of what she had accomplished with addressing her staff's learning needs.

When I met Donna for our last interview, I noticed we were walking toward a different part of the building. We went in her office, I immediately knew something had changed. This office was bigger and brighter and, frankly, not as cluttered. Donna had gotten a promotion to administrator. She was now the supervisor of other supervisors. This was a huge leap for someone who had not yet been a supervisor for a full year. She was still struggling to find

balance and still dealing with turnover in the agency and heavy workloads, but the agency had new leadership and things were getting better. She was still being intentional with finding ways to use what she learned in training and was now working with her team of supervisors on their transfer of learning. She also pointed to different successes with the unit she supervised before she got promoted, including having three people get promoted to supervision.

Her job commitment and sense of personal accountability were driving forces in her transfer efforts. She explained:

I just don't believe in allowing my ability to be successful to lie in somebody else's hands - I take partnership in that. So, even though I might have to come to the table with 90 percent, if that's what I got to do, that's what I got to do because it's - at the end of the day, it's for me and it's fulfilling for myself.

Organizational issues (e.g., high turnover, constant change) impacted her capacity for transfer as these conditions lessened the time, mental capacity, and physical energy she could dedicate to improvement. Also, she did not have a consistent supervisor for her first six months in the position. So, there was a gap in the guidance and feedback she received. However, this appeared to make her more determined and self-reliant. I asked her to complete this sentence: "Not having the level of support you would want from your supervisor has made you..." Her answer was:

I think it's made me stronger and more resilient [in] wanting to make sure that my people have it... it's made me feel like I have to reach out to other people for guidance where I've even sought my own mentor to kind of bounce things off.... So, I've had to seek out other people to help me to be able to grow.

Donna's LTSI results are presented in Table 16. She perceived more catalysts for transfer than barriers. Two of the barriers she identified – Personal Outcomes Positive and Personal Outcomes Negative– suggest she believed there was no accountability for transfer of learning; no rewards or incentives for doing so and no consequences for not doing so. This is consistent with the theme of accountability (or the lack of) as a transfer factor identified in the case study data.

Table 16

*LTSI Results: Donna*

LTSI Scale Name	Mean
<b>Catalysts for Transfer (&gt;4.01)</b>	
Transfer Effort-Performance Expectations	5.00
Supervisor Opposition	4.67
Motivation to Transfer	4.33
Performance-Outcome Expectations	4.33
Transfer Design	4.33
<b>Weak Catalysts for Transfer (3.51-4.00)</b>	
Personal Capacity	4.00
Content Validity	4.00
Opportunity to Use	4.00
Supervisor Support	4.00
Resistance/Openness to Change	4.00
Peer Support	3.67
Performance Coaching	3.67
<b>Barriers to Transfer (2.5 – 3.5)</b>	
Personal Outcomes Positive	3.33
Personal Outcomes Negative	3.00
<b>Severe Barriers to Transfer (&lt;2.5)</b>	
Learner Readiness	2.00

Note. Participant did not answer some of the survey questions. Therefore, scale scores could not be calculated for Performance Self-Efficacy.

### **The Second Class**

I entered the classroom and immediately noticed the uncomfortable setting. People were crammed into a space inadequate for the class size. Some sat with their backs to the trainer and had to twist and maneuver their positions to see. I sensed this group was not as engaged with the training content as the first class. Thinking about it from a trainer's perspective, this seemed like a "hard group." The topic this week was Educational Supervision. Ironically, one of the topics was the supervisor's role in supporting their staff's transfer of learning. Betty (pseudonym) took full advantage of my knowledge of the topic by asking me to comment and add to the discussion. I had to balance almost becoming a part of the class instruction with being a participant-observer in the class.

With this class, I discovered some offices send staff to supervisor training who are not actually supervisors. There were several participants like this in this class. I also learned some participants were supervisors of virtual call center units. Having a statewide call center to take reports on child abuse and neglect was something new in the agency. Previously, these calls came into the county offices. These dynamics – people who weren't supervising and people who were supervising virtually—were not accounted for in the curriculum. As I would learn from study participants who supervised the virtual units, this was a huge disconnect that impacted their learning transfer and supervisory development.

Demographically, this class was very similar to the first class --- predominately women and early career. There was more racial diversity because of the location of the class. As with the first class, I gave a brief presentation about the study. There was a lot of initial interest, but several individuals did not follow through. Three study participants were recruited from this

class – Mary, Beverly, and Patricia (pseudonyms). Table 17 contains the key demographics for these participants.

Table 17

*Cohort Two Participants*

Participant	Age	Highest Degree and Major	Population of County Served by Agency	Years with Organization	Length of time supervising before training
Mary	28	Bachelor's Sociology	Statewide Call Center	3	1 month
Beverly	28	Bachelor's Social Work	Major metropolitan county (estimated population 996,319)	4	6 months
Patricia	33	Master's Social Work	Major metropolitan county (estimated population 996,319)	3	Attended training before being promoted to supervisor

Note. County population data is from the U.S. Census Bureau 2014 population estimates.

**Mary: The One Who Had to Toughen Up**

I sat at the same table with Mary in class. She was slow to speak and quiet, reserved, almost shy. She was the same way in our interviews together. Mary was one of the participants who supervised a virtual team in the agency's call center. Her staff members were located throughout the state so in-person interaction with her staff was rare. She started working for the agency because she wanted to do something with her Sociology degree. She worked as a case manager and a lead worker before being promoted to supervision.

In the weeks following training, Mary struggled with the administrative aspects of supervision. She attributed this to her personality – she was very laid back and just wanted

people to do their work. She didn't like telling people what to do or having to reprimand people. She discussed how difficult it was to deal with performance issues when working in a virtual environment where you can't connect with your staff face-to-face. She was focused mostly on actions related to supportive supervision. She left training with some specific ideas for improvement in this area. She was also trying to figure out how to use some of the other things she learned in training in her context of virtual supervision. At this point, there was minimal data to support her transfer of learning. Mary had intentions and ideas, but had not been able to act on most of these intentions.

During the middle stage of her journey, Mary was trying to find balance between being supportive and holding staff accountable for their work. She had changed her approach and was now a "little bit tougher." She had made some progress in adapting the things she learned in training to fit her context. For example, she tried to provide staff with feedback on the daily work they submitted; but, it was difficult to be proactive in identifying and meeting her staff's learning needs. By the time of our last interview, Mary had concluded her approach and thinking around supportive supervision was wrong and had led to her continuing to doing the work for staff. So, she adapted again. As a result, she experienced some success. In the end, Mary had taken some action toward applying what she learned in training but she wasn't consistent. She was still trying to find her way.

The lack of supervisor support was a significant influence on Mary's efforts. She did not receive any coaching or mentoring from her supervisor. She believed this was a hindrance to her development in the beginning, but by the end of the study she had accepted it and learned to cope. Interactions with her peers also influenced her change process. Mary realized there were areas she was not performing as well as others so she decided to "step it up." Mary was also operating

in an ever-changing work setting as the agency experimented with ways to make the new call center effective. The lack of connection between what was taught in training and her work context was a major factor for Mary. She explained her reaction to the training:

[The training] it did give you a sense of hope, a sense of hope for change. But when you really try to come back and apply some of it, it doesn't coincide with what you actually do. Like the administrative piece, that's pretty much going to always be the same. But as far as the coaching and educational part, that definitely has been totally different from what we learned at training.

Positive transfer influences for Mary included her self-awareness and ability to recognize the connection between learning, performance, and future career possibilities. This helped to motivate her to continue to try. She genuinely wanted to do better.

At the end of our last interview, Mary told me she had decided to leave the agency. She had been working and going to graduate school part-time and it had gotten to be too much. She just wanted to focus on school. She shared the difficulty of this decision:

After I hit the send button [on the resignation letter], I was like oh, my God. Can I retract this? I've been kind of down about it the whole weekend, but I'm just praying about it and trusting that I made the right decision.

Mary's LTSI results are presented in Table 18. At the beginning of this process, Mary perceived more catalysts to transfer than barriers. The majority of the barriers she identified were factors in the work environment. Although her motivation remained high, the barriers in her work environment limited her capacity for change and implementation of new learning.

Table 18

*LTSI Results: Mary*

LTSI Scale Name	Mean
<b>Catalysts for Transfer (&gt;4.01)</b>	
Motivation to Transfer	5.00
<b>Weak Catalysts for Transfer (3.51-4.00)</b>	
Performance Self-Efficacy	4.00
Transfer Effort-Performance Expectations	4.00
Personal Capacity	4.00
Content Validity	4.00
Transfer Design	4.00
Opportunity to Use	4.00
Performance-Outcome Expectations	3.67
Personal Outcomes Positive	3.67
Resistance/Openness to Change	3.67
<b>Barriers to Transfer (2.5 – 3.5)</b>	
Peer Support	3.33
Supervisor Support	3.00
Supervisor Opposition	3.00
Learner Readiness	2.67
Performance Coaching	2.67
<b>Severe Barriers to Transfer (&lt;2.5)</b>	
Personal Outcomes Negative	2.00

### **Beverly: The Reluctant Supervisor Who Might Quit at Any Moment**

On my drive to meet with Beverly for the first time, I tried desperately to remember who she was. Did she stand out in class? Did I have any conversations with her? I simply could not remember. When I entered her office, her face did not seem at all familiar to me. I thanked her for agreeing to participate in the study and began to get to know her. She explained how she came to work in child welfare:

Honestly, this is the first job that called me afterward [after graduating from college] and I was a little hesitant in the beginning but everybody was like, it's going to be a great

experience. All my professors, all my teachers, my family and friends were all saying it's going to be a great experience for you....so that way whenever you are ready to move on you'll have experience with a little bit of everything and you'll be more marketable.

They just kept telling me it's a great experience for you and I bought it. I didn't know it was going to entail all that it does, but I bought it and I've been here ever since. But I knew that I wanted to work and help those that could not help themselves, not necessarily this agency or child welfare. But this was the first opportunity that was presented to me.

Beverly had been a lead worker and then the interim supervisor of her unit, but she was very ambivalent about taking the supervisor position. Several times she told her managers she did not want to take the position. But, she eventually decided to take a chance on it. The first weeks following training she was focused on figuring out what needed to change now that she was officially the supervisor. She felt she still had a lot to learn:

I feel like I'm just still in the beginning stage and there's so much more I need to learn and so much that I don't know. I feel like because I was unofficially doing it for six, seven months, I'm supposed to be in another space, I guess developmentally or I'm supposed to know certain stuff that I don't know. I don't know why I feel like that. I felt like that even when I was a caseworker. I felt like - I'm supposed to know this stuff but I don't know it, but I know you can't know everything.

In our second interview (six months post-training), Beverly appeared to be stressed and overwhelmed. The interview seemed cathartic as she recounted the struggles she was having. She felt as if she were slowly falling into her role and was more comfortable with decision making about cases, but she was struggling with her staff and balancing her power as a supervisor. She wanted her staff to perform better but was unsure how to make that happen. She

couldn't bring herself to initiate disciplinary methods with her staff although she could articulate the need for clear consequences. At this point, her greatest impact was with supportive supervision. She had not spent as much time and effort on the educative tasks (e.g., coaching, feedback) and instead fell into a pattern of doing tasks for her staff rather than teaching them.

At our third interview, I could tell Beverly had changed. Gone was the woman who seemed sad, almost disheartened, and in her place was a woman who was much more aggressive (her words) about her work as a supervisor.

In the beginning, I was more lenient. I wasn't as aggressive with some stuff. But now, there's zero-tolerance. There's zero tolerance for anything. Either you're going to give me my work [or] I'm going to the next action. I don't have time for these lies or [to] be going back and forth. So either you do what you're supposed to do or I'm going to take it to the next step.

Beverly's catalysts for transfer included support from her peers, supervisor, and some of her staff, but this staff support was tenuous as a result of the turnover in her unit. The accountability that came with becoming the official supervisor also influenced her change efforts. Perhaps her biggest barriers to transfer were organizational issues (e.g., high turnover rate, re-organizations, policy changes) and the general climate of her office (e.g., low morale, lack of support from upper management). It was difficult for her to settle into a routine and focus on improving her performance because of the chaotic nature of her organization. Beverly did manage to take some actions that reflect the competency areas from the training, but her change effort was inconsistent. She shared this about her progress:

I think right now, I'm moving upward right now. I don't want to fall back to doing the stuff that I used to do. So I haven't fallen back yet. Right now, I'm going up. I don't want to fall back.

Beverly really didn't like supervision and had regrets about taking the job. She explained that she had learned a lot about the work, the agency, and herself, but that didn't make up for the workload and stress. When asked what was next for her, she said this:

Just taking [this thing] one day at a time. That's my plan. I'm not going to sit up here and say I want to do this -- I want to be in this position because I don't. But I'm taking it for what it is. I do my job. It's a learning experience. It's only going to help me or make me better whether I work at this agency or not. So I just take it one day at a time.

Beverly's LTSI results are presented in Table 19. Beverly perceived there to be more catalysts to transfer than barriers, yet she had difficulty applying what she learned. Issues in the work environment likely impacted her, but her attitude, personality, and motivations also played a significant role.

Table 19

*LTSI Results: Beverly*

LTSI Scale Name	Mean
Catalysts for Transfer (>4.01)	
Motivation to Transfer	5.00
Peer Support	5.00
Personal Capacity	4.67
Opportunity to Use	4.67
Transfer Design	4.33
Weak Catalysts for Transfer (3.51-4.00)	
Performance Self-Efficacy	4.00
Transfer Effort-Performance Expectations	4.00
Performance-Outcome Expectations	3.67
Personal Outcomes Positive	3.67

Barriers to Transfer (2.5 – 3.5)	
Learner Readiness	3.33
Supervisor Support	3.33
Performance Coaching	3.33
Resistance/Openness to Change	3.00
Supervisor Opposition	3.00
Severe Barriers to Transfer (<2.5)	
Personal Outcomes Negative	2.00

---

Note. Participant did not answer some of the survey questions. Therefore scale scores could not be calculated for Content Validity.

### **Patricia: The One Who Hit a Brick Wall But Refused to Quit**

I definitely remembered Patricia from class. Her comments were unfiltered in a way that was unusual, but refreshing. She didn't seem interested in saying what others wanted to hear or what she thought was the accepted norm; instead she spoke her truth as she saw it. Patricia was one of the participants who started supervisor training but had not yet been hired as a supervisor. She was hired toward the end of the training program and began her position about a week after training ended. Patricia's child welfare story was one that I will not likely forget. It started when I asked her, "So, why child welfare?"

Well, honestly, I had a lot of family members in [agency] custody and stuff like that in [another state] and it wasn't a good experience for them.... And my mentor in high school -- I was on the wrong road and she gave [me an opportunity]. A lot of people didn't give me the opportunity because - especially adults because they were afraid of me or they [had the attitude] – 'Oh, she's not going to do nothing. She's probably going to drop out or go to jail.' And so, my counselor saw I was about to get into a fight [in the quad] in high school. She told me, 'Come in here. I don't know why [you] think you so big and bad, but I'm going to show you something better.' ...Coming from the projects, I was

born in a single parent home. My dad in the penitentiary, stuff like that. But she showed me something else...She gave me an opportunity and she didn't know me from a can of paint. And if we had more people like that, then a lot of these kids could be okay. Well, somebody gave me the chance - a chance. Because that's all [I] want, is a chance... So, that was the main reason.

Patricia became the supervisor of an established unit and the former supervisor of that unit became her direct supervisor (her administrator). Because of various dynamics with this administrator and staff within her unit, in the weeks following training Patricia struggled to become the supervisor in reality and not just on paper. Unit staff members continued to go to the administrator with questions about their cases and even with administrative issues, which left her feeling disconnected from the unit. But, she did have a plan for what she wanted to do with her team. At our second interview (six months post-training), Patricia recounted how the previous months had been a constant struggle to operate as the supervisor of the unit. She blamed the administrator for not letting go of the unit and for not handling the transition well. She felt some of her unit members were resistant to her leadership and did not fully trust her. She wondered why she was not getting the desired performance from her staff and questioned the source of this resistance. She wondered if she had been “set up to fail”:

December was the best month I had, but that was because I micromanaged them. When I let them be the adults that they are - because I know that they're capable of doing the work. I've seen it. I've heard [about] it when I was a worker. I know --- But is it my age? Is it who I am? I don't know. They're not going to answer that. They're not going to be honest with me. So, how can I be supportive when they're not allowing me to get feedback, they're not giving me criticism...It could be my orientation or the way I dress.

It could be that. They make it seem like it's not a problem, but it probably is. But I am who I am. I can't change -- because I'm comfortable with myself.

Data in support of transfer was minimal during this time, but Patricia did take some actions related to the training competency areas. She made efforts to establish unit expectations and other processes for managing the work. She also established a reward system for her unit to acknowledge when they met certain goals. Her primary support for transfer came from peers and informal mentoring. Patricia's perception that she was not being given the opportunity to use the knowledge and skills she learned in training likely contributed to her not making more progress toward transfer.

At our final interview, some situations had gotten better and some had gotten worse. Patricia was still feeling disconnected from her staff. She had engaged in self-directed learning to find different approaches to communicating with her staff. Patricia also expressed dissatisfaction with the training program. She felt the training should have been more "hands on." There were things in the training that she couldn't relate to because the training was too broad and wasn't specific. Her unit's performance on key metrics had been inconsistent and she could not point to any accomplishments within her unit. Patricia remained stuck in the preparation stage. She had intentions to implement what she learned, but hit a brick wall.

Patricia's experience with supervision was not what she expected. She thought about stepping down and asking to go back to a case manager position, but she is not a quitter:

I have learned good things and bad things. But it's going to make me a better supervisor because I'm not going to quit. You're going to have to fire me because I'm not going to quit. And I don't know if that's what they expect, but I still got to do what I have to do. And hopefully my workers can see that I'm not a quitter. I'm not going to give up no

matter how hard it gets. Because I feel like if they [my workers] see the things that I go through and I still do what I have to do, maybe they will see ‘okay, well, I’m not going to quit either.’ Or maybe, [my workers will think] ‘I need to try harder because she does have my back.’

Patricia’s LTSI results are presented in Table 20. Patricia perceived more catalysts to transfer than barriers. However, her reality was different from these initial perceptions. Perhaps the biggest difference was in what she perceived would happen regarding supervisor support and what actually happened once she was in the position.

Table 20

*LTSI Results: Patricia*

LTSI Scale Name	Mean
<b>Catalysts for Transfer (&gt;4.01)</b>	
Transfer Effort-Performance Expectations	4.33
Performance-Outcome Expectations	4.33
<b>Weak Catalysts for Transfer (3.51-4.00)</b>	
Personal Capacity	4.00
Content Validity	4.00
Motivation to Transfer	4.00
Performance Self-Efficacy	4.00
Supervisor Support	4.00
Learner Readiness	3.67
Peer Support	3.67
<b>Barriers to Transfer (2.5 – 3.5)</b>	
Transfer Design	3.33
Supervisor Opposition	3.33
Performance Coaching	3.33
Resistance/Openness to Change	3.00
<b>Severe Barriers to Transfer (&lt;2.5)</b>	
Personal Outcomes Positive	2.33

Note. Participant did not answer some of the survey questions. Therefore scale scores could not be calculated for Opportunity to Use and Personal Outcomes Negative.

### **The Third Class**

Being in a dedicated training room on a college campus provided a much better learning environment for this class. The space was almost luxurious compared to the second class I attended. I noted the well-arranged table groups with plenty of walking and wall space. Participants had space for their materials but were still close enough to engage in discussion. Betty and Helen (pseudonyms) were co-training this week, which provided more diversity in the instruction. The topic this week was Administrative Supervision, so this was week one for these participants. I sensed their anticipation, and some anxiety, as I took notes during introductions. There were newly hired supervisors – some who worked in the traditional office setting and some who worked in the virtual call center – and participants who were chosen to attend the class, but had not actually been hired as a supervisor. There were also individuals who had been supervising for a few years but had never taken the class. I looked for opportunities to speak individually with each of these people. This class was also more diverse in terms of race, gender, and the geographical areas where participants worked. There were four men! So, this was my best chance at getting at least one of them to be a part of the study.

At this point, I had my spiel down – it was just the right balance between my personal narrative and why this study was important to the fields of human resource development and child welfare. As before, I took the time allotted to me, made my appeal, and rejoined the group. At the end of the week, four women had signed up for the study (although two of them didn't follow through with the interviews). They were all new supervisors. I didn't get any of the veterans and I didn't get any of the men. At the end of the week, I sent an e-mail to each of the men, which read:

It was great meeting you during the first week of your supervisor training. I wanted to touch basis with you to make a special appeal for you to consider participating in my research study on learning transfer. I am very interested in having male representation in the study. No pressure. I would just appreciate your consideration of the idea.

One man said yes. Participants from the third class were: Owen, Malissa, and Bobbie (pseudonyms). Table 21 contains the key demographics for these participants.

Table 21

*Cohort Three Participants*

Participant	Age	Highest Degree and Major	Population of County Served by Agency	Years with Organization	Length of time supervising before training
Owen	27	Master's Psychology	Small metropolitan county (estimated population 27,051)	4	Less than 1 month
Malissa	36	Master's Social Work	Statewide Call Center	7	2 months
Bobbie	34	Master's Social Work	Major metropolitan county (estimated population 996,319)	5	Attended training before being promoted to supervisor

Note. County population data is from the U.S. Census Bureau 2014 population estimates.

**Owen: The One Who Landed in a Really Good Place**

Owen had been a case manager in a county office that he described as being “chaotic.” He was hired as a supervisor in a much smaller county, which seemed to be the perfect fit for him. He entered child welfare after having done an internship with the agency as a student. He explained how the internship launched him into the field:

...And I actually liked it. I was like -- you know, this is something I would enjoy doing... I've always wanted to be somewhere where I can make a difference.... and they just so happened to have a vacant position come open [in the county I interned in], so it all worked out... I was fresh out of college, the only experience that I had was what I had observed through being out in the field with other workers and hearing the horror stories. Then, some of the older workers saying, 'you sure you really want to do that? Are you sure? You have all of these options.' But, I was just the type -- well, I'm just going to do it. I'm going to try it out and see..So I've hung in there.

Owen applied for a supervisory position because he felt he had “reached his peak” as a caseworker and wanted to move up. His transition into supervision was relatively uneventful. He inherited an existing unit where the majority of the staff were veterans. The weeks following training, he was focused on settling in and getting to know his staff and the other staff in the county. He didn't leave training with a list of things he thought he could apply. For him, it was more of a natural process –he acted as situations occurred and it wasn't until afterward, sometimes after discussing it with the other new supervisor, that he connected what he did to something discussed in training.

His middle stage of transfer was characterized by taking ownership for his staff – their performance, their competency, and their emotional well-being. Owen stayed focused on how he felt as a worker. This became the driving force behind his approach to supervision and helped push him toward significant changes and performance improvement in educational supervision. The data also include examples of actions he took related to the other training competency areas.

Owen experienced some task interference as a result of being out of the office a lot in training and at different meetings. He felt as if he were being “pulled in different directions.”

This impacted his transfer effort and he felt he would have been further along in his development and the actual doing of supervision without these interruptions. He also had a critique of the training structure. Although the training helped him to move forward in the right direction, he felt the training was too piecemeal:

It was very overwhelming to go and learn and then come back to the office [into] reality-- and then you have to staff your cases, you have to meet with staff, you have to run to court. And then go back to training. Then you learn some more and then you come back. So, that part was overwhelming, the in and out so much... That's probably the biggest barrier because it's hard to get adjusted when you're gone so much... and we had those three weeks of training and then we had another week of training -- a different supervisor training. And so it was just a lot of training. Training, training, training.

Supervisor support was the most important catalyst for transfer. Rather than the layers of management found in larger county offices, the county director was Owen's direct supervisor and he was able to forge a positive relationship with her. This boosted his morale and provided the extra motivation he needed to keep moving forward. Supervisor support continued to be an important factor for him six months post training, but the nature of this support shifted. What he needed from his supervisor in the weeks immediately following training was answers -- to feel he could go to her for answers and she would respond in a helpful way. Six months post-training, support for him was more about confirmation. He could generate answers on his own, but he needed confirmation that he was going in the right direction and feedback that would help to boost his confidence. Owen shared how he was still evolving as a supervisor:

As time goes on, as more responsibility or more things take place -- and I've seen and done a lot in the last six months as a supervisor -- but it's evolving. Some days, it's like --

am I the supervisor? And then other days, I'm on it. I know it. You can't tell me anything.

Six months after training, Owen had transferred much of what he learned in training. He was fully in the action stage and there were indications he would be able to maintain and achieve a high level of performance. Unfortunately, I was unable to do a final interview with Owen because he did not respond to my requests for the third interview. So, the end of his journey is unknown.

Owen's LTSI results are presented in Table 22. Owen identified far more catalysts to transfer than barriers and the qualitative data supports this assessment. Performance coaching, rated as a severe barrier, is an interesting contradiction. This suggests that immediately following training, Owen thought he would not be provided with coaching and feedback on his performance; however, the qualitative data reveals the opposite. There are two possible interpretations of this difference. One, he answered the questions based on his experiences in his previous job/office, which ended up being very different from what happened in his new position. Two, social desirability became a factor as a result of his interpretation of the questions. It could be he interpreted receiving performance coaching as a negative or an indication he was not performing well.

Table 22

*LTSI Results: Owen*

LTSI Scale Name	Mean
<b>Catalysts for Transfer (&gt;4.01)</b>	
Content Validity	5.00
Transfer Design	5.00
Supervisor Opposition	5.00
Motivation to Transfer	4.67
Motivation to Transfer	4.67
Transfer Effort-Performance Expectations	4.33

Performance-Outcome Expectations	4.33
<b>Weak Catalysts for Transfer (3.51-4.00)</b>	
Learner Readiness	4.00
Personal Capacity	4.00
Opportunity to Use	4.00
Peer Support	4.00
Supervisor Support	4.00
Resistance/Openness to Change	4.00
<b>Barriers to Transfer (2.5 – 3.5)</b>	
Performance Self-Efficacy	3.33
Personal Outcomes Positive	3.33
<b>Severe Barriers to Transfer (&lt;2.5)</b>	
Personal Outcomes Negative	1.33
Performance Coaching	1.00

### **Malissa: The One Who Couldn't Deal with Being Virtual**

I originally met Malissa when she was a participant in one of my training classes. She was outspoken, clear on her opinions, and seemed to know what she wanted out of her work life. Her child welfare entry story describes how, after finishing graduate school, she was “encouraged” to apply for work:

My dad -- he was either watching the news or read in the paper about whatever was going on with the agency. And he told me, ‘Malissa, apply to that agency. They have a high turnover rate.’ So, pretty much saying that I would get a job there. So, I applied. And of course, I got hired. That's pretty much how I got started, because of my dad. I wasn't thinking about this agency.

Malissa was the other participant who worked in the call center. She had been a lead worker in the same program area before the job became virtual and was also a lead worker in the call center before getting the supervisor position. Malissa knew the work of the program and, as a lead worker, had experience with providing practice guidance to others. Her knowledge and

skill gaps were in the other aspects of supervision. Her first weeks following training were characterized by frustration with managing the work and ensuring accountability of her staff, struggles with trying to teach the new workers in her unit when she was geographically separated from them, and regrets about not taking steps early on to build a supportive culture among her team members. The evidence of transfer was minimal at this point. She seemed stuck in the contemplation stage. She could articulate what she should have done and what she could or should change, but had difficulty committing to an actual change strategy.

Malissa was experiencing several barriers at this point. There was a lack of connection to and support from her supervisor. Also, things were constantly changing in her work environment, which lessened the time and energy she had to devote to improvement. She believed her biggest barrier to transfer was being in a virtual work environment. Even the smallest issues like how to get approval and the resources to travel to meet with her staff became major roadblocks for her. She thought the training was “very insightful,” but questioned how she could really apply it in her work setting:

It's like this virtual world is just really - it's just not for me... I don't care for it. I thought I was going to get used to working virtual, but I'm not. And it's probably because I don't want to. I don't. Because I've already told myself I can't see myself being in this particular position in this particular program for long. Part of me kind of feels like if I leave and do something else within the agency -- would I feel like a failure, or I just quit and just couldn't stick it out? And then a part of me, is like – No. I don't. If I don't like it, I need to find something else. There's no point of sticking out something that you totally just don't like doing.

I also wrote about this in my field notes because she had such strong feelings about it. I wrote, “Malissa was very clear that she does not like her job and may not even be in the same position by the next time we meet.”

At our second interview, which occurred about six months post-training, Malissa had indeed moved on to a different position and was no longer in the call center. Gone were her struggles of how to deal with virtual supervision. In recalling her last months in the call center, not much had changed. Beyond doing the basics of what the job called for, she had not put much effort into applying the skills she learned in supervisor training. Her focus was survival not change. She thought she would do better in her new setting. Although only in this new position about two weeks, she had already done some modeling and teaching with one of her new workers and she was looking forward to being fully staffed and getting off to a good start with her new unit. She was contemplating the things she could do related to the different supervisory roles. When I asked her if she thought she might go back and revisit any of the training information, she replied, “Yeah I think I do need to revisit...I need to grab that book.”

Malissa hadn't made it to the point where she was being consistent with acting on the things she learned in training. Part of this could be attributed to her work context, but part of it was her lack of motivation to make the effort given her dissatisfaction with the work she was doing. Unfortunately, I did not have an opportunity for a third interview with Malissa, so I don't know if the change in her work setting increased her motivation for transfer.

Malissa's LTSI results are presented in Table 23. Malissa perceived an equal number of catalysts and barriers to transfer. However, the qualitative data revealed the barriers ended up outweighing the catalysts. Malissa's assessed motivation to transfer was high, but it could be that the barriers in her work environment served to lessen her motivation. The LTSI does not

assess for job attitudes. Her negative attitude about her job may have contributed to decreasing her motivation for transfer.

Table 23

*LTSI Results: Malissa*

LTSI Scale Name	Mean
<b>Catalysts for Transfer (&gt;4.01)</b>	
None	
<b>Weak Catalysts for Transfer (3.51-4.00)</b>	
Performance Self-Efficacy	4.00
Transfer Effort-Performance Expectations	4.00
Transfer Design	4.00
Resistance/Openness to Change	4.00
Motivation to Transfer	3.67
Performance-Outcome Expectations	3.67
Opportunity to Use	3.67
Supervisor Opposition	3.67
<b>Barriers to Transfer (2.5 – 3.5)</b>	
Peer Support	3.33
Personal Capacity	3.00
Content Validity	3.00
Personal Outcomes Positive	3.00
Performance Coaching	3.00
Personal Outcomes Negative	2.67
<b>Severe Barriers to Transfer (&lt;2.5)</b>	
Learner Readiness	2.33
Supervisor Support	2.00

### **Bobbie: The One Who Kept Calm and Carried On**

When I met Bobbie in class, she seemed to be a very serious person. Through our different interactions, I learned she could be quite hilarious. Even in discussing sensitive matters, she maintained a sense of humor. Our conversation about how she entered child welfare went like this:

Deidre: I'm always interested in how people end up in child welfare. Everybody's got a different story, so how'd you land here?

Bobbie: Wow. That's very interesting. I don't know.

She said it with such a straight face that it took me off guard. We both laughed and it took a minute for her to regroup and actually tell me the story:

In undergrad I started in early childhood. I don't know why I was in that either - I guess because there are a lot of teachers in my family. I do love children, but once I did my observation in the school system I knew it was not for me. Eight hours in a classroom with children. No. No. It was not for me. So, I really don't know how I got into social work. I transferred to [a different university] and I transferred into social work. I really didn't know anything about it at all, so I just said, I'll take that... And I think the other part was that my cousin -- My mom adopted him and that probably was kind of the reason. Both of his parents were on drugs.... So I think that's probably part of it that pushed me over to social work -- to see what my cousin went through. But other than that, I don't know. I guess it was just God placing me here.

When Bobbie began the supervisor training, she had not yet been hired in a supervisory position. So, she entered training knowing nothing about who she would be supervising. She had no expectations other than to learn how to be a supervisor. Identifying what she could take from training and apply on the job came later and mostly as a result of her daily experiences at work rather than deliberate planning to use specific things that she learned.

Her transition into supervision included a struggle to gain her authority as a supervisor and mentally transition to thinking as a supervisor. Challenging situations with her staff (e.g., personnel issues, staff performance) contributed to the shaping of her new identity as a

supervisor. She was intent on being the type of supervisor who figures out a way to help people do better rather than just being punitive. This “trial by fire” in the early stage seemed to help build her up rather than discourage her and increased her confidence in her own abilities.

In the middle phase of her journey, Bobbie experienced a complete turnover of staff in her unit. This situation gave her a chance to re-boot and capitalize on lessons learned from her efforts with the previous staff. She was being more hands-on with this new team – modeling and teaching and acting on much of what she learned in training. By the time of our third interview, Bobbie’s disposition was almost Zen-like. She had one of those decorative indoor water falls in her office and used a lamp for lighting rather than the fluorescent ceiling lights that are common in offices. Her staff composition had changed again and she was down to only two staff members, but she was upbeat and excited about the positive changes she had made and the achievements of her unit. Her team had gone from worst to first in a key metric and her administrator had chosen Bobbie to be in charge while she was on leave. Bobbie was able to recount various actions she had taken related to the different competency areas of supervision. She attributed her ability to maintain the changes and to continue to improve to goal setting and “pushing herself.” She discussed the role of self-reflection in her change effort:

I think it [self reflection] played a very important role. Because not realizing it during the time, [but] I was going through my own personal issues. I had school and I had this and that. I had to reflect and put things in order because -- not knowing it [then] -- but when I'm not in order, I can't be the leader for them.

In the months immediately following training, the lack of supervisor support impacted Bobbie’s transfer and performance efforts. She did not receive coaching or mentoring from her supervisor initially. But, she created and used her own network of people she could go to for

advice and support. By the time of our second interview, her relationship with her supervisor had taken a turn for the better. She was getting the support and the vote of confidence she needed and this served as a catalyst for her transfer and performance efforts. The opportunities she had to actually act in the role of the supervisor also contributed to her transfer effort and performance and she was able to make important connections between what she learned in training and the work she was doing. Bobbie managed to transfer much of the knowledge and skills learned in training to her work. Her change effort was slow in the beginning, but she fought her way out of it and was able to maintain a high level of performance.

Bobbie's LTSI results are presented in Table 24. Bobbie perceived more catalysts to transfer than barriers. Her self-efficacy, motivation to transfer, and expectations that her efforts would result in improved performance were high. This is consistent with the qualitative data from her actual transfer experience. Bobbie's motivation to succeed helped her to persevere in her transfer efforts.

Table 24

*LTSI Results: Bobbie*

LTSI Scale Name	Mean
Catalysts for Transfer (>4.01)	
None	
Weak Catalysts for Transfer (3.51-4.00)	
Motivation to Transfer	4.00
Transfer Effort-Performance Expectations	4.00
Content Validity	4.00
Transfer Design	4.00
Opportunity to Use	4.00
Peer Support	4.00
Supervisor Support	4.00
Supervisor Opposition	4.00
Resistance/Openness to Change	4.00
Learner Readiness	3.67
Performance Self-Efficacy	3.67

Barriers to Transfer (2.5 – 3.5)	
Personal Outcomes Positive	3.00
Personal Outcomes Negative	2.67
Performance Coaching	2.67
Severe Barriers to Transfer (<2.5)	
None	

---

Note. Participant did not answer some of the survey questions. Therefore scale scores could not be computed for Personal Capacity and Performance-Outcome Expectations.

### Chapter Summary

The context for this instrumental case study was a public (state government) social services organization. Study participants were supervisors working in child welfare programs who had taken a mandatory course on supervision. This training addressed competencies in the three primary areas of administrative, educational, and supportive supervision. Accordingly, transfer of learning from this training meant sustained application of supervisory knowledge and skills learned in training on the job that led to desired work behaviors. I recruited participants from three different training classes. The same instructor taught each class. One class was co-trained by the primary instructor and another a supervisor trainer. Each class was held in a different location and there were differences in the training environment in each class. Eleven participants, 10 women and one man, were enrolled in the study. The individual profiles presented in this chapter provided an overview of the participants' transfer journey, including their experience of work-related behavior change and the factors that influenced their change process. Individual LTSI results were included at the end of each profile. For easy reference, Table 25 presents the complete listing of study participants. As noted in Chapter Three, all 11 participants were interviewed twice. Eight participants completed the third interview. Participants not included in the third round of interviews are indicated with an asterisk. In the

next chapter, I present the case level findings, which are grounded in the data gathered from each participant. These findings, presented as themes, connect to the study purpose of deeply understanding the process of transfer and change from this training program and the factors that influenced this process.

Table 25

*Study Participants: Complete Listing*

	Participant	Age	Highest Degree and Major	Population of County Served by Agency	Years with Organization	Length of time supervising before training
1	Wanda The One Who Committed Early and Held On	32	Bachelor's Social Work	Metropolitan county	4	2 months
2	*April The One Who Wasn't Afraid to Ruffle Some Feathers	27	Master's Social Work	Major metropolitan county	2	Less than 1 month
3	Anna The Veteran Who Stayed Because She Loves Her Job	37	Master's Public Administration	Major metropolitan county	12	6 months
4	Julie The Survivor Who Moved On	30	Bachelor's Psychology	Metropolitan county	4	1 month
5	Donna The Ambitious One Who Moved Up Quickly	40	Bachelor's Social Work	Major metropolitan	8	1 month
6	Mary The One Who Had to Toughen Up	28	Bachelor's Sociology	Statewide Call Center	3	1 month

7	Beverly The Reluctant Supervisor Who Might Quit at Any Moment	28	Bachelor's Social Work	Major metropolitan county	4	6 months
8	Patricia The One Who Hit a Brick Wall But Refused to Quit	33	Master's Social Work	Major metropolitan county	3	Attended training before promotion to supervisor
9	*Owen The One Who Landed in a Really Good Place	27	Master's Psychology	Small metropolitan county	4	Less than 1 month
10	*Malissa The One Who Couldn't Deal with Being Virtual	36	Master's Social Work	Statewide Call Center	7	2 months
11	Bobbie The One Who Kept Calm and Carried On	34	Master's Social Work	Major metropolitan county	5	Attended training before promotion to supervisor

---

\* Did not participate in the third study interview

## CHAPTER FIVE

### FINDINGS

The purpose of this study was to understand how individuals progress over time from having gained new knowledge and skills in training to achieving change in their work-related behavior and the factors that affect this change process. The following research questions guided the study:

1. How do adults involved in employer-sponsored training experience the process of individual work-related behavior change?
2. How do learning transfer system and other factors influence the behavior change process over time?

In this chapter, I present the case study findings. First, I present the case level Learning Transfer System Inventory (LTSI) results and an overview of the themes from the qualitative data. Next, I present the qualitative findings by stage: early stage (one to two months post-training); middle stage (four to six months post- training); and late stage (10 to 12 months post-training). For each stage, I discuss themes related to the change process (research question one), the factors influencing the change process (research question two), and the assessment of participants' achieved stage of change.

#### **Case Level LTSI Results and Overview of Qualitative Themes**

The LTSI assesses trainee perceptions of the workplace, training design and content, individual attributes, and group variables that can act as barriers or catalysts to learning transfer. The LTSI consists of 16 scales (11 training specific and 5 general) and 48-items. Study

participants took the LTSI approximately one week after completing the supervisor training.

Table 26 presents the LTSI descriptive statistics.

Table 26

*Case Level LTSI Results: Descriptive Statistics*

Scale	<i>n</i>	M	SD	Min	Max	$\alpha$ (Cronbach's alpha)
Motivation to Transfer	11	4.3095	.54638	3.33	5.00	.74
Transfer Design	9	4.1944	.52143	3.33	5.00	.67
Transfer Effort- Performance Expectations	10	4.1795	.42197	3.33	5.00	.76
Opportunities to Use	9	4.0833	.42935	3.33	4.67	.59
Performance Self-Efficacy	10	3.9231	.51197	2.67	4.67	.72
Peer Support	11	3.7381	.68161	2.67	5.00	.79
Performance – Outcome Expectations	10	3.6154	.93141	1.67	5.33	.86
Content Validity	10	3.4615	.81125	2.00	5.00	.79
Supervisor Support	11	3.4286	.73297	2.00	4.33	.90
Personal Outcomes Positive	11	3.3333	.61324	2.33	5.00	.75
Learner Readiness	11	3.0238	.85199	2.00	4.67	.85
Performance Coaching	11	2.9762	.91019	1.00	5.00	.78
*Resistance/Openness to Change	11	2.7381	.87880	1.00	4.00	.79
Personal Outcomes Negative	10	2.4615	.87706	1.33	4.33	.85
*Supervisor Opposition	11	2.2619	.96236	1.00	4.33	.93
*Personal Capacity	10	2.0256	.79886	1.00	4.00	.93

Note: Resistance/Openness to Change, Supervisor Opposition, and Personal Capacity are negative scales.

To help with interpretation of the impact of different factors on study participants, LTSI results were also categorized as catalysts, weak catalysts, barriers, or severe barriers. This categorization scheme has been used in other evaluation and research studies (e.g., Bates & Coyne, 2005; Holton, 2003). The negative scales (Resistance/Openness to Change, Supervisor Opposition, and Personal Capacity) were recoded to be consistent with the other scales. Table 27 presents this categorization of LTSI results.

Table 27

*Case Level LTSI Results: Catalysts and Barriers*

LTSI Scale Name	Mean	Scale Description
<b>Catalysts for Transfer (&gt;4.01)</b>		
Motivation to Transfer	4.31	The direction, intensity and persistence of effort exerted toward using on the job skills and knowledge learned in training.
Transfer Design	4.19	The extent to which training has been designed to give trainees the ability to transfer learning to job application.
Transfer Effort-Performance Expectations	4.18	The expectation that effort devoted to transferring learning will lead to changes in job performance.
Opportunity to Use	4.08	The extent to which trainees are provided with or obtain resources and tasks on the job that enable them to use the skills taught in training.
<b>Weak Catalysts for Transfer (3.51-4.00)</b>		
Personal Capacity	3.98	The extent to which individuals have the time, energy and mental space in their work lives to make changes required to transfer learning to the job.
Performance Self-Efficacy	3.92	An individual's general belief that he/she is able to change his/her performance when needed or desired.
Supervisor Opposition	3.74	The extent to which individuals perceive negative responses from supervisors/managers when applying skills learned in training.

Peer Support	3.74	The extent to which a trainee's peers reinforce and support use of learning on-the-job.
Performance-Outcome Expectations	3.62	The expectation that changes in job performance will lead to outcomes valued by the individual.
<b>Barriers to Transfer (2.5 – 3.5)</b>		
Content Validity	3.46	The extent to which the trainees judge the training content to accurately reflect job requirements.
Supervisor Support	3.43	The extent to which the trainee's supervisors/managers support & reinforce the use of learning on-the-job.
Personal Outcomes Positive	3.33	The degree to which applying training on the job leads to outcomes that are positive or desirable for the individual.
Resistance/Openness to Change	3.27	The extent to which prevailing group norms resist or discourage the use of new skills and knowledge acquired in training.
Learner Readiness	3.02	The extent to which individuals are prepared to enter and participate in a training program.
Performance Coaching	2.98	Formal and informal indicators from an organization received by an individual about his or her job performance.
<b>Severe Barriers to Transfer (&lt;2.5)</b>		
Personal Outcomes Negative	2.46	The extent to which individuals believe that if they do not apply new skills and knowledge learned in training that it will lead to outcomes that are negative or undesirable.

Motivation to Transfer ( $M = 4.31$ ,  $SD = .55$ ) was the most powerful catalyst for study participants. This suggests that at the end of the training program, participants were excited about and looking forward to using what they learned in training on the job. In fact, the strongest catalysts for transfer were either motivational factors (Motivation to Transfer, Transfer Effort to Performance Expectations) or ability-enabling factors (Transfer Design and Opportunity to Use). At the end of training, participants were motivated to transfer what they learned, believed the

training had prepared them for transfer, and assumed they would have plenty of opportunity to use what they learned on the job. Conversely, the barriers to transfer were primarily work environment factors (Supervisor Support, Personal Outcomes Positive, Resistance/Openness to Change, Performance Coaching, and Personal Outcomes Negative). Of these work environment factors, Personal Outcomes Negative ( $M = 2.46$ ,  $SD = .88$ ) was the most severe barrier to transfer. Participants believed they would not experience negative outcomes for failing to apply new skills on the job. They also believed they would not experience positive outcomes for applying training on the job as indicated by the scale score for Personal Outcomes Positive ( $M = 3.33$ ,  $SD = .61$ ). This is an indication of a lack of consequences in the learning transfer system. Supervisor support ( $M = 3.43$ ,  $SD = .73$ ) was also a powerful barrier to transfer. One week post-training, participants believed they would not receive much support for transfer from their supervisor. Overall, these findings suggested a potentially troubling situation in participants' work environment that could severely impact learning transfer in the case. In several instances, the qualitative data supported participants' initial perceptions about their work environments.

The qualitative findings represent themes in the data. To identify themes, I focused on importance to the research questions and prevalence within the data. In assessing prevalence, I considered whether the theme appeared in each data set and whether there was a significant amount of talk related to the theme in each data set. Collecting data and identifying themes in the data across different time phases allowed me to describe the change and transfer process as it unfolded over time. Table 28 presents an overview of the study themes. Each theme is discussed in detail in the sections that follow.

Table 28

*Overview of Study Themes*

Research question	Early stage themes and sub-themes	Middle stage themes and sub-themes	Late stage themes and sub-themes
How do adults involved in employer-sponsored training experience the process of individual work-related behavior change?	<p>Transitioning into supervision</p> <ul style="list-style-type: none"> <li>• Navigating self</li> <li>• Gaining acceptance of others</li> <li>• Forming a new work identity</li> </ul> <p>Testing the change for fit</p> <ul style="list-style-type: none"> <li>• Identifying what's important</li> <li>• Making the training your own</li> <li>• Engaging in trial and error</li> </ul>	<p>Evolving</p> <ul style="list-style-type: none"> <li>• Growing into the supervisor identity</li> <li>• Growing in competence</li> <li>• Taking ownership</li> <li>• Re-booting</li> <li>• Experiencing success</li> </ul> <p>Stagnating</p> <ul style="list-style-type: none"> <li>• Feeling disconnected</li> </ul>	<p>Integrating</p> <ul style="list-style-type: none"> <li>• Accepting the new state</li> <li>• Doing it my way</li> <li>• Making a greater impact</li> </ul> <p>Stagnating</p> <ul style="list-style-type: none"> <li>• Becoming disillusioned</li> </ul>
How do learning transfer system and other factors influence the behavior change process over time?	<p>Relationships with people</p> <ul style="list-style-type: none"> <li>• Supervisor interactions</li> <li>• Peer interactions</li> </ul> <p>Personal capacity for transfer</p> <p>Resistance to change in the work environment</p>	<p>Opportunities to use new knowledge and skills on the job</p> <p>Personal capacity for transfer</p> <p>Supervisor interactions</p> <p>Accountability for transfer</p> <p>Personality traits</p>	<p>Managerial Support</p> <ul style="list-style-type: none"> <li>• Supervisor interactions</li> <li>• Leadership from upper management</li> </ul> <p>Job attitudes</p>

### Early Stage of Change

I identified two themes related to the early stage of the change process: transitioning into supervision and testing the change for fit. I identified three themes related to the factors that influence change: relationships with people, personal capacity for transfer, and resistance to change in the work environment. Table 29 presents these themes and sub-themes in relationship to the research questions.

Table 29

#### *Early Stage Themes*

Research Question	Themes	Sub-themes
How do adults involved in employer-sponsored training experience the process of individual work-related behavior change?	Transitioning into supervision	Navigating self Gaining acceptance of others Forming a new work identity
	Testing the change for fit	Identifying what's important Making the training your own Engaging in trial and error
How do learning transfer system and other factors influence the behavior change process over time?	Relationships with people	Supervisor interactions Peer interactions
	Personal capacity for transfer	
	Resistance to change in the work environment	

### **Behavior Change Process: Transitioning into Supervision**

What exactly does it mean to transition from being a “worker bee” to a manager? When one receives such a promotion, it suggests a time of happiness, feelings of accomplishment, and perhaps confidence in oneself as a result of being chosen to lead. However, the transition may also include feelings of uncertainty, self-doubt, and even a sense of loss as one attempts to leave

behind an old identity and create or take up a new one. Transitioning into supervision was a major topic in the supervisor training, and the participants' experiences with the transition figured prominently in their change story. It appears that the difficulty or ease of the transition and the pace at which the transition occurred impacted participants' ability to transfer other knowledge and skills learned in training to the job and create desired change in their work performance. Transitioning includes navigating self, gaining the acceptance of others, and forming a new work identity.

**Navigating self.** To successfully transition, participants had to cope with their own thoughts and emotions about becoming a supervisor in their agency, which meant moving from a job they knew and had achieved success in to a job that was unfamiliar and held tremendous responsibility. Although the majority (but not all) of the participants desired the promotion, they still experienced a sense of loss of the familiar. Julie shared her initial concerns about becoming a supervisor:

Instead of me being in the field, being with kids, being with parents, arguing with the judge -- you know, the things that I feel that I'm good at, the things that I like doing --it was -- you're going to be in the office all day and that's it. You're going to be in the office, you're going to be trying to manage people's time, you're going to be trying to look to see where they can improve, you're going to try to manage the flow of this work and that's as close as you're going to get to the action. Basically, that's it. So, it was like-- Oh, that's depressing. It's very sad. But that's what I asked for, that's what I wanted.

Anna expressed a similar sentiment when she shared how supervision sometimes made her miss being a worker:

I miss being a worker. Trust and believe. Let me tell you why. As a supervisor I deal with complaints, money issues, complaints all day long. It's like --- I've never been on the phone so much in my life. Not complaining, but I'm just like, Is there ever a happy day? I think as a worker you hear them [the complaints] but you just move them on to your supervisor, to the next level, I don't think you really had to focus on them as much. Now that I'm stuck with trying to clean up the issue and trying to make wrongs right, that's one of the more challenging aspects of it all.

An additional aspect of navigating self was the mental changes that were necessary.

Participants had to begin to see themselves as the supervisor and then change their behaviors accordingly. Wanda shared an incident that happened with one of her employees:

It's funny, because one of my new employees was like, 'Okay, so I want to work this time, what do I need to do?' And I just said, 'Just go talk to your supervisor.' I was still transitioning cases and so I was still thinking as a case manager... And she looked at me. She was like, um --- 'you are my supervisor'...It was funny because I said it without thinking. It was like my first response without me even thinking -- Hey, you're in this role now...Until you make that transition mentally as well as physically -- it's almost like you've got to put those pieces together.

Participants also expressed a feeling of being "stuck between two worlds." Sometimes this was a result of staff shortages that forced them to do casework while also trying to carry out their supervisory duties. But, remaining in this limbo often had more to do with their inability to let go. Patricia expressed this difficulty in terms of letting go of her former clients:

It was hard [letting go of being a case manager]. It was hard at first because some of the cases I transferred and that went to other case managers, the kids were still calling me because I told them you can call me anytime. It was just hard because I was still working cases... I sat with my administrator and I asked her, 'how can I let go?'

**Gaining acceptance of others.** A successful transition also meant gaining the acceptance of others. Not everyone will welcome newcomers into the managerial ranks. Participants dealt with the perceptions of their new peers regarding their competency and qualifications. This situation can force the newcomer into a defensive mode of having to prove him or herself to others. Wanda noted how these dynamics influenced her transition:

Because I did transition in the same county I worked in, you go from being a case manager to now you're the person in authority -- even though that might not be the way you want to be portrayed. And so it was a big transition for me and it was constant ridicule. It was ridicule to say, I didn't know what I was doing [or] 'she's new.' And sometimes I took offense. It wasn't coming so much from my staff, as many of them were new, but from them being fed negative energy from other employees.

Gaining the acceptance of others also included gaining acceptance from the staff they would now be supervising. For some participants, this was no more than the normal testing of a new relationship; but for others, this became more of a stumbling block than they anticipated or were prepared to deal with. Bobbie shared the difficulty she had gaining acceptance from her team who had been reporting to someone else:

My administrator, she was really handling my team. So, it was kind of a tug-of-war of getting my power because they were so used to going to her. And so, then when I come in and I'm saying things and giving directives, it was more like, 'I don't have to listen to

you because your administrator said' ...So, we had to get to the point where I had to gain my power from her and I think that was part of the issue. And then, I had workers who wanted to do what they wanted to do regardless of what I directed them to do... Yeah, it was a tug-of-war.

For April, it was not that they were resistant to her supervision, but more that they had to accept her as a new part of their work life:

I had a worker that had went out on a case ...he didn't even call me, he called one of his team members to get their opinion about what was going on and then they brought the phone to me. And so before I could even say anything, the team was like, 'Okay, I'll go to court.' 'I'll do this.' 'Give me the form.' They just started divvying up the duties amongst themselves and I was like, 'No, let's reel it back in...as the supervisor, I'll go to court and file a complaint' ... And it was kind of like they had to take a step back and remember they don't have to do it all themselves anymore. They've been on their own so long...I've got to work on bringing them in. They do stuff on their own all of the time. I'm going to have to reel them in.

**Forming a new work identity.** In addition to navigating their emotions and the perceptions and habits of others, participants also formed new work identities as a part of transitioning. Past experiences with supervision heavily influenced their identity formation. Participants assessed what they considered to be good and bad supervision and then used these experiences, taking a little from each, to form their own identity. Beverly shared a story about how experiences with one of her previous supervisors were shaping her supervisor identity:

I think everything that I've learned came from her. She used to get on my nerves when we came to staffing -- the way she did her staffings. And then our unit meetings, they used to

be two hours long...She used to print out all this stuff and then she used to print out documents and make us read the documents and discuss them. I was like, what is the purpose of this? But now that I'm in her position, I see why she did what she did and I find myself operating very similar to the way that she operated. I want to operate like her because she was a wonderful supervisor. But I don't want to turn into the person she was, or I don't want to exhibit the traits that she was exhibiting because she was very nasty at times and it just seemed like she wasn't compromising.... She wasn't trying to work with you, to help you on anything, and as soon as you did something wrong it was always, 'well, I'm going to have to write you up.' I don't want to be that person. She taught me a lot, but I just don't want to be that supervisor.

The desire to make things better for the people they supervised was the overriding consideration for these participants. Wanda, who had experienced more than her fair share of poor supervision, explained it this way:

So my thing is, and this is what I took to heart, what I prayed about --- I don't ever want to duplicate what happened to me. I don't want to pass the baton. I saw that there was a need and there was an error. I have to figure out a way to fix it... If I do something, and I feel like -- you're acting like -- I'm not going to name certain supervisors --- but, I don't ever want to be that person. Ever.

### **Behavior Change Process: Testing the Change for Fit**

Individuals in organizations rarely adopt innovations wholesale and without question. Training is no exception, particularly when the trained skills are open skills (i.e., principles that reflect a freedom to perform as the trainee sees fit rather than a single correct way) as was the case in this training program. In addition, for these participants, the transition into supervision

(how the transition occurred, the successes, the challenges) impacted their engagement in the training and their decisions about what was important to them to apply with their unit. Testing the change for fit included the processes of identifying what is important, making the training your own, and engaging in trial and error.

**Identifying what is important.** Julie and Donna, two participants who were already supervising before they attended training, noted they were particularly tuned into content that connected with problems they had already identified with their staff. Donna described her approach to the training content:

While I was in training, I kept a list of things because being that from day one [of the training] I was supervising, and I felt like when I started I didn't know what I was doing... I had a list. If we talked about something in training that kind of stuck out—Okay, that's what I needed, I'm going to do this. And I would tag—my book has so many tags in it. And it wasn't just stuff on the test, it was like something that I identified that I wanted to be able to come back and do or I knew, if I do this, it's going to help me with this particular situation.

Similarly, Julie noted her perspective on what was most important for her:

I think since I was already working...I like to be solution focused... I was seeing things that were problematic and it was like—well how can I fix it? And so I used a lot of stuff from training...it was like—Okay, this is how it should look when I'm fixing it.

Julie also noted how she tuned out if the training content did not appear to be immediately relevant to her:

The thing about it is when you're doing it—when you're in class, you internalize the things that speak to you. So, the things that don't—outside of making sure you know

what it is for a test item—you don't put much stock into it... If the point was to be aware of it, I was made aware. I just didn't have to go that deep. And then some of the stuff—because it wasn't something that I wanted to do—it kind of floated by like, yeah yeah, yeah, I get it, I get it.

On the other hand, for those participants who came to training without prior knowledge of their unit, training was more about a general awareness, good ideas, and possibilities. The identification of what was important to apply did not come until after training and they were actually back on the job working with their unit. Bobbie explained in this way:

I think the training was good. The trainers really hit things right on target. But, if you don't know what to expect going in and then you don't have a team, you can't really apply it until you actually come back and go through it. Everything that they taught was good, but until I got back [here], I really couldn't see it.

**Making the training your own.** Deciding what was important was only a first step. Participants then had to figure out how to apply things in a way that were consistent with their personalities and emerging supervisory identity. For Julie, there was really no other way to act upon the knowledge and skills learned in training. To do otherwise resulted in a personality dissonance she was not willing to deal with. Julie told the story of her initial attempts to apply what she learned about one aspect of administrative supervision:

I'd already had a meeting the first day [I became the supervisor] with my unit and talked about unit expectations. It was like -- Look, y'all know me, you've seen me around here. These are the things that I need from you... And I felt like that was fine. But then when I went to the training it was like, it needs to be on paper and it needs to be structured. [I walked away thinking], okay, I need to be more formal and I need to take this more

seriously... So I had typed it [the expectations] out, but I had this [attitude] -- You are going to have your documentation done by the third week on Friday, there are no excuses, you're going to have it like this, and you are going to do collaterals, and there are no excuses, and this is what it is... And they did it, but I didn't feel comfortable with doing it that way.... And I had one that cried to my administrator and basically said that I make her feel stupid. That was not my intent, but it was my impact. I don't like coming off this way. I need it to be important but I need to be able to express that to you in a way that I feel like it's natural for me...It was like my mother was talking through me to tell people what to do... I felt like I was having an out of body experience.

Owen shared how he used what he learned in training about assessing his staff's learning needs and accomplish the same goal using a different method:

So, that's where I've kind of started is reviewing the documentation to see how they document. And then through case staffings each month -- asking them questions that will kind of test their knowledge and their insight as a worker. Because if you've been in this field for seven or eight years, you should know how the pieces fit together. So even though I may know the answer-- asking them. And so that is a way to test their knowledge as well. And if there continues to be the same thing within the same areas, then that's a sign that there's a gap there and that they may need some additional training. Instead of giving them a formal assessment --- because I would feel intimidated if I was a worker and I had a new supervisor coming in. And so, my attitude would be well, who do you think you are, coming and telling me I don't know how to do my work. And so, I wouldn't want to come off as that approach. So, I guess I've had to develop an informal way of testing [them], instead of here's a written piece of paper, let's go over this.

Because even just looking at that assessment in the training, it could be a bit overwhelming, sitting there going through each one of those things.

**Engaging in trial and error.** Testing the change for fit also involved a process of trial and error. Julie explained how, in her effort to find the right fit for what she had learned, she had to back track with her staff:

I felt like after that first week I may have lost a little personal power and I didn't like that. That wasn't something that I was comfortable with...[I came back later] and cleaned it up. Made some apologies, blamed it on the hormones, whatever they would let me do. Just forget all of that. Let's start over...I felt like my years of being in the agency, I had the practice experience. But, it was how to do it in this new role and capacity that I didn't have. So it was like, do this, go back and try that. That didn't work, or oh, that worked fine, okay. Let me see what other piece I can add to make it this holistic thing... Trial and error. A lot of error.

Donna brings a different perspective as she recounts how she constantly evaluates and adjusts her approach to the work:

I love to self-evaluate, What's not working? How can I tweak it? What am I not doing right? Let me look back at my training book to see if I can...Just so you can feel like you're making those accomplishments. And if it's not working then I'll look back and make sure --- Am I doing it right? Am I missing something? Do I need to add something in there or is there a different way we can do it better?

To summarize, three months post training, two themes characterized the individual work related behavior change process: transitioning into supervision, which included the initial formation of a new identity as a supervisor, and testing the change for fit, which involved

considering what was learned in training and adapting it to fit one's personality and work identity. Next, I present three themes that characterized the transfer influences during this time period – the relationships and interactions study participants had with key people in the workplace, organizational conditions that influenced the time and energy participants could devote to the transfer effort, and the resistance to change they experienced in their work environments.

### **Influence on the Change Process: Relationships with People**

The interactions participants had with people in the workplace post training had a significant impact on their early efforts to apply what they learned in training and improve their job performance. These included interactions with subordinates, clients, former classmates, and most significantly immediate supervisors and peers. Supervisor interactions, whether positive or negative, by far had the most significant impact.

**Supervisor interactions.** Study participants' experiences were almost evenly split between positive supervisory interactions and negative supervisory interactions. Even when the supervisory relationship was described as being supportive, the emphasis from the supervisor was primarily on the accomplishment of the work, with less emphasis being placed on encouraging transfer from training or the new supervisor's continued development. However, a notable exception to this pattern is found in Owen's experience. Owen described what engaged and supportive supervision looked like for him and how it impacted his performance improvement process:

It's been a real benefit having my supervisor being really hands-on and she didn't just throw us out into the deep end and say figure it out, sink or swim. But she's there. Any questions, you can ask. So that really helps me as new supervisor put the pieces together

and connect the dots. And in times of uncertainty, I go around the corner and have a conversation. Hey, I'm not sure about this worker. I'm not sure about this. So, that's really been a motivation and support for me. And I think that her attitude is that she wants me to learn. She wants me to know about the leadership role of supervision. She's showing me what to do, giving me guidance in areas that [may need improvement]. And kind of pushing me along the way...She is very encouraging... She's not afraid to jump right in the mix and say hey, what do we need to do to get the job done. Not what do you need to do to get the job done. And then helping you think critically. So, it's a very good relationship...When we go to training and come back she'll ask how was training and what was learned and then she'll give some examples on the scenarios that it could be [used]. So, that helps. It kind of paints the picture a little bit more clear. Then she tests our knowledge to see what we've learned. At staff unit meetings, she'll ask us to talk about - tell us about your training or tell us about the conference you attended. Tell us what you took away from it....me feeling supported from leadership would probably be the most positive thing because it just - it boosts your morale. It gives you that feeling like I can do this, even when you look at stuff and feel overwhelmed and you have to make decisions on hard cases and so forth, but knowing that you have that backing and that support behind you probably has the most positive impact. And then gives me that extra motivation, that extra drive to keep moving forward and to keep plowing through. Of course, everyone did not have this level of supervisor engagement. Malissa recounts a particular incident with her supervisor:

I felt like I was just thrown in there... I didn't know, so I was constantly having to reach out to my administrator. And then I didn't feel supported. I was like where's my

guidance? When am I going to get coaching, guided, and mentored? I'm not getting this. And my administrator was like, 'I didn't forget about you. I'm coming to your county to see you'. [When she did come to meet with me, there was no one to cover my team] so, I was still working. I was still emailing and she was still doing her thing. So, it was still some distraction. And then I thought we were going to spend a lot more time together. But we didn't. She had to go on to [another county]. But she was supposed to come for a few days. So, I kind of felt cheated.

April described a tenuous relationship with her supervisor:

For the longest I felt like I forgot about my administrator. I've never had a monthly conference with my administrator and I've been here since February. I get a "Hi" when she walks by...now that I'm actually supervising my load, I get more interaction but it's all on my part. I seek her out, but I don't get much from her at all. And I addressed it, I mean, nothing has come from it.

The data point to several characteristics of supportive supervision that positively influence learning transfer: being hands on, encouraging, available, and open to staff member's ideas. Supportive supervisors also allow room for independence, but are there for back up if needed. They help staff member's make connections between what they learned in training and the work they are doing and view mistakes or errors as learning opportunities.

**Peer interactions.** The second most influential relationship was with their peers. Peers are defined as the other supervisors in the participants' program area. Unlike supervisor interactions, peer interactions were mostly positive and supportive of the participants' transfer and development efforts. Peers were helpful for the participants' transfer and improvement efforts and also provided support for the day-to-day work of supervision. In some cases, the

support of peers helped to lessen the impact of unsupportive supervision. This influence seemed to be particularly impactful when peers were hired around the same time and/or attended the supervisor training around the same time. Bobbie described how she and her peers work together on their job performance:

We are very supportive of each other, especially the new ones who just entered this journey. Some of us were in training together. One of them is actually going through training now. But we support each other. There are times that we just don't feel comfortable talking to our administrator, our supervisor. We support each other, lean on each other, and then if we get to the point where we just can't figure it out, then we call our administrator. Other than that, we try not to bother her too much... [They are helpful for sorting things out from training] especially if I might have missed something that they got. And then it helps also with critical thinking. I might have a tough case and I just can't figure out. I might have a tough worker. So, we're able to brainstorm and come up with other ways to reach that person.

Wanda echoed that sentiment with her description of the relationship with one of her peers:

Thankfully, one of my co-workers is a new employee, too, and so we kind of collaborated a lot with our supervision in what we're going to do and how we can get this to another point. So, it's good to have that support as well. This co-worker was actually in training with me and so we're learning together...I do think going through with someone that I knew, it was more helpful. He is a thinker like I am and he wants to develop as well.

Similar to supervisory interactions, not every peer group was supportive. April and Mary demonstrated how having a negative peer group can motivate performance. April discussed the relationship with her peer group:

As a supervisor coming in from the outside, I didn't feel embraced, not by my team...the other supervisors in different programs came over and extended themselves. But my actual team, no. To me, it helped me because it made me do stuff on my own. I had to navigate the system by myself. Made me a little bit more resourceful. And then, because of that I've made relationships with people in different units, if I need something in [another program area] I know somebody.

Mary described how she felt compelled to “step it up” as a result of the negative interactions with her peers:

Being challenged by other supervisors --- seeing what they're doing and I'd be like -- okay, maybe I need to do something different. [The culture] - it's a I know more than you know type of thing. I had to say one day, 'can we be more supportive of each other?' We're all on the same level. You don't have to send me an email and tell -- and check me to make sure I did my job. And that's the kind of atmosphere that we're in -- where you always want to check somebody else to make sure that they're doing what they're supposed to do... You just don't want to be the one that's always receiving the backlash.

The data point to different dimensions of peer support that positively influence transfer: support for learning, support for day-to-day performance, and emotional support. Peers can also provide challenges that encourage improved performance. This may not be perceived as being supportive, but this dynamic can serve to increase motivation for transfer.

### **Influence on the Change Process: Personal Capacity**

Situations within the organization that were beyond the study participants' control impacted the time, energy, and mental space available for them to work on applying what they learned and improving their job performance. As a result, their personal capacity for transfer

was lessened. The data revealed various organizational conditions that impacted study participants' personal capacity for transfer. These include a high turnover rate, hiring freezes, mandatory overtime, and various efforts at re-structuring to try to lessen the impact of these conditions. The cumulative, and overarching, impact was on workload. The workload demanded attention to the most critical areas of the work, leaving less time and energy for efforts at individual change. Donna recounted the impact of these influences on her change effort:

I've made a lot of progress since I first came when I look at where I was in March and where I am today... I just know some of the things that I want to do - it's a time issue. It's like learning to continue to juggle and do each piece efficiently - to feel like I'm giving enough time to each part of it...When I look at - okay, so where did my time go? Well, I have this backlog that I'm trying to work, and I'm doing overtime myself...I want to make sure I implement...to be able to truly do what we're supposed to be doing and then, at the same time, have some learning for myself where I feel like I'm continuing to grow and continuing to develop.

Patricia described how organizational conditions impacted her full participation in the skill building activities that were a part of the training program:

The skill building, it really - I couldn't focus on it because I still had to do the work that I had. So, I really didn't ever get any time to complete it and right now I'm trying to work on it. But it's still becoming a barrier because I have to do other things. So, I just have to find - I have to fix my - work on my time management when it comes to working on the skill building.

Bobbie had a similar experience:

When I was back here [in the office] in between [class weeks], I was working my own cases. I had a caseload. I think I had a caseload of 15 cases. So, I really - I did some of them [the skill building activities], but I had to close my cases. And that was the demand from up top.

### **Influence on the Change Process: Resistance to Change in the Work Environment**

Finally, study participants experienced resistance to change in the early stage of their transfer process. A majority of participants perceived their efforts to apply what they learned in training, to try things a new way, or to strive for excellent performance were not always welcomed in their offices. The data revealed various dimensions or forms of resistance to change, including contentment with the status quo (i.e., this is how we've always done it), negative feedback for being different or attempting to buck the system, and a sense of defeatism that overshadows anything perceived as change.

Donna recounted an incident where she wanted to apply what she learned about interviewing and selecting staff but hit a brick wall in her attempts:

I looked at my book [the participant manual from training] and went through my stuff for the questions [but], that's not the way we do interviews here. ... the people that you might have had a question about or could have been a possibility, [the process] didn't allow for further exploration [to see] if they were a good fit... I don't think that we use anything that's in that book beyond the straight questions. [They do it that way here] because it's routine. It's always been done that way. That's what they're comfortable with, that's what they're used to and that's what works...I think here -- especially people

who have been here for awhile -- they don't often get out of their comfort zone. It takes a lot to bring new ways of doing things to the table because of that.

Julie shared how her efforts to improve her performance and the performance of her unit were met with negativity from others in her office:

I'm a person that gets kind of gung ho about something. If I like it, I like it and I'm excited about it and I want to share it and that's what I'm going to do. And when people don't share that sentiment, they can become resentful....or kind of mean....and then especially when you're gung ho about something and you're doing it and you're doing it well. And you're getting acknowledged for doing it well, you do get some backlash. And then my people, as a consequence, have suffered some of the backlash, some of the brunt of that. And that's not fair to them either...you should not get reprimanded for doing a good job.

Similarly, April described the resistance as a culture where no one wants to rock the boat:

Nobody wants to rock the boat....Nobody wants to step outside and do things. I don't want to say laziness...it could be laziness on people's part or it could just be....like I said, just don't want to be the one that rocks the boat....And the attitude, "Oh, we're not going to be able to do that" and I think people have this defeated mentality....like any time something new comes in, they're like, "We're not going to be able to do that" without even giving it a chance. So, stuff gets dismissed or forgotten about. I feel like the challenge is going to be changing attitudes and I don't know if we can do that.

### **Stage of Change Assessment**

Study participants entered training already contemplating the need for learning application. I found no evidence to suggest they dismissed the need for using what they learned

on the job or were refusing to at least consider adopting what they had learned. All of the participants found value in the training and expressed interest in using at least some of what they learned to improve their performance as supervisors. However, at this stage, some were further along in their efforts than others. As discussed in Chapter Three, the Transtheoretical Model (TTM) provided the conceptual model of change for this case study. The TTM stages of change, operationalized for this study, are presented in Table 30.

Table 30

*TTM Stages of Change in Training and Training Transfer Context*

Stage of Change	Definition
Pre-contemplation (status quo)	Has not adopted the desired behaviors from training and does not intend to do so in the near future. No clear recognition of the need to change work behaviors.
Contemplation (testing and internalizing)	Acknowledges there is a change to potentially be made and is likely to take some action toward change in the near future. May be seeking additional information related to the knowledge and skills learned in training but has not committed to the change.
Preparation (decision point)	Has decided to adopt the desired behaviors from training. Is signaling to others readiness to begin doing things differently and/or is putting things in place to support the change.
Action (active use of new skills on the job)	Has begun to adopt the desired behaviors from training. Change in behavior is evident and there are early signs of improvement in job performance.
Maintenance (new state of being)	Adopted the desired behaviors from training. Continued application of trained knowledge and skills has contributed to recognizable improvement in job performance.

The assessment of progress toward transfer from this training program based on TTM stages of change is presented in Table 31. Progress toward transfer is considered for each of the training competency areas. Two months following training, most participants were planning or preparing to adopt the knowledge and skills learned in training or had already taken some actions and could connect their actions to what they learned in training. However, there were some participants who had not committed to change.

Table 31

*Early Stage of Change Assessment*

Competency area	Number of participants in Contemplation	Number of participants in Preparation	Number of participants in Action	Number of participants in Maintenance
Administrative Supervision	1	5	5	N/A
Educational Supervision	3	4	4	N/A
Supportive Supervision	1	5	5	N/A

Note. No participants were in the precontemplation stage. The maintenance stage is characterized by at least 6 months of consistent application of new behaviors; therefore, this stage was not applicable to the first round of data collection.

**Middle Stage of Change**

In the middle stage of change, a distinctive pattern of change emerged. Participants followed one of two paths. They were either evolving or stagnating. These two paths represent the themes identified in the data. Also, I identified five themes related to factors that influenced the change process: opportunities to use new knowledge and skills on the job, personal capacity

for transfer, supervisor interactions, accountability for transfer, and personality traits. Table 32 presents themes for the middle stage of change in relationship to the research questions.

Table 32

*Middle Stage Themes*

Research Question	Themes	Sub-themes
How do adults involved in employer-sponsored training experience the process of individual work-related behavior change?	Evolving	Growing into the supervisor identity Growing in competence Taking ownership Re-booting Experiencing success
	Stagnating	Feeling disconnected
How do learning transfer system and other factors influence the behavior change process over time?	Opportunities to use new knowledge and skills on the job	
	Personal capacity for transfer	
	Supervisor interactions	
	Accountability for transfer	
	Personality traits	

**Behavior Change Process: Evolving**

The Merriam-Webster online dictionary defines evolving as developing slowly often into a better, more complex, or more advanced state. This definition captures the experience of a majority of the study participants. Participants who were evolving were growing into their new identity, growing in competence as a supervisor, and taking ownership in their role. They were

also learning from their experiences and had the ability to identify when they needed to re-boot or do something different.

**Growing into the supervisor identity.** At this stage of the change process, participants had become more comfortable with their new identity as a supervisor. Feeling a loss of the familiar or nostalgia for being a case manager had lessened. Julie shared some of her struggle with growing into the supervisor identity:

And then [getting] comfortable with being - basically being behind the camera. I'm not one of the actors anymore. I'm behind the camera. And that's okay. There's still good things about being behind the camera. It was just about being more comfortable with that role and finding the good part about that role, and realizing I don't want to be in the action anymore...So, I think that was the change... I think a long time ago, a teacher told me that whoever wants to be the leader should probably not be the leader. It is the person that demonstrates the behavior without demanding the title. So I was like -- well, definitely don't ever demand it. I need to find a way to demonstrate it...The first couple of months, I would literally sit here and be like, I don't know what the hell I'm supposed to be doing...then it was remembering that I'm here to manage the [flow of] work and not the cases – well, how do you do that?... So, then it was another month of sitting here going well, what the hell and I supposed to do now? And then, kind of finally wrapping my mind around all of that and feeling comfortable enough to say, Yes, I am the supervisor and I am in charge and that is okay. There's nothing dirty or wrong or criminal about it. I think I just had [the] very negative connotation. Maybe I had some deep-seated issues with authority figures.

**Growing in competence.** A second aspect of evolving is growing in competence.

Participants' confidence in their supervisory skills grew during this phase. Owen shared how he grew in competence as a supervisor:

There's sometimes -- on the days when I don't know I'm a supervisor or I don't feel like I am. I have to get that - okay, let me go run this by somebody else and see what they say...Initially, it was all the time. Several times a day, I'd be going [and] asking questions. And just seeking answers. 'Is it okay if I do this or what do you think about this?' But now, instead of that, I'm becoming more confident in the decisions that I make.

Donna gave an example of the increase in her confidence and ability to address performance issues with her staff:

I think I'm more comfortable in my role. Whereas before, I would consciously think about how am I going to say this because you want to make sure you say it the right way. And now I feel a lot more comfortable...I know what the right way is, and so I can just immediately address it...So, there [is] no hesitation in my thought process or my actions to address situations as they come up... As opposed to before, I may not have addressed it right then. I might have waited a little bit so I can get my thoughts together about how am I going to approach it.... It's easier now...and I guess that's a part of the confidence and me being comfortable with my ability to do it.

For some participants, growing into the supervisor identity and growing in competence included feelings of inadequacy and even the desire to quit. Feeling like you want to quit is different from just experiencing the loss of the familiar or feeling nostalgic about the previous caseworker identity. Feeling like you want to quit happened when participants became so

overwhelmed by the change they thought it would be better or easier to just go back to the status quo. Bobbie shared the difficulty of her evolution:

It was a difficult transition from case manager thinking to supervision because that's all you know. And I know it would irk my supervisor because she would [always] be in [here], you're not a case manager. You're a supervisor. And I'm looking like what? Okay... You're not understanding... It doesn't come just like that. Uh-uh. It's been a couple of times I've asked to go back because I'm like I can't [do this]. I told her [my supervisor] because it was just too much.

Mary expressed a similar sentiment:

I just had this conversation yesterday. I was like I really think I need to just go back to being a worker. I did have that conversation. I miss it sometimes because I knew that I was responsible for me and myself only, but now I'm responsible for, like today, eight other people. So, sometimes that responsibility and knowing that you have all these other responsibilities in your personal life, it's just - it's overwhelming sometimes. So sometimes it is easier to go back to being a case manager.

**Taking ownership.** Taking ownership is also a part of evolving. Taking ownership involves three distinguishable traits: ownership of the work, the team/people, and one's own performance. Owen described how taking ownership had changed the way he approaches educational supervision:

It was during training that I began to understand that I'm responsible for making sure that they know this stuff. And when that light finally clicks on and dawns, it's like oh, wow, I'm the one that has to make sure that happens. So, I think taking more ownership of that specific area of supervision is something that [I've] really taken away and I've seen

evolve more since the training has completed. Instead of just kind of passing it along and making an assumption, but taking that ownership and going that extra mile to make sure they understand.

Donna described how she takes ownership for the work in her unit:

I always look at what is it that I might not be doing that we're not attaining a certain goal. I need to change something -- I consider myself like - we're on this boat and I'm driving the boat so whatever happens, I take a part in that, too, and I always try to become - even though it may not have been me directly, but I just take ownership of whatever it is that we do because we're a team and I'm leading the team.

Julie described how she takes ownership through the protection of her team:

They know that this [is] sanctuary. This is our place. No one can come in and touch you. Nothing can happen to you here, and as long as we're doing these things, we're fine...And when I would champion for them and I'm like --- my workers need, or my workers want. And it's not me boasting about being over them. It's letting you know that this group of people are affiliated with me and you're not going to mess with these people because they're mine...So, it's all our team, [but] when we represent to other people it's mine. There's ownership of it.

April described how she takes ownership of her performance as a supervisor:

...I'm going to give [a form] to my workers at the end of the year for them to evaluate me. And at each of our monthly meetings, I asked them, 'Is there anything that I can do to help you? Is there anything about my supervision style that you want to change? What do you need more from me as a supervisor?' And a lot of times I'm getting a No. You're -- everything is okay. But I ask that question every month.

Similarly, Donna described her belief about taking ownership of her own performance and her own success:

Sometimes you have to be aggressive in what it is that you want to do. I just don't believe in allowing my ability to be successful to lay in somebody else's hands - I take partnership in that. So, even though I might have to come to the table with 90 percent, if that's what I got to do, that's what I got to do...And even though it should have been a two-way street, I just think that you have to take ownership [in] -- and where it is that you're going and not allow it to rest in somebody else.

**Rebooting.** All of the participants made mistakes early on. The difference between the participants who were evolving and those who were stagnating was the ability to re-boot or to recover from previous errors and change direction. Some opportunities for rebooting came as a result of their recognition that what they were doing was not working. Other opportunities came as a result of staff turnover that allowed them to start fresh with a different group. A key characteristic of re-booting is the ability to learn from experience or, as several participants characterized it, to “learn as you go.” Wanda explained how she learned from her experiences and connected what she learned in training to the re-booting she had to do:

[The trainer] said you have to find that velvet-steel approach. You have to learn how to be velvet and steel. And I think I was more one of the steel. And didn't even realize it because I say something and I'm thinking -- oh, I just said... I didn't say anything with any [intention]...In the beginning, it was just -- I'm going to send out an email to everyone and be done. But this person might not like emails and might read the email wrong. This person feels like -- ‘I'm competent, I don't like for you to follow up with me

and it feels like you're talking down to me and nagging when you continuously do it this way.' So I think that's been my biggest adjustment.

Julie described a re-boot to the way she was approaching supervision and using what she learned in training:

I had to take a step back and focus on the supervision because I think I was too invested in the case management and I'm not here to dictate cases. I'm here to manage workload, and there's a difference. So, it was really about sitting back, being in my office, not trying to be in the street with them or being with the client. It was sitting in my office, doing the things that I don't particularly care to do... I had to step back and think -- because before when I think we first talked, I was having the informational sessions about case plans and things like that...but it wasn't the best way for everybody to be learning...So, I had to sit back and [think] -- what is it that I'm trying to do? I hadn't really focused on my end result and that's what's throwing me off. I had to think in general of what I wanted to accomplish instead of trying to use this one thing I learned and making it fit to correct this problem.

Mary described how she learned from experience and changed her approach to supportive supervision:

Right after training, I think I spent more time on being supportive. But now I'm learning you have to - you could be supportive but at the same time there are other things that need to be done, because while you're spending time supporting, this person can kind of get crippled by that support sometimes -- it's like you take them under your wing and it's like -- 'okay, well, I know she's not going to care if I do this or that' and then the work

goes [lacking]. So, I had to push back off of the [supportive] a little bit. I had to learn how to balance it all out.

Bobbie described how a complete turnover with her staff provided her with a second chance:

I'm able to really teach and lead them the way that they need to be...I learned a lot when I had my first [group] to make sure that I do differently with this group... I really wanted to be more hands-on because I felt like with the first group I wasn't hands-on. I felt like I really wasn't able to teach them because we had so many clashes... I guess you learn as you go...So the mistakes I made with the first team, I don't want to make those with this team.

**Experiencing success.** The majority of participants, particularly those who were evolving, experienced some success during this stage of their change process. Success took various forms including victories with the organizational system, the performance of their unit, and various types of recognition. Bobbie experienced success with her unit performance: "Their caseloads have come down a whole lot. They [upper management] have been noticing." Anna could point to how her efforts at educational supervision had resulted in a successful record audit for her unit: "So, out of 60 homes that they pulled, we're getting dinged on what? Two or three? Not bad." April's performance led to valuable recognition within her agency:

I think because I've shown improvements within my unit and my refreshing attitude, I've been put on special tasks, special projects. At one point, I was supervising eight people. They [upper management] knew I could handle it and I took a little extra work but I managed those eight people for as long as I needed to. I try to take it as a compliment to me that any time there's a special task or a special something that they need [the program area] to be the experiment on, it's me and my unit that the administration calls on. I try to

look at that to maybe they're grooming me to be an administrator or they know that I can handle it so I get it done.

Julie also had several accomplishments:

We're still hitting our targets. Our numbers are still the best here in the local agency. One of my girls just got promoted... They weren't giving out lead workers. Our county had refused. But I went and presented my case and they were like well, we'll definitely give you a lead worker, of course we will because we know your people, we know their work. That felt good because just a year and a half ago they [were like] we don't do that here. I'm going to be the only one that has a lead worker.

### **Behavior Change Process: Stagnating**

I identified a stark contrast to this pattern of evolving in some participants' change process. In contrast to those who were evolving, these participants were slower to grow into their identity and competence as supervisors, less likely to take ownership, and demonstrated fewer examples of learning from experience and change in their behavior. Some experienced stagnation to a lesser degree, but this was such a prevalent theme for Patricia that to write it off as unimportant would mean I had not provided a full account of this case. Stagnation was primarily characterized by being disconnected from the identity as a supervisor, the work, and the peer group. Patricia described how five months after her promotion, she was still stuck between being a case manager and being a supervisor and how this left her feeling disconnected from what was supposed to be her new role:

It was to the point where they were still going over my head -- getting things signed, getting [service] authorizations that they said I wasn't doing in a timely manner. But you got to understand, I'm in the field, too. If I was at the office all the time, then yeah [you

could complain]. But I've been in the field. I've been seeing kids, managing parents just so I won't overwhelm them. And I thought that that was supportive, but clearly it wasn't because you were going above me and saying, 'She's not doing this, she's not doing that.' But you're not telling me. You're not giving me the opportunity to gain -- or show you that I can supervise.

Patricia's lack of relationship with her staff also led to a disconnect with the work of her unit:

They want to make sure that you're educated on their cases. So, if they do go out, they trust that you will take care of court, panel, all that type of stuff. And they don't trust that. And that's because I don't know their cases. So, they trust her [the administrator] because she knows their cases. But I'm like until you give me an opportunity to know your case by having a conversation with you, by interacting with me more, then that's when I'll know the case. Until then, I'm not going to know the case because you keep going over my head, letting her know things that you should be letting me know. So yeah, I'm going to be dumbfounded. I wouldn't trust myself to testify on a case that I didn't know.

Patricia also described a serious disconnect from her supervisor. She recounts a conversation she had with her supervisor and what she perceived to be the results of that exchange:

And so, I told her. I said, 'You need to let them go. You need to let me do my job'. And that's when more negative stuff started happening... And they may not attack you themselves but they find ways. Either they give you a caseload of hard cases, bad cases, or they [the case managers] get in their minds that -- oh, well, [we] don't have to do it.

In contrast to the participants who were evolving, it was difficult to identify successes for those who experienced stagnation during this period. Patricia pointed to various barriers to her success including what she perceived to be an unprofessional work environment and an over emphasis on quantitative measures:

Numbers. Number motivated. Because if you don't have your numbers, whether it's a quality visit or not, you get hit. All they care about is numbers. The numbers are not going to help us promote permanency because I can put in blah blah blah on my documentation and get percentages, and it not be quality work.

To summarize the experience of change during this period, six months post-training, I identified a pattern of two different change paths. The first pattern was evolving, which consisted of growing into the supervisor identity, growing in competence, taking ownership, re-booting as a result of learning from experience, and experiencing success. The second pattern was stagnating. Participants who were stagnating experienced feelings of disconnection from the work, their identity, and others. These participants experienced little to no success during this period and instead were frustrated and dissatisfied in their work. Next, I present the themes that characterized the transfer influences during this period.

### **Influence on the Change Process: Opportunities to Use New Knowledge and Skills**

During this middle stage, most participants experienced various opportunities to use the skills they learned in training on the job. Participants who had varied and numerous experiences evolved. Opportunities to use included both every day situations and situations that pushed or challenged participants. Owen described how different opportunities had helped him apply what he learned in training:

So, as time has gone on, I've got a lot more experience in the administrative field. [For example], in the training, they covered the PMFs, the performance reviews... Having learned that and being familiarized and then being able to actually do it, I was able to grasp it. So, and I think what helps me a lot is not just learning about it but being able to do it, too... So, it all meshes together and makes sense to me... You can sit in a class and you can hear something all day long but until you apply and you actually do -- a lot of it doesn't register until you're actually doing it. It's like oh, I learned this in training and then it kind of comes back to you from that moment in training.

Bobbie described how she felt when she made her first major decision without guidance from her supervisor:

I've had a couple of cases that push you to the point -- but I made it. Especially my first deprivation. I made the decision to deprive the child. I'm so used to having [my administrator] make the decision, but I had to make it. And I was nervous but I made the right decision. I had emailed her and let her know what's going on. I gave her these big long paragraphs as to why this child needed to come in care. And she never responded back. So I went ahead and said deprive the child. So later, when I saw [my administrator], I said 'you didn't answer my email.' She said, 'That's because you made the right decision. If it was the wrong one, I would have emailed back and told you, but you had already made the right decision.'... And she patted me on my back for it... It makes me feel good that I can do this independently. I don't have to just rely on somebody, be dependent. It helps me know that I have it.

On the other hand, participants who did not have, or only had limited, opportunities, to use their training on the job, had a slower rate of growth than their counterparts. Mary described

how the organizational structure of her program prevented her from using much of what she learned in training:

The way that we're doing things now, each week I'm working with a different set of workers, so I'm not really able to develop my own personal team...So, the coaching and educational part, that definitely has been totally different from what we learned at training... [And] in our portion of the agency, the supervisor doesn't approve the leave. It goes through the administrator. So now you have taken -- it's kind of like you're taking it away from the supervisor and that's one thing that in training -- we were taught that's something that you do. But now you have taken it away so it's like you are just - you're taking more and more away of my supervisory duties.

Patricia described what she perceived to be a lack of opportunity to practice what she learned in training:

I really haven't had an opportunity to touch on administrative, the educative, or supportive. I haven't been able to touch on none of that. Since our last conversation, I haven't had a chance to really fulfill my supervision role because I'm still doing case management due to workers going on family medical leave, going on vacation, being overwhelmed. And so, I really haven't had a chance to really do what I learned...until [I get] the opportunity to supervise, my experience as a supervisor here is not going to be effective. It's not going to be a good one -- a good learning experience.

### **Influence on the Change Process: Personal Capacity for Transfer**

Just as in the early stage of change, participants continued to be influenced by conditions in the organization that impacted their personal capacity for transfer. These conditions lessened the time and energy they had to be purposeful about using what they learned in training to

improve their work performance. For some who started off trying to immediately implement things they learned in training, these conditions resulted in what I called change interference -- the immediate priorities of the job resulted in them falling back, relapsing, or being unable to maintain the changes they started. Wanda described some of the conditions she had been working under:

I don't even know how to describe it. Probably since the end of July maybe, starting around that time, we've been down a supervisor and the other supervisor that's here strictly does resource development. He has no knowledge of the foster care piece, so that leaves myself and our administrator who was pulled to act as director and administrator for [a different program area] because we lost that one as well and a couple of supervisors on that side. So it's kind of been like everybody just pitching in how we can to make sure that the work is still getting done and we're supporting the staff how we need to. So we've been all over the place.

Wanda went on to explain how this situation had interfered with the processes she had put in place to provide coaching and feedback for her staff. When I asked if she had been able to maintain her Coach's Corner, she replied:

Around August, July/August is when everything started hitting with that backlog, when we were doing the mandated overtime. So, that's - you can see it, right there where it stopped. See, they have the date. So that is when -- the last time somebody came in to request a coach[ing session]. A lot of stuff we didn't have time for any more. One of the things that I wanted to do was a lot of little workshops throughout the month.... but we didn't have [the time]. You're trying to work overtime for this and make sure the rest of your work is done during the other time, you don't have the time to sit and do those things.

Donna also explained the chaotic circumstances she had experienced during the previous months:

My team has changed five times. So, I don't have any of the people that I initially started supervising in the beginning. So, I have a whole new team.... I had at one point nine people that I was supervising, and so I think the number of people was impacting in a lot of different areas, not even just the administrative part of it but impacting every area... And right now, I think we're coming up to the point where we're fully - supposed to be fully staffed. But the majority of our staff - we're lopsided because the majority of our staff are very brand new staff.

Donna went on to explain the impact on her ability to apply what she learned in training:

I think it impacts it in a lot of ways because I feel like sometimes you don't always have enough time to do the things that you're supposed to do.

Perhaps Beverly summed it up in the most honest and succinct way when she explained what was impacting her capacity to use what she learned in training to improve her performance:

I'm tired. I'm tired. Mentally drained. Mentally drained. I'm mentally tired. It's just - it's a lot. It's a lot. And then from workers going [on] FMLA to workers up [and] leaving and their cases are just all over the place. There's a lot - I'm emotionally, mentally drained.

### **Influence on the Change Process: Supervisor Interactions**

Supervisor interaction continued to be an important factor during this stage. Data from the early stage of change revealed what supportive supervision looked like for these participants. These characteristics (being hands on, encouraging, available, and open to staff member's ideas) remained. In the middle stage, supportive supervision also included the characteristics of

helping to build the participants' confidence, backing their decisions, and being a good role model. Similar to opportunities to use, participants who experienced this type of support were more likely to evolve faster than those who did not. For those who did not experience this type of support, how they reacted to the lack of the support influenced whether they would continue to involve or become stagnated in their improvement efforts. In this stage, I also began to identify if there were differences in the importance of supervision in the beginning stage of change as compared to the middle stage. Mary described characteristics of her supervisor who she considered to be unsupportive:

She's the type of person that you don't hear anything until something goes wrong. And I'm the type of person where I like feedback. I welcome feedback. I want to know if I'm doing a good job. I want to know if I'm doing a bad job. I don't want you to wait to it hits the fan and then you're like well, why you didn't do this. Well, okay, where's your training and your coaching me? ...you lead by example and she's kind of [an] example of a bad one. So, I just feel like what I learned in training as far as how supervisors should supervise, she's not displaying that.

Regarding whether supervisor interactions were more important to her in the beginning or now, Mary shared:

I think it [the lack of supervisor support] was a hindrance at the beginning and now I've learned how to deal with it. Because at the beginning, I felt like okay, you should have come in and [supported], especially when I reached out to you for support. And now I'm just like, that's who you are. I understand that and I will get my support from other places.

Donna explained how the lack of support from her supervisor impacted her transfer and change effort:

I definitely feel like I've been put in positions where - I've asked for guidance because I may not have been so comfortable with certain situations that's come up and not necessarily received the guidance that I've asked for...In a sense it's - I think it's made me stronger and more resilient [in] wanting to make sure that my people have it [the guidance they need]. But I think that it's definitely developed me to be - even the lack of has developed me to be a little bit better because I've had to go out there and I've had to go get it, or I've had to get it from other people.

Regarding the importance of supervision in the beginning compared to now, Donna shared:

I think early on, it [supervisor support] would have been more impactful...[The lack of supervisor support] made it more of a challenge. Much more difficult than it needed to be. Much more frustrating in a sense.

Other participants felt the importance of supervisor support remained relatively constant since they completed training although the nature of that support may have changed. Owen described how the nature of supervision changed for him:

When I first became the supervisor, I thought that it [supervisor support] was really, really, really important, that was just one of the things that really helped me the most was that particular connection and that support system. But as I've grown more, I don't want to say that it's less important, but I wouldn't say that it's more important. I would say the importance is probably the same...I think that initially as a supervisor, I was asking more questions versus now I'm asking less questions and developing that confidence. Instead of just running and asking all these questions, I'm thinking through it, reviewing the policy,

applying things that I've learned and then making [the] decisions, and if I'm unsure about it then I'll run it by her to see if I'm thinking right. And nine times out of ten, I am heading in the right direction as far as decisions that [I make].

### **Influence on the Change Process: Accountability for Transfer**

Accountability for the application of learning on the job has been explored in limited ways in the transfer literature. Accountability refers to how the organization does or does not hold trainees, trainers, and managers accountable for transfer of learning. In this case, there was little to no accountability for the use of trained skills on the job. There was accountability for achieving specific performance outcomes that are measured by the agency, but no real attention given to promoting the use of trained skills to help new supervisors meet these outcomes.

Accountability includes how participants were prepared prior to training, the expectations set for trainees regarding training and training transfer, and actions taken after training to ensure expectations were met. The lack of accountability started before participants ever set foot in the training class. Participants received little to no information about the training before attending and there appeared to be no organizational expectations for training or for training transfer.

Wanda described her pre-training expectations:

I wasn't looking forward to going because I thought the training was mostly about the management information system. And even when I asked, 'Okay, what's the training going to be like?' [The answer I got was] 'Oh, it's a whole bunch of training, but Helen is good.' That's what other supervisors would say. 'You got Helen? She's good.' That's pretty much what they were saying and so I was like, 'Okay, what's it going to be about?' 'Oh, you'll see'....I had no idea what to expect. The only expectation was that I pass the assessment. That I pass the assessment. I'm not aware of any -- 'This is what you'll

need to be able to do when you come back' ...other than pass that assessment.

Julie also described how she didn't know what the training was about before she went:

The only conversation was, 'You need to go to training and when you get back or while you're there, I need you to read this case, this case and this case' ....So, it was mostly about that. And then the people who went – 'I liked it,' but not any details...It was like when I was pregnant the first time and I wanted to know 'Well, how will I know when my water breaks?' And everybody was like, 'Well, you'll know!' There was no details...it was just kind of like you just have to figure it out for yourself or you'll see when you get there.

Donna described the lack of expectations set for her regarding using what she learned in training:

I know generally my expectations are to review cases and close cases and build a relationship ....I really feel like a lot of my expectations came through training -- as a supervisor, I'm expected to do this...But now how do I implement those things like when I'm back here...like what are my expectations here...what do you expect from me? Not anything clear. What do you expect me to implement or to be able to do as a result of the training? No. Um um. No.

Following training, there were very few post-training conversations that focused specifically on what was learned and how it could be used. Julie explained how one administrator had plans for how to support the transfer of learning of new supervisors, but these plans fell through:

The program director that left was like, 'ya'll are going to go to training immediately because it's important, you need the training, it's valuable training, it's going to help you develop and get you where you need to be. We're going to meet with you all every week

to check on your progress and we're going to have discussions.' But then she left....It was going to be this whole thing ....'We feel like we left the last supervisors kind of hanging and they didn't get the mentorship and coaching they needed and so you're going to go to training and we're going to meet with you every week to check on your progress...'And then she left. [And nobody picked it up], and people knew about it because she'd been adamant that this is something that needed to happen because it could have benefited the people that have not been supervisors for a year if it had happened.

One byproduct of the lack of accountability for transfer was the apparent disconnect between what trainees were taught in training and the practices of more veteran supervisory staff. April described how everyone seemed surprised when she actually followed through with something she learned in training:

What I realized is that nobody is really following it [procedures taught in training] anymore. Like in my unit meeting today -- when I was being observed -- when I pulled out my unit expectations, I could see the--I don't know if it was shock -- like the reactions on their faces were like, 'Oh. You did unit expectations.' And when I talked to the other supervisors around here nobody has unit expectations. And the different things that I was going through...it was like, 'Oh, it was good that you remembered that' and so I just felt like it must not be being practiced if that was something to be noted. I just thought I was doing what was required of me.

As a result of the lack of accountability for learning transfer, much of the continued motivation for transfer was internal. For most participants, the only thing that kept the training alive was their own efforts to be purposeful about using what they learned. Participants used their learning to improve their performance because they found value in the knowledge and skills

they learned and could connect the training to personal goals, not because of any explicit requirement or expectation from the organization.

### **Influence on the Change Process: Trainee Personality Traits**

Participants who exhibited certain personality traits were more likely to successfully navigate the middle stage of change and continue their efforts toward improved performance. The influence of different personality traits on learning transfer has been taken up in the transfer literature with research examining the Big Five Personality Traits. Studies examining this issue are few, but at least one trait, conscientiousness, has gained some support as a factor that influences learning transfer (Blume et al., 2010; Huang et al., 2015). Conscientiousness was a theme among many (although not all) of the participants in this study. Words that describe people who are conscientious include: dependable, persevering, hardworking, disciplined, deliberate, and achievement-oriented. Conscientious people are motivated to see a task through to completion, persevere in the face of difficulties, and do not avoid challenging tasks. There was also a sense of resiliency among many of the study participants. Despite the challenges in their transfer climates, the participants who demonstrated these traits were able to persevere and remained motivated to use what they learned in training.

Wanda described her response to people telling her she wouldn't be able to implement different things with her staff:

A lot of people were like, 'You're not going to have time to do that' and every time somebody tells me what I'm not going to be able to do I'll go on a path to see how I'm going to incorporate it and how I'm going to make it work. I'm just a person of determination, I don't believe in listening to what others say that you can't do.

When asked if she thought all of the changes she faced in the organization had impacted her ability to transfer what she learned in training, Wanda responded:

Absolutely not. And I say that because just of the person that I am. I don't give up when there is a bump in the road. You find a way over the bump, smooth it out, and you keep going. That's just the approach that you take.

Donna described how she remained focus on transfer and went the extra mile to improve her performance and performance of her team:

I think if you're conscious of it then you make sure that you apply it. Even if it's just - even if I can just get 10, 15 percent of it in, let me get that 10, 15 percent in, is what I try to do... Because I want to make sure that I have a strong team and I know it's going to take all three [areas of supervision] in order for me to have a strong team...I've been working probably seven days a week - and not probably, but for sure. At least anywhere from five hours in on the weekend and sometimes even longer so that I can plan things out...I didn't like feeling like I was in a situation where I did not have - [the guidance I needed] - that's the worst thing ever -- feeling that way. And I didn't want it to happen again. And so, whatever it was going to take for it not to happen again, I was willing to go out and do it. Whether that meant I needed to talk to 10 different people, whether it meant I needed to go to my own research to help me kind of identify where we were at with this new policy, be comfortable with my decision making --- I was going to do all of those things.

In summary, in the middle stage of change, participants' experience with transfer and change were varied. Some had managed to maintain a fairly consistent trajectory toward training application and performance improvement while others had lost some of the gains they achieved initially and others remained stuck and were unable to achieve significant performance improvement. Participants experienced both catalysts and barriers to transfer. The primary

factors that promoted learning transfer were opportunities to use new knowledge and skills on the job and the positive interactions they had with their immediate supervisor. Barriers to transfer were having the time and mental energy to work on training application (i.e., personal capacity for transfer), the negative or lack of interactions with their supervisor, and the lack of accountability for transfer. Individual conscientiousness served as a catalyst and helped some participants overcome the organizational barriers they encountered.

### **Stage of Change Assessment**

The assessment of progress toward transfer during this stage is presented in Table 33. Again, the assessment ranges from contemplation to action. Although some participants digressed in their stage of change, overall there was an increase in the number of participants reaching the action stage in each of the competency areas.

Table 33

#### *Middle Stage of Change Assessment*

Competency Area	Number of Participants in Contemplation	Number of Participants in Preparation	Number of Participants in Action	Number of Participants in Maintenance
Administrative Supervision	0	4	7	N/A
Educational Supervision	2	2	7	N/A
Supportive Supervision	0	5	6	N/A

Note. No participants were in the precontemplation stage. The maintenance stage is characterized by at least 6 months of consistent application of new behaviors; therefore, this stage was not applicable to the second round of data collection.

### Late Stage of Change

In the late stage of change, participants' change experience continued to follow two different paths. Ten to 12 months post training, the majority of participants were integrating their different experiences and moving forward in their role, while some participants were still stagnating. These two paths represent the themes identified in the data. Also, I identified two themes related to factors that influenced the change process. Table 34 presents themes for the late stage of change in relationship to the research questions.

Table 34

#### *Late Stage Themes*

Research Question	Themes	Sub-themes
How do adults involved in employer-sponsored training experience the process of individual work-related behavior change?	Integrating	Accepting the new state Doing it my way Making a greater impact
	Stagnating	Becoming disillusioned
How do learning transfer system and other factors influence the behavior change process over time?	Managerial Support	Supervisor interactions Leadership from upper management
	Job attitudes	

#### **Behavior Change Process: Integrating**

After almost a year in the position, most of the participants were integrating many of their different experiences and bringing those experiences to bear on their work. These participants had a positive outlook about their future in supervision and were using much of what they learned in training to help them improve their performance. Three subthemes related to

integration were identified – accepting the new state, doing it my way, and making a greater impact.

**Accepting the new state.** Accepting the new state involved accepting the good and the not so good aspects of the job. Although there were things participants did not necessarily want to change, they were now embracing, or at least accepting, that it could work and be good.

Wanda described how she was able to accept not having as much contact with clients, which was an important value for her:

I think that the hardest thing for me to let go was working with families directly because I am a people person and I just love working with people. I love seeing them at their worst, giving them that inspiration and letting them know I believe in them. So I had to learn a different way to do it. Because you're now really - the only time you're called in is when it's a problem. So that's the only time you really get to interact. Other than that, I'm sitting in my office, at this desk. I'm walking, trying to get this done, that done, and this done...and my passion is people, so I had to figure out a way to link the two...I can still go out on visits. I can still interact with the families. We can talk other than times when it's just a problem....And I try to make it my best to know every child, and to at least have some form of interaction with that child. When we get to court, I don't want them looking like – ‘who is this lady?’ I want them to know that I am the supervisor of the case. I work right along your case manager. It's a team.

Julie reflected on her original fear of being out of the action and how she had come to accept the importance of her administrative supervision work:

Famous last words – ‘I miss being in the action.’ I do not miss being in the action at all...I'm not really here to move the cases, they know the cases better than me...It was

about me learning – okay, this is really my role, this is really what I'm supposed to be doing. I can be supportive with them in their fieldwork helping them out or doing something, covering when they go on vacation.... But that was kind of like -- oh, okay. Ah, it's not so bad. It's really not. It's not so bad. This is the better model. It is. Begrudgingly, it is. That's exactly what I was supposed to be doing. And then life was so much easier for everybody. They were happy. I was happy. Administration was happy. The clients are being serviced, so it was like -- oh, this is what we're supposed to do. Got it. Got it. Got it. Got it. Sorry. It took me a minute, but I got it.

After months of trying to juggle the management of cases and the management of her staff, Anna shared how she was finally able to settle into her role:

My new supervisor now has told me that I have till the end of the month to get rid of them [my cases] so I can do my job. And that made it a whole lot better because I still can assist and help them where they need it, but at the same time I'm not monitoring [cases] and supervising. I'm not wearing so many hats. It's just that I'm [going to] help out as needed. So being between the two worlds is getting a little bit easier. I probably would have been continuing to help out and trying to assist where needed so that they wouldn't be drowning. But she made a good point and I thought - I was like -- okay. I understand why I had to let the caseload piece go -- because I'm needed on so many other ends to work out the fires that they may can't get to because they have their 20 and 30 something cases.

**Doing it my way.** Participants who were integrating had become a lot clearer about their supervisory philosophy. They were attentive to the fit between their personality and values and their actions, and they were learning to be strategic in how they used various tools they learned

in training. Initial trial and error in their efforts to make the training their own had turned to increased confidence in what would work for them and what would not. Wanda, when asked about the progress she had made toward using what she learned to improve her performance of administrative supervision, explained how she attends to performance issues, but does not follow all of the protocols learned in training:

On the administrative end, it would be -- oh, we need to put this in writing. There needs to be some form of written communication to say that we are aware of these [problems] and they need to be addressed. And I think that's where I struggled. Because if it's something that's consistent and the person is not trying, then of course, yes, we need to go that route. But if you have someone that's trying but they're struggling, I don't feel that needs to be written. Let's see what we can do to help this person develop...I see it more so as - I guess my approach is different. It's still administrative but it's a different approach. I'm not more of a dictatorship. It's more of a -- it's really a team approach. Sitting down and saying, 'Hey, these are the things we have to do, how can we get it done? What does that look like?' Versus, 'this has to be done, this has to be done, this has to be done. This is the deadline. No exception.' It's still there. We still have to do the administrative role.

Bobbie had the same sentiment regarding what she believes about the use of progressive discipline:

I don't like to write anybody up, but I will have a conversation with you. And based off that conversation, determine which way we go. I know a lot of people saying you do the written reprimand, then do the write-up, and then call HR - and that's the way they laid it out in training. But me, I don't go that way. I'd rather just have a conversation with you.

We're going to sit down and come up with a way we can fix this together. I give you time. I make you give deadlines. I'm going to come back and check on you to see if it's done. And then we can go from there. I just - the write-up part, it has to just get me to the point where I just can't - I'm ready to fall out in the floor. I just can't do no more...My supervisor's gotten onto me a lot about it. [But I tell her], 'I see me in them. I see how I used to be'...But it took that one person to work with me to get me to where I am now. And I promised [then], when that one person grabbed me and sat me down and talked to me -- I promised that if I am ever in this seat I will make sure that I use the same techniques that she used with me.

**Making a bigger impact.** Participants had moved beyond just being concerned with their performance and their unit and were giving more thought to how they could use their new knowledge and skills to have a greater impact on the organization. Participants were making a bigger impact in several ways, including changing the culture in their office, mentoring new supervisors, expanding opportunities for their staff, and improving work procedures/protocols. For example, Wanda was mentoring one of her co-workers who had just gotten promoted to supervisor. She was also focused on building relationships and changing the culture in her office:

And one of the workers came - I guess he's their [the case manager's] vocal piece. But he came and we were talking and I was just talking about how - because we were doing CQI. I'd invited [some of the workers] into the CQI. And he was like -- some people don't want to come because they don't want a supervisor there. I said, 'they don't feel comfortable to talk?' He was like 'yeah, because they think they'll get in trouble.' I said, 'we have to get rid of that mentality.' I said, 'for us to develop as supervisors, for case

managers to develop, and for our agency to develop, we have to be able to have that transparency to where we are able to say hey, this is not going well. This is something we can change and not feel like I'm going to get in trouble'. So that's where it started...What I found is that people see their supervisor as the enemy. Almost like they don't feel like this is the person that's supposed to support me, the person that's going to take up for me and make sure they advocate for me, which is what we're supposed to do in our role. But we're supposed to be developing these people. How can you develop them if you don't have that type of relationship or if they don't feel open enough to say that this is how I feel; if they feel like -- I'm going to get in trouble if I say this? So one of the things - I just challenge myself --how can we rebuild that relationship. So I decided to take that on.

Bobbie was making an impact in different ways including being a support to a new supervisor in the agency:

We brought her in at a good moment so that she is supported, knows that I am here. She has a team. We can just lift her up and just carry her... I just want to be the best I can be here. I just want to learn everything I can learn so that I'm able to build my team and be a good supervisor, a manager, [and] a leader for the ones who are coming in. I don't want anybody to feel the way I felt when I came in. That's why my goal is to take her in and make sure she's okay.

She was also advocating for the case management staff:

I've asked if we can establish a relaxation room for the workers, because they need to relax. Nothing but just painting some relaxation colors with some little chairs, TV, music, whatever... We need to take care of our own. Because if we don't take care of them, they can't take care of our babies out there.

In her new role as an administrator, Donna had been successful in making a change to agency procedures to improve the workflow. She was also focused on continuing to apply what she learned in training and helping supervisors improve their transfer of learning from training:

I'm still, even as an administrator, trying to get back to where we make sure - and I try to reference it [what I learned in training], especially I definitely have to be conscious about it because I think that is something that we don't do. To make sure that we have almost a continuous transfer of learning because there's so much information that you get while you're in training. To come back and say that you're going to apply everything as soon as you get back, that doesn't happen. And what you'll find is that over time -- I mean I still use my book. I was cleaning up two weekends ago and I was like oh, I got to bring this with me because I need to review this because there's some things in here that I'm not doing that I could be doing differently. And then I try to make sure as an administrator now that I introduce my team to that and kind of pull that out of them ---this is what you should be doing, that we're having those conversations about their different roles, because sometimes that's put on the back burner because of all the other stuff that we need to do.

### **Behavior Change Process: Stagnating**

Just as with the middle stage of change, there were some participants who were stagnating. These participants were not as settled in their new role. They were still waging some of the same battles as when they were fresh out of training. In some cases, there had been some initial actions taken to use what was learned in training, but these participants were not able to create sustained change in their performance. Rather than looking forward to their role and believing that it could work and be good, they had become disillusioned.

**Being disillusioned.** Participant disillusionment manifested in different ways. Some chose to exit the situation by moving to other positions or leaving the agency altogether. Others just remained stuck – not moving forward in their development but also not exiting. For example, Beverly’s disillusionment seemed centered around the difficulty she was having with performance management. In contrast to participants who were integrating, she was not able to achieve a fit between her personality and values and the work. Instead, she felt forced into various situations that she did not want to be in. Her disillusionment led to a change in attitude and increased disengagement from the work. She described how she had changed from being lenient to having a “zero-tolerance” policy:

There’s zero tolerance for anything. Either you’re going to give me my work or I’m going to the next action. I have no issue with writing people up anymore...Really, because I'm - I got tired of people - I felt like I was being used and I got tired of people lying to me, and then in the long run it would - no matter what, it'd always fall back on me. So I'm not about to continue to get blamed or get punished or anything like that for something that you're supposed to be doing, especially after we've had a conversation about this over and over again. That's not right. That's not fair.

Beverly also explained how she felt forced into micro-managing her staff:

I definitely micromanage now. I hate it. That's just so time-consuming to me and I don't feel like I should have to micromanage an adult. You come in here. We sit down every day for an hour. You're documenting in front of me. We're going through, making sure that you're putting it in the system right. We're following up. We have a to-do list every day. Such and such needs to get done off your list. The next day, we'll come back, you need to sign in before you leave and after you leave. It's two of them that I micromanage

heavy. Every day. Every day. Every single day I sit with them for at least a hour. Each one of them by themself. Because they're not going to do it.

Patricia's disillusionment stemmed primarily from the ongoing difficulties she had with her staff and her supervisor. From the very beginning of the process, she felt disconnected from her staff. This situation was still playing out almost a year after she completed training.

Yeah. It's a big disconnection. Because, like I said, it's still going on. They're still going to her... And it's the mentality. When you don't hold their hand or when you don't give them answers or when you don't do their work for them, they say you're not supportive. And then they go to your boss and they say – ‘well, she's not supportive. She's not this, not that’....It's personal with them. If my boss tells them the same thing [that I tell them] they'll complete it. And that's because they still are with my supervisor. And I keep telling them -- I said, ‘I can't do my job to my ability if you keep going to her. I can't. And you're not giving me the opportunity for you to do well with me’. Like I said, it's been a year now. And I tell them that. I tell them, I said, ‘give me the opportunity. I'm giving you the opportunity. So give it to me the same.’

Although disappointed and frustrated with her situation, in contrast to Beverly's reaction, Patricia appeared to be hunkering down:

I thought the first four months was going to be hard, but it's the whole year that's hard.... It makes me want to do my job even more. Sometimes I get a little stressful. We all do. But you can't give up. Because once you give up, it's going to be hard for you to get back to the point where you need to be. Because once you quit, you prove them right. My job is to make sure that I'm doing what I need to do. I'm not trying to prove anybody right or wrong but myself. And I'm not going to give you the benefit of the doubt. Because that's

what you're expecting. That's what you're waiting for.... I've thought about it [quitting] about four times. I'm not going to lie. But I never went backwards before. I don't want to. I'm not a quitter. So I'm going to fight this battle until I can't fight no more.

To summarize the experience of change during this period, 10 to 12 months post training participants in this case study continued along one of two paths. A majority of the participants were integrating most of their experiences. Their talk and actions were reflective of the competencies addressed in the supervisor training and they had made strides in their performance. These participants had a future orientation and were thinking about and acting on ways to make a greater impact on their staff and the organization. However, a subset of participants remained stagnant in their development. They were not making strides in their performance and their talk and actions were only distantly connected to trained supervisory competencies. These participants appeared to be disillusioned with their positions. Next, I present the themes that characterized the transfer influences during this period.

### **Influence on the Change Process: Managerial Support**

The data across each of the stages suggest the ongoing impact of supervision throughout the change process. During the late stage of change, the support and engagement of participants' direct supervisor continued to be a significant influence. In addition, the actions or inaction of upper management also impacted participants' performance efforts. It is likely upper management was always influential, but in the later stage participants engaged in more talk about this level of management. I can only hypothesize why this shift occurred. It could be that after being in their new role for almost a year, they were becoming more aware of higher level influences on their work.

**Supervisor interactions.** To add to the growing list of characteristics of a supportive supervisor, data from this stage revealed taking a team approach to management, valuing staff development, being honest, and allowing autonomy as important supervisor traits. Anna described how finally getting a supervisor (after the position had been vacant for some time) was helping her achieve integration:

She'll give a directive and let me figure it out. Or she'll say, 'well, what do you think you ought to do. You all tell me. You all should be the experts on this so you tell me what you think you should do and then we can go from there and see if it works'. And I like that because it makes me feel like I have some ownership in it at that point. And I can appreciate that....I love the fact that she lets me think on my own... And what I will say is I missed having a supervisor because having one, I have the support that I need. And so now I feel like I have somebody that I can go in at any time if I did have a question. Also, somebody who's allowing me to ride the bike without the training wheels.

Similarly, Wanda acknowledged how engaged supervision helped to enable her performance:

She's all about team and development. All about development. So if I tell her, 'Hey, Emily (pseudonym), I'm struggling in this area. Can I get you to help me out?' She will. She'll provide as many supports [as needed]. The biggest thing I could say about her is she leads by example. She's not one of those people that tells us this is what you should be doing and this is what you should do. She will do the exact - she's not - she's very hands-on. She's not too big to touch the work. She doesn't just make it like - oh, this is what y'all do. She's a part of our team just as much as we are. Most people don't even see their administrator. Ours - administrator is on the hall with us all day. Her door is

open. We come in and out all day long. So it's an open door policy. She wants to hear the voice of her team.

Julie, on the other hand, described the adverse effect of not having engaged supervision. Julie described the lack of coaching and feedback she had received, which contributed to her decision to leave her supervisory position for a different position in the agency:

I have not received much help with my development. No. You either going to make it or you're not. It's just do what we need to do. I get 50 emails of tasks -- do this and get it done. Just figure out how to do it. And then my supervisor is flipping back and forth -- she's in one program area and then she's in my program area; the other program area and then my program area... They just act like I -- No one's above reproach. Everybody needs to be supervised at some level all the time. I don't have anybody to ask, 'well, what do you do? How does this work? Or, let me bounce this off of you'. I don't have anybody to ask. And that's frustrating.

**Leadership from upper management.** Upper management can have a tremendous influence on employees' work performance motivation as well as their motivation to use knowledge and skills learned in training to improve their performance. Donna explained some of the things that had helped her maintain her progress as a supervisor, including how a change in upper management had changed the entire picture for her:

I think the leadership we have in place now. The changes that's been put in place. The people that's been here to support. I think a change in the message around that it's about our kids. So it's not that I got 50 cases -- I got 50 kids or 50 families that I need to be able to assess. So I think that's what it is. And

then feeling that you do have people around you that want to see you succeed, that assist in ensuring that you have the opportunity to be able to be successful...And so I think that that definitely was a change... Now, we're going to start to put things in place to support us making sure that we have at least a chance to win. But when you don't feel like that that's what's being done, it's almost – it feels hopeless in a sense. How do you want me to get through this when you're not giving me – or even looking at how you can support me to make sure that I'm successful. And so right now, I feel like we do have that...And I want to be a part of something great happening, something that's a great turnaround because I think that we can do it.

This positive perception of agency leadership is contrasted with the experiences of other participants who perceived a lack of engagement and support from upper management. Beverly described how she felt unsupported in her efforts to deal with staff performance problems. This situation likely contributed to her becoming disillusioned with the job:

We have met with upper management. We've met with my supervisor. We've met with the program director, and you don't care because you telling them the same thing you told me to my face that your documentation ain't never going to be in on time. That's your exact words to my supervisor and to your program director. Your stuff ain't never going to be in? Really? Okay... And then, nothing really happened. No consequences from leadership. After we had that conversation, no consequences from leadership. None whatsoever. So okay. Y'all not going to do nothing. It is what it is. I'm not going to stress myself about it.... you just can't take this stuff personal. You got a job to do. Do your job, support your staff, and at the end of the day, that's what it is. It's the end of the day.

Similarly, Patricia expressed concern about what she saw as upper management's inattention to the quality of staff being hired. Her concern was grounded in her perceptions about and interactions with the staff she supervised:

The supportive word is the new word for saying - because right before they said that they're not being supported, they say they don't want to be here anymore. As an administrator and beyond, it's not just about bodies. And right now, it's just about bodies. And that's why we try to keep them. If they don't want to be here, let's not keep them. Because they're going to mess up what we're trying to build. And what we're trying to build is case managers wanting to do the work, loving their job. Not just going with the motions, collecting a paycheck.

Despite having achieved significant accomplishments during her year in supervision, Julie was disappointed with upper management's indifference toward staff in general and their treatment of her specifically. Julie discussed the impact of being re-assigned to a different unit against her wishes and her decision to leave the county office for a different position in the agency:

I shouldn't be surprised because it's not the first time. It's not the second time. And not the third time that this has happened. They just - I was like y'all just tell me and I go. And it's been like that since I've been here and I was like I'm just asking you all to acknowledge it. So, it is what it is. I tried to make the best of it, but outside of the work, there are things internally that I was just not pleased and happy about and I wasn't going to continue to be supportive to the regime....I think people get stuck in thinking that people have to be here and I've never had that misconception...They can always go do

something else. Appreciate them when they're here...but be prepared for them to move on, especially if you can't offer them any incentives.

### **Influence on the Change Process: Job Attitudes**

The construct Motivation to Improve Work through Learning (MTIWL) in Holton's HRD Evaluation and Research Model (Holton, 2005) includes the concept of job attitudes (specifically job involvement and organizational commitment) as an influence on MTIWL. However, this construct is not included in the LTSI. Job involvement can be described as the psychological and emotional extent to which a person participates in his or her work, profession, and company beyond simply punching in, performing tasks, and punching out. Organizational commitment can be described as recognition with and devotion to an organization and the organization's focus or mission. Job attitudes were prominent in the participant narratives in this final phase. Participants' general feelings about their job, as expressed in sentiments such as "I love what I do," were certainly a part of their individual traits from the beginning of the study, but I included this factor in stage three because it was at that point I could connect their feelings to actions that demonstrate, or fail to demonstrate, job involvement and/or organizational commitment.

Donna's feelings about the job are reflected in her job involvement and the efforts she made to use what she learned in training and to continue learning on her own:

I love what I do. I love working with our families and I love being in a place where I have some understanding and knowledge about our work to help guide the work. This is not a job where - I've had those jobs before and I leave - you come to work and you're like -- oh, I do not want to go to work and I'm thinking of every reason to stay home. [But], I can eat, sleep, and drink this place... I research stuff where it pertains to my job

because I want to know. It's like almost having this thirst for this knowledge, making sure that we can move our work the right way because I really, really like what I do. And I think that - out of everything else, that's the resonating thing for me that keeps me going forward.

Despite her decision to “change seats” within the agency, Julie still had positive feelings about the work and remained committed to the organization:

I like working here. I love this job. I love this job. I really do. I love the work itself. And for the most part, I really enjoy supervision. I really have. I've enjoyed [my] people. I enjoyed working with my unit. I enjoyed the mentorship and seeing people who were going to quit or leave realize that they can do it, it is manageable, and they get excited about the work. I have enjoyed that... I just - I've - you can always transform and you can always do something else within this agency. If ever it gets to a point where you feel like this is not the place for me to be, there's always something else for you to do. There's always something else for you to do. So it was just kind of like okay, I can stay here – in this- and be miserable and want to -- I want to fix it. I want to make it better. But then, it was like -- or you can do what you said you were going to do. And move on and transition in your career and maybe you can make it better but from a different seat. You need to go to a different seat.

Wanda also demonstrated organizational commitment and was clear on her goals:

I don't want to leave the agency. I just want to see how I can utilize my skills better and really make an impact. I think that's my biggest thing. Am I impacting lives every day? Yes. To the level that I want to? No. This is what's driving my development efforts.

In contrast to the positive job attitudes of participants who were integrating, Beverly's feelings about the job were reflected in a lack of job involvement and organizational commitment:

I still have regrets. I don't think it was worth it. You can give me my cases back today and I'm okay. You can demote me right now and I'm okay. I don't like supervision. The experience and what I've learned was definitely worth it. I've learned a lot about this job, about the organization, about myself, what I can and cannot handle. I've learned a lot. So in that aspect, it was worth it. But when you really look at it, the work and the stress, it doesn't balance. It - and the pay, it doesn't balance. And on top of all the other negativity and drama and other issues that you got to deal with -- it wasn't worth it. I can just be simply okay managing my 12 cases, doing what I'm supposed to do, reporting to my supervisor, going to court and keeping it moving about my business...[I] just take it one day at a time. I'm not going to sit up here and say I [want to do] this and I want to be in this position. Because I don't. But I'm taking it for what it is. I do my job. It's a learning experience. It's only going to help me or make me better whether I work for this organization or not.

In summary, in the late stage of change, participants' experience with transfer and change continued to follow two different paths. The majority of participants were integrating their training experience with their experience on the job. Accepting their new state, developing the ability to adapt and do things their way, and making a greater impact on the organization were primary characteristics of their change experience. Other participants remained stagnant and exhibited signs of disillusionment with their jobs. This disillusionment resulted in some participants choosing to exit the role or the agency, others becoming disengaged or complacent,

and others engaging in various battles for control. As with the previous stages, participants experienced both catalysts and barriers to transfer. These centered around managerial support from direct supervisors and upper management and job attitudes that influenced participant motivation to use learning to improve their work performance.

### **Stage of Change Assessment**

At this point in the change process, 10 to 12 months post-training, if transfer of learning proceeded as hypothesized by TTM theory, participants may have reached the maintenance stage. That is, the desired behaviors that were the focus of the training may have been adopted and the ongoing use of the knowledge and skills may have contributed to recognizable improvement in job performance. The assessment of progress toward transfer from this training program is presented in Table 35. Half of the participants had reached the maintenance stage. This was an indicator of moderate transfer within this case study.

Table 35

#### *Late Stage of Change Assessment*

Competency Area	Number of Participants in Contemplation	Number of Participants in Preparation	Number of Participants in Action	Number of Participants in Maintenance
Administrative Supervision	0	2	2	4
Educational Supervision	1	1	2	4
Supportive Supervision	0	2	3	3

Note. No participants were in the precontemplation stage. Due to study attrition, late stage data was only available for 8 participants.

## CHAPTER SIX

### SUMMARY, CONCLUSIONS, AND IMPLICATIONS

The purpose of this study was to understand how individuals progress over time from having gained new knowledge and skills in training to achieving change in their work-related behavior and the factors that affect this change process. The study was guided by the following research questions:

1. How do adults involved in employer-sponsored training experience the process of individual work-related behavior change following training?
2. How do learning transfer system and other factors influence the behavior change process over time?

In this chapter, I present a study summary, present and discuss the conclusions drawn from the study, discuss implications for theory, research, and practice, and suggest areas for future research.

#### **Study Summary**

The recognition of a “transfer problem” in organizations led to a stream of research from various disciplines and a substantial learning transfer literature base. There has been quite a bit of success in identifying the factors that support and inhibit transfer; however, questions remain about the conditions under which the factors are most important to influencing changes in individual performance following training, including questions about the individual choices trainees make to attempt or not to attempt to apply their learning on the job. Also, the traditional view of transfer as a product or outcome measurable at a pre-determined time following training

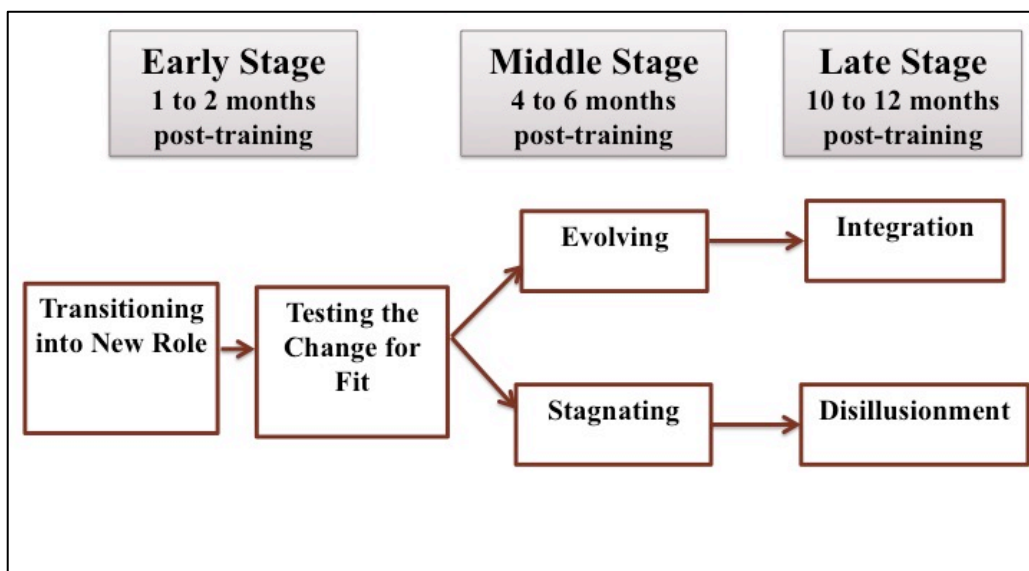
ignores the change process learners go through to reach the outcome that is being evaluated. In this study, I sought to add to the learning transfer knowledge base by examining transfer through the lens of individual behavior change.

To study this perspective of learning transfer, I combined the Learning Transfer System and the Transtheoretical Model (TTM) to form the study's conceptual framework. The learning transfer system (Holton et al., 2000) posits that transfer of learning is impacted by a system of secondary, motivational, ability-enabling, and work environment factors. The Learning Transfer System Inventory (LTSI) measures trainee perceptions of the factors hypothesized in the model. The TTM (Prochaska & DiClemente, 1982) hypothesizes that change is a process consisting of discrete stages an individual must move through to increase the likelihood of a successful change effort. Specific processes of change help to facilitate the movement through these stages.

The lack of empirical research focused on the individual change aspect of learning transfer in organizations pointed to the need for a qualitative inquiry. I chose case study, specifically a single instrumental case, as the specific qualitative methodology for the study. A state social service agency provided the study context. This was a highly turbulent organizational context with a high staff turnover rate that impacted numerous organizational conditions including organization structure, workload, and staff morale. A mandatory three-week supervisor training program served as the study case. Eleven individuals (10 women and 1 man) were recruited from three training cohorts of this program. The study participants served as embedded units of analysis. Data collection methods included the LTSI and three semi-structured interviews with each participant conducted over the course of one year. Scaled scores were produced for LTSI data. I used thematic analysis to analyze the qualitative data. I engaged in preliminary data analysis after each round of data collection using an inductive approach and

initial coding. In the second round of analysis, completed at the end of data collection, I used multiple coding methods and constant comparison to further analyze the data.

The analysis process led to identification of study themes related to each research question. Themes related to the process of change address research question one. Themes related to the factors that influenced the change process address research question two. I organized study findings into three stages: early stage (one to two months post-training); middle stage (four to six months post-training); and late stage (10 to 12 months post training). Figure 9 depicts this change process.



*Figure 9.* Process of Change Based on Study Themes

In the early stage, the process of change included transitioning into the new role of supervision and testing the change for fit. In the middle stage, participants chose one of two paths—some participants evolved, which included growing in confidence and competence. Other participants stagnated and were disconnected from their work and the transfer effort. In the late stage, participants who were evolving entered a stage of integration where they had accepted

their new position and all that it entailed and were beginning to make a greater impact on the organization. Other participants continued to stagnate and became disillusioned with the effort to improve and with their job. Several factors influenced this change process including: relationships with people (peers and supervisor), having the personal capacity for transfer, resistance to change in the work environment, having the opportunity to use knowledge and skills on the job, personality traits, leadership from upper management, and job attitudes.

### **Conclusions from the Study**

The findings presented in Chapter Five addressed each of the study's research questions. Now, I turn attention to conclusions drawn from the findings and my understanding of this case. In the sections that follow, I discuss study conclusions in relation to the relevant literature. I drew four conclusions from this study:

1. The process of individual behavior change is a viable way to conceptualize the transfer of learning from training.
2. The learning transfer system is a valid framework of the factors that impact transfer but does not provide the full picture when transfer is conceptualized as an individual change process.
3. Volition may be a factor in the critical juncture between the early and middle stage of change.
4. Readiness to engage in the change process may be a pre-requisite for achievement of work-related behavior change following training.

## **Conclusion One: The Process of Individual Behavior Change is a Viable Way to Conceptualize the Transfer of Learning from Training**

Study findings support the applicability of individual behavior change as a theoretical lens for viewing transfer and the use of individual behavior change models as frameworks for studying the transfer process. In this section, I discuss areas of convergence and divergence between study data and individual change theory and models. I also discuss how this study contributes to the empirical literature on the applicability of individual change models to training and staff development.

**Areas of convergence.** There are several similarities between individual behavior change models found in the literature and findings from this study. First, there are parallels between Lewin's (1947) foundational ideas about change and the experiences of study participants. As characterized by Lewin, the change process is activated when there is a disruption of the current equilibrium. For study participants, this happened when they were promoted to supervision. Their transition into supervision, a theme in the early stage of change, is similar to Lewin's concept of Unfreezing. As participants' change process continued, their experiences aligned with several constructs of individual behavior change models. For example, testing the change for fit, the other early stage theme, is consistent with the TTM contemplation and preparation stages. In this phase, participants were internalizing and testing the potential change. They were trying to make sense of what they learned in training in the context of their new world of supervision. This manifested as efforts to identify what was important from training, personalize the training to fit their personality and emerging supervisory identity, and engagement in trial and error. The data also reflect congruence with CBAM's Stages of Concern (SoC) construct. SoC theory posits that individuals have concerns of varying intensity and focus at different points in the change process.

As individuals move closer to adoption of the innovation, the type of concerns they have also changes (Anderson, 1997; Hall & Hord, 2011). Participants' talk about their change experiences, in many ways, reflected the types of concerns articulated in the CBAM. Figure 10 depicts connections between behavior change models and themes from the study data.

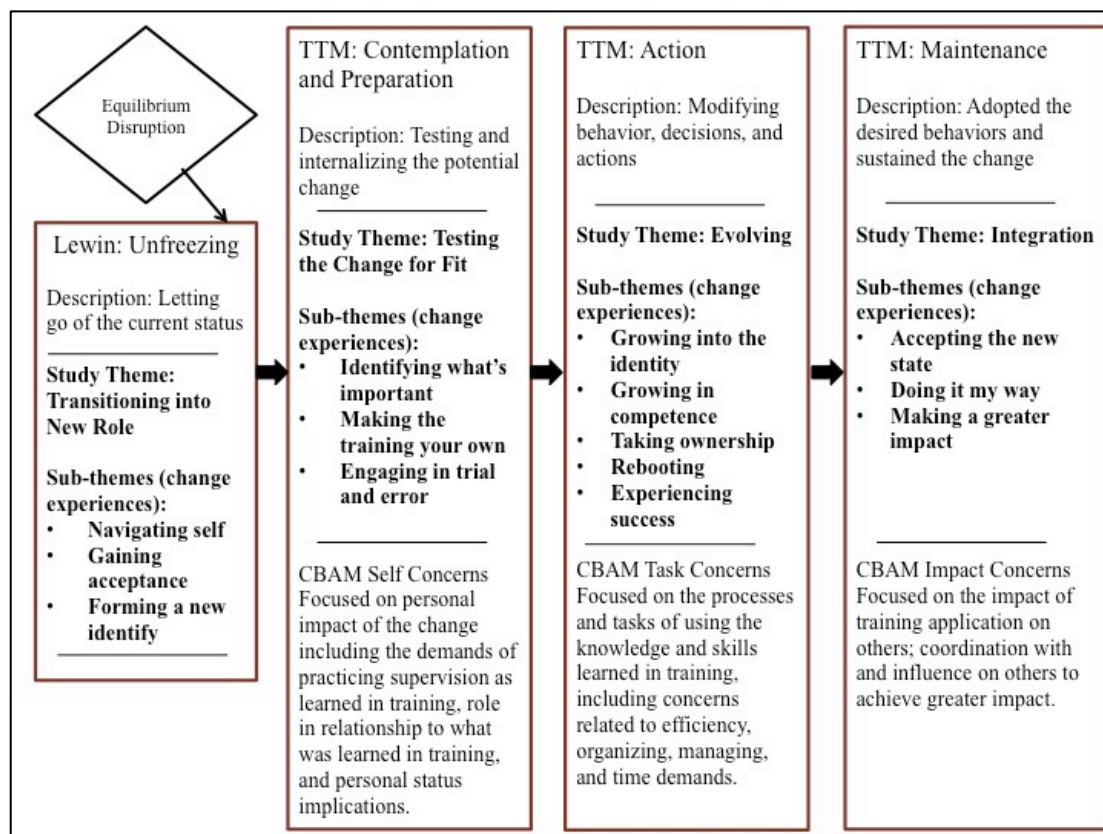


Figure 10. Integration of Change Models and Study Themes

Julie's early stage experiences are one example of how TTM and CBAM theories were reflected in the study data. Julie was apprehensive about administrative supervision (a competency from the training) and how practice in this area would impact her personal power in the organization. She believed her job effectiveness was tied to her personal relationships and positive reputation, and she totally rejected the idea of positional power. She perceived the training content promoted a more authoritarian form of supervision. This conflicted with her

belief system and personality, but she assumed this was the way she was required to act. Julie's first attempt at handling a critical administrative duty was disastrous. She explained, "After that first week, I may have lost a little personal power and I didn't like that. So, I cleaned it up. Made some apologies...Just forget all of that. Let's start over." Julie was internalizing and testing the potential change and she was concerned about the personal impact of the change on her identity and relationships. After a period of reflection and trial and error, Julie was able to adapt her application of training to better fit her personality and the type of supervisor she wanted to be. She went on to progress in her change effort and achieve a high level of job performance.

**Areas of divergence.** There is one notable area of divergence between study findings and individual behavior change models. The TTM depicts change as a process of forward progression. Although individuals may temporarily relapse and return to earlier stages (Prochaska et al., 1992), there is an underlying assumption that individuals will either progress through the stages or drop out of the change effort. However, data from this study suggests it is not just that people regress back to earlier behaviors. The lack of forward progress can also result in stagnation or being stuck without the capacity to move forward or enough prior knowledge or experience to make going back to the old way an option. This type of stagnation, which manifests as ineffectiveness in one's work, can eventually lead to disillusionment. Disillusionment can lead to more than just dropping out of the change effort or stopping attempts at training application. It can lead to dropping out of the job literally or mentally.

Beverly's experience is one example of this deviation from the normal progression of change. She became and remained stuck in her transfer and change effort. She believed her efforts at supportive supervision (a competency from the training) had only resulted in her being taken advantage of by her staff. The knowledge she gained in training did not appear to be

working for her, but she also did not have the managerial experience needed to identify and use other solutions. So was stuck and later became disillusioned. Although she did not quit her job, she essentially checked out and went into survival mode. Sentiments such as “At the end of the day, that's what it is. It's the end of the day,” indicated a coarsening of her attitude toward the job. Study findings suggest a model of change for learning transfer in organizations should consider both the path of forward progression toward desired job performance and possible deviation to a path leading away from desired job performance.

**Applicability of individual change models to training and development.** A small number of studies (e.g., Grant, 2010; Harris & Cole, 2007) have supported the potential applicability of individual change models in the context of training and development, as did my study. For example, Daniels et al. (2014) in their evaluation of a leadership development program, found their evaluation data reflected the contemplation, preparation, and action stages as defined in TTM theory. The results of my study were similar. Even fewer studies have used CBAM constructs in a training and development context. Findings from Tunks and Weller (2009) supported the hypothesized connections between CBAM SoC and Levels of Use (LoU) of an innovation in the context of transfer from a teacher development program. Data from my study revealed a similar pattern between participants’ concerns and stage of change for transfer. Table 36 is illustrative of studies using individual behavior change models in the context of training and development. I have added my study to this table to show its contribution to this literature base.

Table 36

*Selected Research: Individual Change in the Training and Development Context*

Authors and Publication Date	Sample	Training Type	Methods and Measures	Relevant Findings
Daniels et al. (2014)	9 physicians 13 nurses from Africa and the U.S.	Leadership training	Self-assessed leadership skills  Semi-structured interviews  Participant journals	Behavior change reflected contemplation, preparation, and action stages.
Grant (2010)	99 individuals from 14 organizations	Workplace coaching	Stage of change assessment  Self-efficacy, workplace well- being, and decisional balance Coaching skills assessment	Relationships between variables consistent with TTM theory. Individuals in early stages had lower self- efficacy and lower coaching skills than those in the latter stages.
Harris & Cole (2007)	70 managers from one organization	Leadership development	Stage of change scale  Attitudinal variables scales  Content and instruction evaluation scale	Relationships between variables consistent with TTM theory. Individuals in precontemplation had lower organizational commitment and more negative training reactions than participants in contemplation and action.
Tunks & Weller (2009)	4 teachers	Teacher professional development	Survey of Concerns  Levels of Use monthly observations and exit interview  Innovation Configurations checklist	Relationship between movement from self/task concerns to impact concerns and growth in Levels of Use over time. Contact with supportive staff helped to promote implementation; contact with staff who had not attended the program hindered implementation.

Carmichael (2016)	11 supervisors from one organization	Supervisory skills	Learning Transfer System Inventory  Semi-structured interviews, including stage of change assessment  Document review	Adoption of skills from training reflected TTM contemplation, preparation, action, and maintenance stages. Change process included path leading away from desired change.
-------------------	--------------------------------------	--------------------	---	---

### **Conclusion Two: The Learning Transfer System is a Valid Framework of the Factors that Impact Transfer But Does Not Provide the Full Picture**

Given participants' experience of change after training, I drew conclusions about the factors that facilitated or inhibited this process. In this section, I discuss areas of convergence and divergence between the LTSI data, the qualitative data, and the learning transfer literature. I then discuss how this study contributes to the empirical literature on the ability of the LTSI to predict transfer outcomes. Finally, I discuss how a temporal perspective of transfer influences provides a clearer picture than the snapshot in time provided by the LTSI.

**Areas of convergence.** There were several areas of convergence between participants' perception of transfer factors as measured by the LTSI at the beginning of the study and the factors I identified as themes in the qualitative data. For example, in the aggregated LTSI data, Opportunity to Use was a catalyst to transfer. Participants believed they would be provided with or be able to obtain the resources or job tasks that would allow them to use the knowledge and skills they learned in training. This proved to be true for most participants; however, the lack of opportunities to use knowledge and skills on the job became a major barrier to transfer for one participant, Patricia, and contributed to her inability to achieve the desired job performance. Opportunity to use learned skills on the job is well-supported in the transfer literature (e.g.,

Cromwell & Kolb, 2004; Gilpin-Jackson & Bushe, 2007; Grossman & Salas, 2011; Lim & Johnson, 2002; Wehrmann et al., 2002) as a factor that influences transfer outcomes.

Also, LTSI results showed Supervisor Support was perceived as a barrier to transfer. Participants believed their supervisors/managers would not support and reinforce the use of learning on the job. This proved to be true for the majority of participants. The extent and nature of supervisor interactions figured prominently in the qualitative data. Comments such as these reveal the lack of supervisor support for transfer: Malissa shared: “I thought we were going to spend a lot more time together, but we didn't...So, I kind of felt cheated...I just felt that I didn't get enough coaching and guidance.” Beverly commented: “Honestly, we have not talked about training or what I learned in training.” Mary was brutally honest: “I'm trying to figure out if she even knows I went to training.” The idea that supervisor support increases the likelihood of learning transfer and lack of this support negatively impacts transfer is supported through meta-analysis (Blume et al., 2010; Huang et al., 2015) and in individual studies (e.g., Chiaburu et al., 2010; Clarke, 2002; Cromwell & Kolb, 2004; Gilpin-Jackson & Bushe, 2007; Lim & Johnson, 2002).

Finally, LTSI results showed Personal Outcomes Negative and Personal Outcomes Positive as barriers to transfer. Participants believed there would not be consequences (positive or negative) for transfer of learning. This also proved to be true for these participants. The lack of consequences for transfer is consistent with the qualitative theme, Transfer Accountability. Issues with accountability were noted in the lack of pre-training expectations and in the training-practice gap noticed by some participants. For example, April noted the lack of accountability when she discovered she was using what she learned in training, but no one else was: “I talked to the other supervisors around here and nobody has unit expectations. I just felt like it must not be

being practiced if that was something to be noted. I just thought I was doing what was required of me.” Accountability, or the degree to which the organization expects learners to use trained knowledge and skills on the job and holds them responsible for doing so (Brinkerhoff & Montesino, 1995), has received some attention in the transfer literature, but there are few empirical studies examining the relationship between accountability and transfer outcomes. Available studies have found a significant relationship between different accountability mechanisms and transfer (Ahmed, Abdul Majid, Mohd Zin, Phulpoto, & Umrani 2015; Saks & Belcort, 2006; Saks & Burke, 2012; Taylor et al., 2005).

**Areas of divergence.** Personal Capacity for transfer was one interesting area of divergence. LTSI results showed participants perceived Personal Capacity to be a weak catalyst for transfer. That is, they believed they would have the time, energy, and mental capacity in their work lives to make changes required to transfer learning to job. However, the qualitative data revealed Personal Capacity was a significant barrier to participants’ transfer effort primarily because of conditions in the larger organization. Wanda shared a sentiment that was echoed by other participants: “A lot of the organizational changes that have come -- that has directly impacted the way that we do our day in and day out, but still having to be the leader and motivator and encourager and supporter and all of these things ... It has taken away from what I’m able to do.” The transfer literature supports Personal Capacity (e.g., Cromwell & Kolb, 2004; Gilpin-Jackson & Bushe, 2007; Clarke, 2002) as an important influence on transfer outcomes.

There were also areas of divergence related to individual trainee characteristics that influence transfer. The qualitative data revealed participants’ job attitudes, specifically their job involvement and organizational commitment, were factors that influenced the change process.

Job attitudes in this study ran the gamut from Anna's expression of: "I thoroughly love my job. I do. I have loved it for a very long time... This is a calling, definitely not a job" to Beverly's confession of: "I definitely do not see myself at [this agency] within the next two years, no, I definitely don't." Job attitudes are believed to impact Motivation to Improve Work Through Learning (Holton, 2005). For example, von Treuer, McHardy, and Earl (2013) found significant positive relationships between affective organizational commitment and job involvement and Motivation to Improve Work Through Learning (MTIWL). Peters et al. (2014) examined the relationship between job satisfaction, job involvement, and normative organizational commitment and transfer and job performance. Only job involvement showed a significant relationship to transfer and the relationship was negative. In other words, increased job involvement was associated with lower rates of transfer and job performance, which was an unexpected finding (Peters et al., 2014) that stands in contrast to Kontoghiorghes (2004) who found organizational commitment to have a positive relationship with transfer.

Themes from the qualitative data also identified trainee personality traits, particularly conscientiousness, as influences on the change process. Similar to job attitudes, Holton (2005) proposed inclusion of conscientious as one of the personality characteristics impacting MTIWL. Conscientiousness is the only personality trait that has consistently been associated with transfer in the literature (Blume et al., 2010; Huang et al., 2015). Although identified as themes in the qualitative data, job attitudes (job involvement and organizational commitment) and personality traits are not included in the learning transfer system or assessed by the LTSI.

**LTSI and predicted transfer outcome.** The LTSI has demonstrated criterion validity or the ability to predict transfer outcomes (e.g., Bates et al., 2000; Bates et al., 2007; Hutchins et al., 2013). LTSI results showed participants perceived more catalysts to transfer than barriers. This

suggests the likelihood of transfer of learning from this training. However, the actual results were less than stellar with only half of the participants reaching the maintenance stage (learning application that was sustained for six months and led to desired job performance). Despite this overall result, as described in the discussion of convergence between LTSI and qualitative data, several learning transfer system factors influenced participants' stage of change and the transfer outcome as would be expected based on the mean LTSI score. Table 37 is illustrative of studies that examined the ability of the LTSI to predict a transfer outcome. I have added my study to this table to show its contribution to this literature base.

Table 37

*Selected Research: LTSI Predictive of Transfer Outcomes*

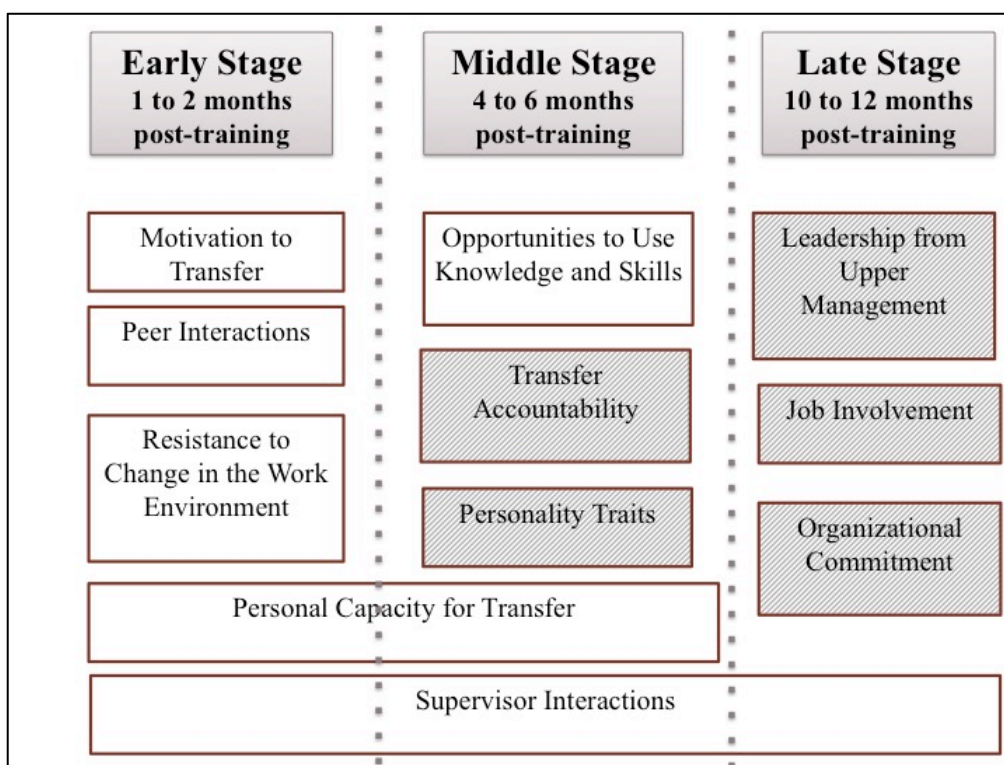
Author and Publication Date	Sample	Training Type	Methods and Measures	Relevant Findings
Bates, Holton, Seyler, & Carvalho (2000)	73 production operators	Certification in production unit standard operating procedures	Transfer Climate survey Supervisor ratings of trainee job performance	Content validity, peer support, change resistance, and supervisor sanctions significant predictors of performance ratings. Interpersonal support variables contributed most to performance ratings.
Bates, Kauffeld, & Holton (2007)	579 individuals representing 117 organizations	Various, including: technical; time, project, and process management; communications; and leadership	German version of LTSI Self-report of performance gains	Motivation to transfer, personal outcomes-positive, personal capacity, content validity, peer support, learner readiness significant transfer predictors; accounted for majority of variance in performance gains.

Mihalko, 2010	378 health care professional employed in a multi-center healthcare organization	Lean Six Sigma Green Belt	LTSI  Self-report of level of transfer (intention, initiation, partial transfer, or maintenance)	Transfer factors differed significantly along the transfer continuum. Supportive work environment more likely to reach maintenance stage. Motivation to transfer, self-efficacy, and transfer design strongly correlated with maintenance stage.
Carmichael (2016)	11 supervisors from one organization	Supervisory skills	LTSI  Semi-structured interviews to assess stage of change	Transfer factors differed across stages of change. Supervisor interactions influenced all stages. Personal capacity, peer interactions, resistance to change, and opportunity to use also influenced the change process.

---

**Factor influence across the stages.** Examining learning transfer as a process of individual change results in consideration of how different influences vary across the stages of the change. The LTSI only captured participants' perceptions of these influences at one point in time immediately following training, but findings based on the qualitative data contributed to a temporal perspective of transfer influences. This long-term view of transfer provided the opportunity to identify factors that impact transfer even months after the training program is completed. For example, in the later stage of change (10 to 12 months post-training) the level of engagement and leadership from upper management became an influence on participants' transfer and change effort. Upper management is not a factor included in the learning transfer system. Participants (e.g., Donna, Wanda and Owen) whose upper management was engaged and providing effective leadership, were hopeful and looked forward to using what they had learned to help improve organizational performance. Other participants (e.g., Beverly and Patricia) were frustrated by the lack of leadership from upper management and this contributed to their

disillusionment with the job. Similar to the TTM framework and the hypothesized connections between the stages of change and the processes of change, an understanding of the influences that most impact trainees at different times following training provides a clearer picture of the work-related behavior change process than is offered by current transfer models. Figure 11 displays the transfer influences identified in this study organized by stage. Although not identified as a theme in the qualitative data, Motivation to Transfer is included as a factor in the early stage of change. LTSI data revealed Motivation to Transfer ( $M= 4.31$ ;  $SD = .55$ ) as the strongest catalyst for transfer. Factors not included in the learning transfer system are shaded.



*Figure 11.* Factors That Influenced the Change Process by Stage

I offer a very tentative hypothesis about the connection between the change process and the factors that influence this process. In the process of work-related behavior change, the work environment remains a constant influence, but is most critical in the weeks immediately following training. Individual trainee characteristics and factors that influence a trainee's ability

to transfer increase in prominence four to six months after training. Ability factors lessen in importance approaching one year post-training, but individual characteristics still play a prominent role in the final achievement of desired work behaviors.

### **Conclusion Three: Volition May be a Factor in the Critical Juncture Between the Early and Middle Stage of Change**

The transition from the early to the middle stage of change is a critical point in the change process. At this point, participants took one of two paths. Some participants moved into an action-oriented phase where they were evolving while others began to stagnate and eventually became disillusioned. Given the different influences on the change process, I considered which of the identified factors could help to account for this important transition. Supervisor engagement stands out because of its importance throughout the process. As noted previously, the majority of the participants received little to no support from their supervisor. This was predicted by the LTSI and proved to be true based on the qualitative data; however, some of the participants still managed to evolve despite the lack of supervisory support and in the face of other organizational barriers to transfer. For example, Patricia had a very negative and conflicted relationship with her supervisor, Mary had very little to no supervisor support, and Beverly had a supervisor who was only minimally engaged. Patricia, Mary, and Beverly stagnated in their efforts. Donna and Julie also had limited to no supervisor support yet both of them evolved, sustained their transfer efforts, and managed to achieve the desired job performance. Although supervisor interactions were important throughout the change process as depicted in Figure 11, the differing transfer outcomes, despite similar experiences with supervision, suggest supervisor interaction is not the key factor in this transition point.

I considered the TTM processes of change that are hypothesized to have differing influence across stages. TTM hypothesizes that movement from preparation into action is facilitated through Self-liberation, which is characterized by choice and commitment to change the problem behavior, including belief in the ability to change (Prochaska et al., 1992). This speaks to making the initial decision to pursue change, but does not seem to explain what sustains action after the initial choice is made. Neither of the frameworks used in this study appear to account for this aspect of the change process.

In light of the study findings and identification of this pivotal point in the change process, I reviewed additional literature related to individual change and identified the Rubicon model of action phases (Heckhausen & Gollwitzer, 1987) and the concept of volition as a possible theory to account for this transition point. The Rubicon model of action phases distinguishes between the concepts of motivation and volition. Motivation is the desire to do something. Motivation leads to formation of intent but is not enough to move a person into and sustain action (Achtziger & Gollwitzer, 2008). Volition is the absolute commitment to achieving something. Volition provides the ability to cross over from deliberating a change or having behavioral intentions to acting on the change. Sustaining the change effort depends on the volitional strength (i.e., how strongly a person is committed to implementing the change). Volitional strength may increase when an individual encounters obstacles (Achtziger & Gollwitzer, 2008). Engaging volition is personal and requires having both head and heart engaged in achieving a desired goal.

The case level LTSI results revealed study participants entered the change process with a high level of motivation to transfer. But, motivation is not static—it is influenced by numerous fluctuating forces (Gegenfurtner et al., 2009). The model of action phases suggests it takes more than initial motivation to achieve change. It takes volition. In this study, it appeared some

participants made this shift from initial motivation to volition but others did not. Donna's thoughts and actions most reflected the concept of volition. She was a reflective practitioner and was constantly evaluating her own processes and looking for ways to move closer to her goals. Her head was in the change process. But her heart was also in it. Despite facing tremendous challenges in her work environment, her will to make it work only increased: "I just refuse to feel like I failed. I don't want to fail. I know I might not get it right the first time, but I'm going to keep trying." She attributed this to her resiliency, but this may also be volitional strength. Donna's sustained application of learned knowledge and skills resulted in a high level of performance and she was promoted again within a year.

The ability to engage volition may be the factor that influenced whether trainees followed a path that led them closer to the desired change or a path that ended in perpetual consideration of and talk about the change without the wherewithal to make it happen. However, volition is not included in the learning transfer system or any learning transfer model. I agree with Gegenfurtner et al. (2009) that there is a need for greater attention to the multiple dimensions and temporal perspective of motivation in learning transfer. This includes motivational–volitional processes.

**Conclusion Four: Readiness to engage in the change process may be a pre-requisite for achievement of work-related behavior change following training.**

The variance in study participants' thought processes, attitudes, coping mechanisms, and transfer outcomes suggested there were individual differences among these participants not accounted for in the demographics of gender, age, education, years of work experience, or even work site location. Some participants exhibited a level of developmental maturity not displayed in other participants. These less mature participants appeared unready, developmentally, to

engage in the intense change process in which they found themselves. Readiness to engage in the change process speaks to trainee readiness to experience the difficulty of creating change in their work behaviors following training, to have their way of thinking confronted, and to effectively handle challenges and setbacks that occur along the way. This is different from Learner Readiness (Holton et al., 2000) identified as a factor in the learning transfer system. Defined as the extent to which individuals are prepared to enter and participate in training, Learner Readiness seems to focus on readiness to engage in the learning experience, including the importance of trainees knowing why they need to learn something before learning it. I contend that being ready to learn is not the equivalent of being ready to change as a result of what you learned, particularly if accomplishing the change will require a shift in or abandonment of closely held schemas.

To attempt to understand readiness to engage in the change process in light of the study findings, I considered the adult development literature. Constructive development theory is one possible framework for conceptualizing readiness to engage in the change process. Constructive development theory focuses on growth and elaboration of a person's ways of understanding the self and the world and how these meaning systems evolve over time. Kegan, in his model of adult development, promoted the idea of three levels of mental complexity in adults (Kegan & Lahey, 2009). Adults progress from a lower level of mental complexity where their way of understanding self and the world is based on the social environment to the highest level where they can not only think independent of social influences but can also look inward to question and potentially transform their own ideologies. The rate of progression through these levels varies for each person and is largely determined by life experiences. As a result, a person's age does not predict his or her developmental level (Kegan & Lahey, 2009). Consequently, a common

situation in the workplace may be viewed differently depending on the level of development of those involved. This impacts individual actions and has ramifications for organizational behavior (Kegan & Lahey, 2009).

The framework of Leadership Development Level (LDL) promoted by Eigel and Kuhnert (2005) is one application of constructive development theory in management development. LDLs are developmental levels of maturity that shape the mental and moral capacities of a leader. LDLs range from an overly simplistic, concrete view of the world where leaders think it is their way or no way to a multiple perspective view of the world where leaders recognize the limitations of their thinking and are open to considering other ways of thinking and being. There is a potential correlation between LDL and leader performance/effectiveness (Eigel & Kuhnert, 2005).

Although assessment of development or LDL was not a part of this study, I found indications of the different LDLs in study participants' thinking and behavior. For example, participants viewed personnel problems, a topic covered in training, very differently although they all heard the same message about progressive discipline. Patricia's view of her self and the world was reflective of a lower LDL. For her, supervision was black and white. There were rules and she expected others (her peers, subordinates, and supervisor) to play by those rule. With employee discipline, Patricia was quick to use formal written reprimands. This was almost a first line of defense for her. Patricia stagnated in her transfer effort and her work performance suffered as a result. In contrast, Wanda and Bobbie both considered formal reprimands to be a last resort. They were able to make decisions on their own about when to use this tool and they based their decisions on their own values and beliefs. Their perspective was more in line with a higher LDL. Wanda and Bobbie successfully transferred much of what they learned in training to

their work and were performing well in their jobs. The study finding suggested some participants had the mental maturity that would support their readiness to engage in the change process following training but others did not. As noted by Kegan (Kegan & Lahey, 2009), a gap exists when individual mental complexity does not equal the complexity of the demands put upon the individual. When this happens, the individual is in over his or her head.

### **Proposed Model of Learning Transfer as an Individual Behavior Change Process**

Study findings combined with the transfer of learning and change literatures lead to a proposed model of learning transfer as an individual change process (Figure 12). I hypothesize that work-related behavior change following training begins with a disruption in the status quo that requires attainment of new knowledge and skills through training. This disruption leads to a period of transitioning during which trainees reflect on what the new state means for them as individuals. Trainees then contemplate how to, and if they can or will, apply what they learned to their work. They examine the potential change to be made and adapt what they learned to better fit their needs. Next, trainees reach the critical juncture point that will take them in one of two directions – either they will continue to work toward training application and adapt to the challenges they encounter during this evolutionary period, or they will follow a path of stagnation where they become thwarted in their efforts. I posit that volition is an important factor in determining which path trainees will take and whether they will persist in their efforts. Finally, those who make it through the evolution process are able to integrate their different experiences (formal training, informal learning, social learning, work experiences) and achieve the desired job performance. At this stage, trainees' learning application is also beginning to impact the organization as a result of their individual performance and likely job involvement and organizational commitment. It is at this point individual learning and change has the potential to

help drive organizational change and performance, which is the ultimate goal of the investment in training and staff development.

Other scholars (Burke & Hutchins, 2008; Foxon, 1993) signaled issues related to the temporal nature of transfer in their models. Burke and Hutchins (2008) suggested transfer interventions are not time bound and transfer planning and interventions should go beyond the generally accepted before, during, and after training taxonomy. Instead, support for transfer should be an iterative and pervasive process throughout the training design process. Foxon's (1993) conceptualization of transfer as a staged process is most congruent with my proposed model. In Foxon's model, this staged process begins with transfer intentions formed at the end of the training course and proceeds through the stages of transfer initiation and partial transfer to reach transfer maintenance. Transfer research using this staged model of transfer is rare. This study and proposed model might serve to refocus attention on transfer as a developmental process.

Results from the LTSI and themes in the qualitative data support the organizational and individual factors in this proposed model. The model includes factors found in the learning transfer system as well as factors not found in the learning transfer system that were prevalent in the qualitative data (indicated by shaded boxes). Viewing learning transfer through an individual change lens results in differing influence of these factors during the change process. Some factors are influential across multiple stages, whereas some factors are influential for a period and then wane as other factors become more influential. Finally, in this model, I propose that readiness to engage in the change process, or whether or not trainees have the needed developmental maturity, will impact trainees' success at navigating these stages, transitions, and influences.

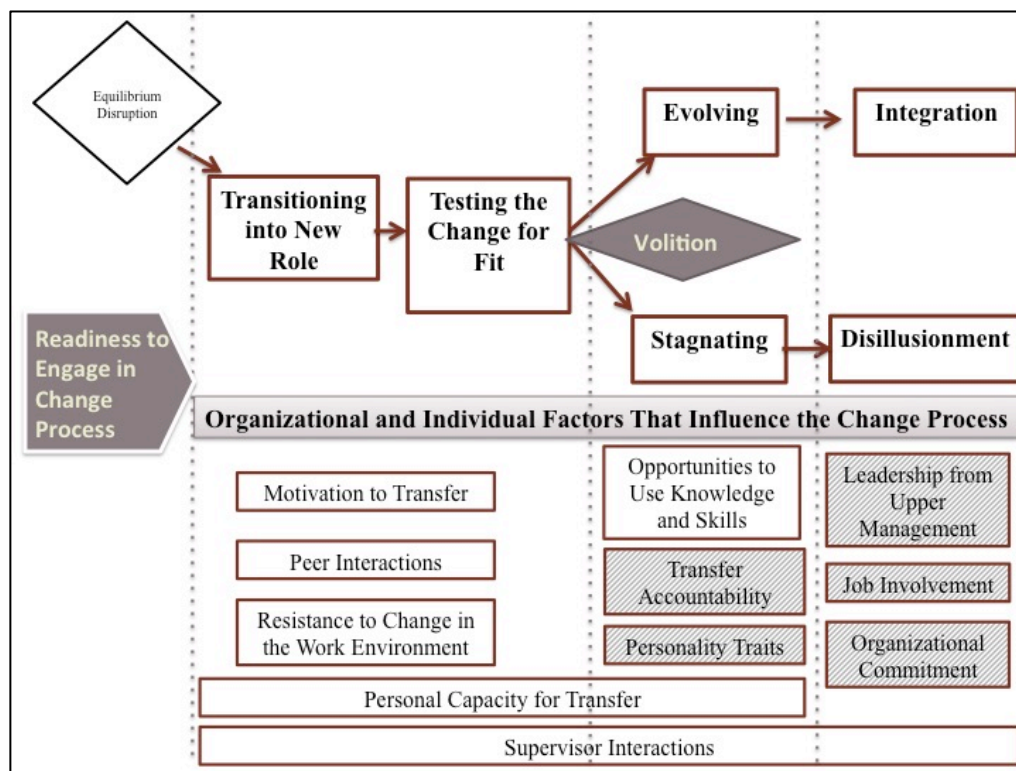


Figure 12. Proposed Model: Learning Transfer as an Individual Behavior Change

### Study Limitations

Limitations that potentially influenced study findings included the extent of triangulation I was able to accomplish within the study, diversity within the study sample, and participant attrition. First, methodological triangulation was attempted through the multiple data collection methods used in the study: participant observation in the classroom, the LTSI, individual interviews, and documents. Few learning transfer studies have combined assessment of learning transfer factors through a quantitative measure with exploration of the factors using qualitative methods. This was a particular strength of this study. However, I did not receive as many documents as I would have liked to support the data gained through interviews. I was limited to documents trainees had created themselves or could easily access. Other organizational documents (e.g., quality assurance reviews, supervisor conference notes) could have helped to

confirm trainee performance, but were not available to me. Also, data source triangulation could have added to the validity of study findings. Collecting data from participants' supervisors and subordinates may have helped to confirm or provide different perspectives on participants' reports; however, this was not feasible for this unfunded study where I was the sole researcher.

Second, the use of purposeful sampling and the established timeframe for recruitment may have limited study findings. Although all participants met the established study criteria, the participant pool was limited to individuals enrolled in the supervisor training during a specific period of time. Agency hiring needs resulted in classes that were mostly filled with employees from metropolitan areas. Consequently, my study sample also included mostly metropolitan area supervisors. This pool may not have been fully representative of the organization's supervisory staff. Although the group was not as diverse as I would have liked, having multiple contacts with participants over time allowed me to develop a deep understanding of their contexts and experiences that would not have been possible without this sustained engagement.

Finally, attrition may have impacted study findings. As a result of the research design, I knew attrition was likely. I began the study with 11 participants. All of them remained in the study through the second round of interviews, which did not occur until four to six months after the training. The final round of interviews, conducted 10 to 12 months post-training, included eight participants. Not having late stage data on three participants was not optimal, but I believe the impact on study findings was minimal. Despite these limitations, the use of multiple data collection methods and multiple interactions with study participants over the course of almost a year was a significant strength of this study and is a rare occurrence in learning transfer research.

### **Implications for Learning Transfer Theory, Research, and Practice**

Study findings suggest a need for better understanding of individual motivations and personality traits that impact the transfer process. Explaining individual behavior in the context of learning transfer requires the integrated use of multiple theories. This is consistent with HRD's multidisciplinary nature (McGuire & Cseh, 2006; Swanson & Holton, 2001). Study findings point to the criticality of individuals and their capacity to act on what they learned in training and sustain action in the face of challenges. A focus on theory that can help to explain what prompts trainees to move from inaction to action and to sustain their efforts at transfer would be beneficial to building transfer theory. I proposed volition as a possible factor in the change process. Adult development theory and mental complexity is another potential area to explore and could help to establish whether and to what extent a trainee's developmental level impacts ability to achieve work-related behavior change following training. Kegan and Lahey (2009) pointed to the growing amount of research connecting mental complexity to work performance. This theory base may also hold promise for creating a better understanding of the learning transfer process in organizations.

Viewing transfer through an individual behavior change lens also has implications for the way researchers operationalize and measure transfer outcomes. Application of change theories suggest accurate assessment of transfer outcomes in research requires a much greater lag time between the training intervention and transfer assessment than what is traditionally seen in the literature, especially if the training intervention involves complex, open skills. Also, researchers should consider using multiple measures of transfer. For example, researchers might consider using a theory of change approach (Watkins et al., 2011) to create measures for short-term, intermediate, and long-term outcomes. This view of transfer will require researchers to move

away from the one and done measures of transfer as these may not tell the entire story and may result in a lower rate of transfer than is actually occurring.

Study findings also have several implications for practice. First, there are implications for how HRD practitioners plan, implement, and evaluate management training. Donna, one of the participants, used the term “continuous transfer of learning” to explain her change experience: “Because there’s so much information you get while you’re in training, to come back and say you’re going to apply everything as soon as you get back -- that doesn’t happen. What you’ll find is that [it happens] over time.” Participants necessarily selected key content to apply at different times as they worked their way into the change and moved closer to the desired work behaviors. This study helped to make clear that transfer of learning is a long-term developmental process. When examining the effectiveness of management training, learning transfer cannot be separated from the more comprehensive process of staff development, which may include growth and expansion of expertise beyond the present job requirements and development related to staff members’ career path. Second, this temporal view of transfer and transfer influences has implications for the way HRD practitioners intervene to improve transfer in their organizations and creates the possibility of matching transfer interventions to trainee stage of change. This would require an assessment to determine where trainees were in the process of adopting the skills learned in training. For example, trainees in the early stage of change who are still focused on the conditions that prompted the need for training or attempting to find the right fit for their new knowledge and skills primarily need a supportive work environment in which they can safely explore the change and receive encouragement and support for their efforts. Trainees who have crossed over into action and are committed and actively working on change need to have varied and numerous opportunities to practice the knowledge and skills learned in training. They

need work tasks and practice opportunities that push them and challenge their thinking, and require them to reach back to what they learned in training to be successful. Participants in this stage also need to be held accountable for training application and to know their efforts will be recognized. This approach to learning transfer interventions is not a simple proposition and would likely require a significant organizational investment. Therefore, this approach may be best used with ongoing training programs, training that is critical to a larger organizational change effort, or development programs that involve the training and transfer of open skills. Third, study findings have implications for training evaluation in organizations. It is frequently said that what gets measured gets done. What gets evaluated, tracked, or assessed sends a message about what is important to the organization. During the member checking process, several study participants shared how engaging in the study helped to reinforce their learning and made them more conscious of the relationship between their actions and what they learned in training. Similarly, evaluating behavior change following training puts a greater emphasis on accountability for transfer (Burke & Saks, 2009; Saks & Burke, 2012). Similar to the recommendation for transfer researchers, training evaluators should consider evaluation methods that include multiple measures of behavior change taken at different points in time.

### **Recommendations for Future Research**

Viewing learning transfer as a staged process leads to several new research areas for HRD scholars. First, researchers could build upon this study and continue to examine the applicability of individual behavior change theories and models to training and training transfer. This line of inquiry should lead to further refinement of the concepts and relationships examined in this study. For example, I focused primarily on the stages of the change process. However, the TTM also includes processes of change believed to move participants through the stages.

Research examining these specific processes could add an additional dimension to the use of change theories in transfer research, including the development, implementation, and efficacy of stage-matched interventions for transfer. Also, future research could be used to test different approaches to the stage of change assessment, including the development of a stage of change instrument specific to learning transfer. Second, researchers could examine the role of informal learning in the transfer of learning from formal training. Data from this study suggest that what gets transferred may be influenced not just by what was learned in formal training, but also by what was learned informally while existing and acting in the socio-cultural context of the work environment. In this study, transfer involved more than just the simple use of segregated knowledge and skills from the identified training program. Instead, trainees took what they learned initially in training and combined that knowledge with informal learning and experiences in the workplace to achieve the desired work behavior and performance. Additional research could examine the influence of informal learning on transfer and change, including how informal learning serves to support or reinforce transfer from training and any differing outcomes between trainees who engaged in informal learning post-training and those who did not. Finally, researchers could examine the influence of professional commitment on transfer and change. Study data revealed job attitudes, specifically job involvement and organizational commitment, to be factors in the change process; however, study data also raises questions about the influence of professional commitment, which may be different from job attitudes. Some participants expressed a commitment to the profession of social work although they may not have had a strong commitment to the organization. Professional commitment may be a factor in learning transfer when learners have a distinct professional identity.

## References

- Achtziger, A., & Gollwitzer, P. M. (2008). Motivation and volition in the course of action. In J. Heckhausen & H. Heckhausen (Eds.), *Motivation and action* (2nd ed., pp. 272-295) Cambridge University Press.
- Adams, J., & White, M. (2005). Why don't stage-based activity promotion interventions work? *Health Education Research, 20*(2), 237-243.
- Aguinis, H., & Kraiger, K. (2009). Benefits of training and development for individuals and teams, organizations, and society. *Annual Review of Psychology, 60*, 451-474.
- Ahmed, U., Abdul Majid, A., Mohd Zin, M., Phulpoto, W., & Umrani, W. (2015). Role and impact of reward and accountability on training transfer. *Business and Economics Journal, 7*(1), 1-6.
- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior & Human Decision Processes, 50*(2), 179.
- Al-Eisa, A. S., Furayyan, M. A., & Alhemoud, A. M. (2009). An empirical examination of the effects of self-efficacy, supervisor support and motivation to learn on transfer intention. *Management Decision, 47*(8), 1221-1244.
- Alvarez, K., Salas, E., & Garofano, C. M. (2004). An integrated model of training evaluation and effectiveness. *Human Resource Development Review, 3*(4), 385-416.
- Anderson, S. E. (1997). Understanding teacher change: Revisiting the concerns based adoption model. *Curriculum Inquiry, 27*(3), 331-367.
- Anderson, S. E. (2010). Moving change: Evolutionary perspectives on educational change. In A. Hargreaves, M. F. Lieberman & D. Hopkins (Eds.), *Second international handbook of educational change* (pp. 65-84). New York: Springer.

- Antle, B. F., Barbee, A. P., Sullivan, D. J., & Christensen, D. N. (2009). The effects of training reinforcement on training transfer in child welfare. *Child Welfare, 88*(3), 5-26.
- Armitage, C. J. (2009). Is there utility in the transtheoretical model? *British Journal of Health Psychology, 14*(2), 195-210.
- Awoniyi, E. A., Griego, O. V., & Morgan, G. A. (2002). Person-environment fit and transfer of training. *International Journal of Training and Development, 6*(1), 25-35.
- Axtell, C. M., Maitlis, S., & Yearta, S. K. (1997). Predicting immediate and longer-term transfer of training. *Personnel Review, 26*(3), 201.
- Bailey, D. B., & Palsha, S. A. (1992). Qualities of the stages of concern questionnaire and implications for educational innovations. *The Journal of Educational Research, 85*(4), 226-232.
- Baldwin, T. T., & Ford, J. K. (1988). Transfer of training: A review and directions for future research. *Personnel Psychology, 41*(1), 63-105.
- Barclay, S. R., Stoltz, K. B., & Chung, Y. B. (2011). Voluntary midlife career change: Integrating the transtheoretical model and the life-span, life-space approach. *Career Development Quarterly, 59*(5), 386-399.
- Barrick, M. R., & Mount, M. K. (1991). The big five personality dimensions and job performance: A meta-analysis. *Personnel Psychology, 44*(1), 1-26.
- Bates, R., & Coyne, T. H. (2005). *Effective evaluation of training: Beyond the measurement of outcomes*. Retrieved from ERIC database. (ED492371)
- Bates, R., Holton III, E. F., & Hatala, J. P. (2012). A revised learning transfer system inventory: Factorial replication and validation. *Human Resource Development International, 15*(5), 549-569.

- Bates, R. A., Holton III, E. F., & Seyler, D. L. (1997). Factors affecting transfer of training in an industrial setting. *Academy of Human Resource Development Annual Conference Proceedings*, Bowling Green, OH. 345-359.
- Bates, R. A., Holton III, E. F., Seyler, D. L., & Carvalho, M. A. (2000). The role of interpersonal factors in the application of computer-based training in an industrial setting. *Human Resource Development International*, 3(1), 19-42.
- Bates, R., & Holton III, E. F. (2004). Linking workplace literacy skills and transfer system perceptions. *Human Resource Development Quarterly*, 15(2), 153-170.
- Bates, R., Kauffeld, S., & Holton III, E. F. (2007). Examining the factor structure and predictive ability of the German-version of the learning transfer systems inventory. *Journal of European Industrial Training*, 31(3), 195-211.
- Bates, R., & Khasawneh, S. (2005). Organizational learning culture, learning transfer climate and perceived innovation in Jordanian organizations. *International Journal of Training & Development*, 9(2), 96-109.
- Baumgartel, H. J., Reynolds, J. I., & Pathan, R. Z. (1984). How personality and organisational climate variables moderate the effectiveness of management development programmes: A review and some recent research findings. *Management & Labour Studies*, 9(1), 1-16.
- Baumgartel, H., & Jeanpierre, F. (1972). Applying new knowledge in the back-home setting: A study of Indian managers' adoptive efforts. *Journal of Applied Behavioral Science*, 8(6), 674-694.
- Blume, B. D., Ford, J. K., Baldwin, T. T., & Huang, J. L. (2010). Transfer of training: A meta-analytic review. *Journal of Management*, 36(4), 1065-1105.

- Boswell, R. A. (2011). A physician group's movement toward electronic health records: A case study using the transtheoretical model for organizational change. *Consulting Psychology Journal: Practice and Research*, 63(2), 138-148.
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3, 77-101.
- Bridge, C. A. (1995). *The progress of implementation of the K-3 primary program in Kentucky's elementary school*. Paper presented at the annual meeting of the American Educational Research Association. San Francisco.
- Bridges, W. (1991). *Managing transitions: Making the most of change*. Larkspur, CA: William Bridges and Associates.
- Bridle, C., Riemsma, R. P., Pattenden, J., Sowden, A. J., Mather, L., Watt, I. S., & Walker, A. (2005). Systematic review of the effectiveness of health behavior interventions based on the transtheoretical model. *Psychology & Health*, 20(3), 283-301.
- Brinkerhoff, R. O., & Montesino, M. U. (1995). Partnerships for training transfer: Lessons from a corporate study. *Human Resource Development Quarterly*, 6(3), 263-274.
- Broad, M. L. (2005). *Beyond transfer of training: Engaging systems to improve performance*. San Francisco: Pfeiffer.
- Broad, M. L., & Newstrom, J. W. (1992). *Transfer of training: Action-packed strategies to ensure high payoff from training interventions*. Reading, MA: Addison-Wesley.
- Brown, K. G., & Charlier, S. D. (2013). An integrative model of e-learning use: Leveraging theory to understand and increase usage. *Human Resource Management Review*, 23(1), 37-49.

- Brown, K. G., & Sitzmann, T. (2011). Training and employee development for improved performance. In S. Zedeck, & S. Zedeck (Eds.), *APA handbook of industrial and organizational psychology, vol 2: Selecting and developing members for the organization*. (pp. 469-503). Washington, DC: American Psychological Association.
- Brug, J., Conner, M., Harré, N., Kremers, S., McKellar, S., & Whitelaw, S. (2005). The transtheoretical model and stages of change: A critique. Observations by five commentators on the paper by Adams, J. and White, M. (2004) why don't stage-based activity promotion interventions work? *Health Education Research, 20*(2), 244-258.
- Burke, L. A., & Baldwin, T. T. (1999). Workforce training transfer: A study of the effect of relapse prevention training and transfer.. *Human Resource Management, 38*(3), 227.
- Burke, L. A., & Hutchins, H. M. (2007). Training transfer: An integrative literature review. *Human Resource Development Review, 6*(3), 263-296.
- Burke, L. A., & Hutchins, H. M. (2008). A study of best practices in training transfer and proposed model of transfer. *Human Resource Development Quarterly, 19*(2), 107-128.
- Burke, L. A., & Saks, A. M. (2009). Accountability in training transfer: Adapting Schlenker's model of responsibility to a persistent but solvable problem. *Human Resource Development Review, 8*(3), 382-402.
- Burke, R. V., Guck, T. P., Robinson, M. L., Powell, W., & Fichtner, L. O. (2006). Overcoming resistance to implementing classroom management strategies: Use of the transtheoretical model to explain teacher behavior. *Research in the Schools, 13*(2), 1-12.
- Burnes, B. (2004). Kurt Lewin and the planned approach to change: A re-appraisal. *Journal of Management Studies, 41*(6), 977-1002.

- Campbell, M. K., DeVellis, B. M., Strecher, V. J., Ammerman, A. S., DeVellis, R. F., & Sandler, R. S. (1994). Improving dietary behavior: The effectiveness of tailored messages in primary care settings. *American Journal of Public Health, 84*(5), 783-787.
- Cannon-Bowers, J., Salas, E., Tannenbaum, S. I., & Mathieu, J. E. (1995). Toward theoretically based principles of training effectiveness: A model and initial empirical investigation. *Military Psychology, 7*(3), 141-164.
- Chamblee, G. E., Slough, S. W., & Wunsch, G. (2008). Measuring high school mathematics teachers' concerns about graphing calculators and change: A year long study. *Journal of Computers in Mathematics and Science Teaching, 27*(2), 183-194.
- Charmaz, K. (2011). A constructivist grounded theory analysis of losing and regaining a valued self. In *Five ways of doing qualitative analysis: Phenomenological psychology, grounded theory, discourse analysis, narrative research, and intuitive inquiry* (pp. 165-204). New York & London: The Guilford Press
- Chen, H., Holton III, E. F., & Bates, R. A. (2005). Development and validation of the learning transfer system inventory in Taiwan. *Human Resource Development Quarterly, 16*(1), 55-84.
- Cheng, E. W. L., & Hampson, I. (2008). Transfer of training: A review and new insights. *International Journal of Management Reviews, 10*(4), 327-341.
- Cheung, D., Hattie, J., & Ng, D. (2001). Reexamining the stages of concern questionnaire: A test of alternative models. *Journal of Educational Research, 94*(4), 226.
- Chiaburu, D. S., & Lindsay, D. R. (2008). Can do or will do? the importance of self-efficacy and instrumentality for training transfer. *Human Resource Development International, 11*(2), 199-206.

- Chiaburu, D. S., & Marinova, S. V. (2005). What predicts skill transfer? An exploratory study of goal orientation, training self-efficacy and organizational supports. *International Journal of Training & Development*, 9(2), 110-123.
- Chiaburu, D. S., Van Dam, K., & Hutchins, H. M. (2010). Social support in the workplace and training transfer: A longitudinal analysis. *International Journal of Selection and Assessment*, 18(2), 187-200.
- Chinman, M., Hannah, G., Wandersman, A., Ebener, P., Hunter, S., Imm, P., & Sheldon, J. (2005). Developing a community science research agenda for building community capacity for effective preventive interventions. *American Journal of Community Psychology*, 35(3), 143-157.
- Chinman, M., Hunter, S. B., Ebener, P., Paddock, S. M., Stillman, L., Imm, P., & Wandersman, A. (2008). The getting to outcomes demonstration and evaluation: An illustration of the prevention support system. *American Journal of Community Psychology*, 41(3-4), 206-224.
- Chinman, M., Tremain, B., Imm, P., & Wandersman, A. (2009). Strengthening prevention performance using technology: A formative evaluation of interactive getting to outcomes®. *American Journal of Orthopsychiatry*, 79(4), 469-481.
- Clarke, N. (2002). Job/work environment factors influencing training transfer within a human service agency: Some indicative support for Baldwin and Ford's transfer climate construct. *International Journal of Training & Development*, 6(3), 146-162.
- Colquitt, J. A., LePine, J. A., & Noe, R. A. (2000). Toward an integrative theory of training motivation: A meta-analytic path analysis of 20 years of research. *Journal of Applied Psychology*, 85(5), 678-707.
- Corbin, J., & Strauss, A. (2008). *Basics of qualitative research* (3rd ed.). Los Angeles: Sage.

- Cowan, C., Goldman, E. F., & Hook, M. (2010). Flexible and inexpensive: Improving learning transfer and program evaluation through participant action plans. *Performance Improvement, 49*(5), 18-25.
- Creswell, J. W. (2009). *Research design: Qualitative, quantitative, and mixed methods approaches* (3rd ed.). Thousand Oaks, CA: Sage.
- Creswell, J. W., & Miller, D. L. (2000). Determining validity in qualitative inquiry. *Theory into Practice, 39*(3), 124.
- Cromwell, S. E., & Kolb, J. A. (2004). An examination of work-environment support factors affecting transfer of supervisory skills training to the workplace. *Human Resource Development Quarterly, 15*(4), 449-471.
- Daniels, J., Farquhar, C., Nathanson, N., Mashalla, Y., Petracca, F., Desmond, M., . . . O'Malley, G. (2014). Training tomorrow's global health leaders: Applying a transtheoretical model to identify behavior change stages within an intervention for health leadership development. *Global Health Promotion, 21*(4), 24-34.
- Danielson, C. C., & Wiggenhorn, W. (2003). The strategic challenge for transfer: Chief learning officers speak out. In E. F. Holton III, & T. T. Baldwin (Eds.), *Improving learning transfer in organizations* (pp. 16-38). San Francisco: Jossey-Bass.
- Devos, C., Dumay, X., Bonami, M., Bates, R., & Holton III, E. F. (2007). The learning transfer system inventory (LTSI) translated into french: Internal structure and predictive validity. *International Journal of Training & Development, 11*(3), 181-199.
- DiClemente, C. C. (1981). Self-efficacy and smoking cessation maintenance: A preliminary report. *Cognitive Therapy and Research, 5*, 175-187.

- DiClemente, C. C. (1986). Self-efficacy and the addictive behaviors. *Journal of Social and Clinical Psychology, 4*, 302-315.
- DiClemente, C. C., & Hughes, S. O. (1990). Stages of change profiles in outpatient alcoholism treatment. *Journal of Substance Abuse, 2*(2), 217-235.
- DiClemente, C. C., & Prochaska, J. O. (1982). Self-change and therapy change of smoking behavior: A comparison of processes of change in cessation and maintenance. *Addictive Behaviors, 7*(2), 133-142.
- DiClemente, C. C., Prochaska, J. O., Fairhurst, S. K., Velicer, W. F., Velasquez, M. M., & Rossi, J. S. (1991). The process of smoking cessation: An analysis of precontemplation, contemplation, and preparation stages of change. *Journal of Consulting and Clinical Psychology, 59*(2), 295-304.
- DiClemente, C. C., Prochaska, J. O., & Gibertini, M. (1985). Self-efficacy and the stages of self-change of smoking. *Cognitive Therapy and Research, 9*(2), 181-200.
- Dobbs, R. (2004). Impact of training on faculty and administrators in an interactive television environment. *Quarterly Review of Distance Education, 5*(3), 183-194.
- Driskell, J. E., Willis, R. P., & Copper, C. (1992). Effect of overlearning on retention. *Journal of Applied Psychology, 77*(5), 615-622.
- Egan, T. M. (2008). The relevance of organizational subculture for motivation to transfer learning. *Human Resource Development Quarterly, 19*(4), 299-322.
- Egan, T. M., Yang, B., & Bartlett, K. R. (2004). The effects of organizational learning culture and job satisfaction on motivation to transfer learning and turnover intention. *Human Resource Development Quarterly, 15*(3), 279-301.

- Eigel, K. M., & Kuhnert, K. W. (2005). Authentic development: Leadership development level and executive effectiveness. In W. L. Gardner, B. J. Avolio, & F. O. Walumbwa (Eds.), *Authentic Leadership Theory and Practice: Origins, Effects and Development: Vol. 3. Monographs in Leadership and Management* (pp. 357-385). Amsterdam, Oxford, Elsevier JAI.
- Ellinger, A. D., Watkins, K. E., & Marsick, V. J. (2005). Case study research methods. In R. A. Swanson, & E. F. Holton III (Eds.), *Research in organizations: Foundations and methods of inquiry* (pp. 327-350). San Francisco: Berrett-Koehler.
- Elrod, P. D., & Tippett, D. D. (2002). The 'death valley' of change. *Journal of Organizational Change Management*, 15(3), 273-291.
- Facteau, J. D., Dobbins, G. H., Russell, J. E. A., Ladd, R. T., & Kudisch, J. D. (1995). The influence of general perceptions of the training environment on pretraining motivation and perceived training transfer. *Journal of Management*, 21(1), 1.
- Farr, J. L., & Middlebrooks, C. L. (1990). Enhancing motivation to participate in professional development. In S. S. Dubin (Ed.), *Maintaining professional competence: Approaches to career enhancement vitality, and success throughout a work life*. (pp. 195-213). San Francisco: Jossey-Bass.
- Fields, D. C. (2000). The impact of Gagné's theory on instructional design practice. In R. C. Richey (Ed.), *The legacy of Robert M. Gagné* (pp. 183-190). Syracuse, NY: U.S. Department of Education, Office of Educational Research and Improvement.
- Fitzpatrick, R. (2001). The strange case of the transfer of training estimate. *The Industrial-Organizational Psychologist*, 39(2), 18-19.

- Ford, J. K., & Weissbein, D. A. (1997). Transfer of training: An updated review and analysis. *Performance Improvement Quarterly*, *10*(2), 22-41.
- Ford, J. K., Yelon, S. L., & Billington, A. Q. (2011). How much is transferred from training to the job? The 10% delusion as a catalyst for thinking about transfer. *Performance Improvement Quarterly*, *24*(2), 7-24.
- Foxon, M. (1993). A process approach to the transfer of training. *Australian Journal of Educational Technology*, *9*(2), 130-143.
- Foxon, M. (1997). The influence of motivation to transfer, action planning, and manager support on the transfer process. *Performance Improvement Quarterly*, *10*(2), 42-63.
- Freeman, M., deMarrais, K., Preissle, J., Roulston, K., & St. Pierre, E. A. (2007). Standards of evidence in qualitative research: An incitement to discourse. *Educational Researcher*, *36*(1), 25-32.
- Fuller, F. F., & Bown, O. H. (1975). Becoming a teacher. In K. Ryan (Ed.), *Teacher education, 74th yearbook of the national society for the study of education* (pp. 25-52). Chicago, IL: University of Chicago Press.
- Gagné, R. M., & Foster, H. (1949). Transfer of training from practice on components in a motor skill. *Journal of Experimental Psychology*, *39*(1), 47-68.
- Gagné, R. (1985). *The conditions of learning and theory of instruction* (4th ed.). Fort Worth, TX: Holt, Rinehart & Winston.
- Gaudine, A. P., & Saks, A. M. (2004). A longitudinal quasi-experiment on the effects of posttraining transfer interventions. *Human Resource Development Quarterly*, *15*(1), 57-76.

- Gegenfurtner, A., Veermans, K., Festner, D., & Gruber, H. (2009). Motivation to transfer training: An integrative literature review. *Human Resource Development Review, 8*(3), 403-423.
- George, A. A., Hall, G. E., & Stiegelbauer, S. M. (2006). *Measuring implementation in schools: The stages of concern questionnaire*. Austin, TX: Southwest Educational Development Laboratory.
- George, A. A., Hall, G. E., & Uchiyama, K. (2000). Extent of implementation of a standards-based approach to teaching mathematics and students outcomes. *Journal of Classroom Interaction, 35*(1), 8-25.
- George, J. M., & Jones, G. R. (2001). Towards a process model of individual change in organizations. *Human Relations, 54*(4), 419-444.
- Georgenson, D. L. (1982). The problem of transfer calls for partnership. *Training & Development Journal, 36*(10), 75-78.
- Gilpin-Jackson, Y., & Bushe, G. R. (2007). Leadership development training transfer: A case study of post-training determinants. *Journal of Management Development, 26*(10), 980-1004.
- Gist, M. E. (1987). Self-efficacy: Implications for organizational behavior and human resource management. *Academy of Management Review, 12*(3), 472-485.
- Gist, M. E., Stevens, C. K., & Bavetta, A. G. (1991). Effects of self-efficacy and post-training intervention on the acquisition and maintenance of complex interpersonal skills. *Personnel Psychology, 44*(4), 837-861.
- Goldstein, I. L. (1974). *Training: Program development and evaluation*. Monterey, CA: Brooks/Cole.

- Goldstein, I. L. (1979). The pursuit of internal and external validity in the evaluation of training programs. *Public Personnel Management*, 8(6), 416-428.
- Goldstein, I. L., & Ford, J. K. (2002). *Training in organizations: Needs assessment, development, and evaluation (4th ed.)*. Belmont, CA US: Wadsworth/Thomson Learning.
- Grant, A. M. (2010). It takes time: A stages of change perspective on the adoption of workplace coaching skills. *Journal of Change Management*, 10(1), 61-
- Grant, A. M., & Franklin, J. (2007). The transtheoretical model and study skills. *Behaviour Change*, 24(2), 99-113.
- Grossman, R., & Salas, E. (2011). The transfer of training: What really matters. *International Journal of Training and Development*, 15(2), 103-120.
- Hall, G. E. (2013). Evaluating change processes: Assessing extent of implementation (constructs, methods and implications). *Journal of Educational Administration*, 51(3), 264-289.
- Hall, G. E., George, A. A., & Rutherford, W. L. (1979). *Measuring stages of concern about the innovation: A manual for use of the SoC questionnaire*. (ERIC Document Reproduction Service No. ED 147 342 No. 3032). Austin, TX: The University of Texas at Austin, Research and Development Center for Teacher Education.
- Hall, G. E., George, A. A. (1979). *Stages of concern about the innovation: The concept, initial verification and some implications. 1st draft*. Austin, TX: University of Texas at Austin Research and Development Center for Teacher Education.
- Hall, G. E., & Hord, S. M. (1987). *Change in schools: Facilitating the process*. Albany, NY: SUNY Press.
- Hall, G. E., & Hord, S. M. (2011). *Implementing change: Patterns, principles, and potholes (3rd ed.)*. Upper Saddle River, NJ: Pearson.

- Hall, G. E., & Loucks, S. F. (1977). A developmental model for determining whether the treatment is actually implemented. *American Educational Research Journal*, 14(3), 263-276.
- Hall, G. E., Loucks, S. F., Rutherford, W. L., & Newlove, B. W. (1975). Levels of use of the innovation: A framework for analyzing innovation adoption. *The Journal of Teacher Education*, 26(1), 52-56.
- Hall, G. E., Loucks, S. F. (1981). *The concept of innovation configurations: An approach to addressing program adaptation. Research on concerns-based adoption*. Austin, TX: University of Texas at Austin, Research and Development Center for Teacher Education.
- Hall, G. E., Wallace, R. C., & Dossett, W. F. (1973). *A developmental conceptualization of the adoption process within educational institutions*. ( No. 3006). Research and Development Center for Teacher Education, The University of Texas at Austin.
- Harris, S. G., & Cole, M. S. (2007). A stages of change perspective on managers' motivation to learn in a leadership development context. *Journal of Organizational Change Management*, 20(6), 774-793.
- Heaven, C., Clegg, J., & Maguire, P. (2006). Transfer of communication skills training from workshop to workplace: The impact of clinical supervision. *Patient Education and Counseling*, 60(3), 313-325.
- Heckhausen, H., & Gollwitzer, P. (1987). Thought contents and cognitive functioning in motivational versus volitional states of mind. *Motivation & Emotion*, 11(2), 101.
- Ho, M. (2015, December). Commitment to learning continues. *TD: Talent Development*, 69, 42-47.

- Holladay, C. L., & Quiñones, M. A. (2003). Practice variability and transfer of training: The role of self-efficacy generality. *Journal of Applied Psychology, 88*(6), 1094-1103.
- Holton III, E. F. (1996). The flawed four-level evaluation model. *Human Resource Development Quarterly, 7*(1), 5-21.
- Holton III, E. F. (2003). What's really wrong: Diagnosis for learning transfer system change. In E. F. Holton III, & T. T. Baldwin (Eds.), *Improving learning transfer in organizations* (pp. 59-79). San Francisco, CA: Jossey-Bass.
- Holton III, E. F. (2005). Holton's evaluation model: New evidence and construct elaborations. *Advances in Developing Human Resources, 7*(1), 37-54.
- Holton III, E. F., Bates, R. A., Bookter, A. I., & Yamkovenko, V. B. (2007). Convergent and divergent validity of the learning transfer system inventory. *Human Resource Development Quarterly, 18*(3), 385-419.
- Holton III, E. F., Bates, R. A., & Ruona, W. E. A. (2000). Development of a generalized learning transfer system inventory. *Human Resource Development Quarterly, 11*(4), 333-360.
- Holton III, E. F., Chen, H., & Naquin, S. S. (2003). An examination of learning transfer system characteristics across organizational settings. *Human Resource Development Quarterly, 14*(4), 459-482.
- Hope, W. C. (1997). Resolving teachers' concerns about microcomputer technology. *Computers in the Schools, 13*(3-4), 147-60.
- Hord, S. M., Loucks, S. F. (1980). *A concerns-based model for the delivery of inservice*. Research and Development Center for Teacher Education, The University of Texas at Austin.

- Huang, J., Blume, B., Ford, J., & Baldwin, T. (2015). A tale of two transfers: Disentangling maximum and typical transfer and their respective predictors. *Journal of Business & Psychology, 30*(4), 709.
- Hutchins, H. M. (2009). In the trainer's voice: A study of training transfer practices. *Performance Improvement Quarterly, 22*(1), 69-93.
- Hutchins, H. M., Burke, L. A., & Berthelsen, A. M. (2010). A missing link in the transfer problem? Examining how trainers learn about training transfer. *Human Resource Management, 49*(4), 599-618.
- Hutchins, H. M., Nimon, K., Bates, R., & Holton, E. (2013). Can the LTSI predict transfer performance? Testing intent to transfer as a proximal transfer of training outcome. *International Journal of Selection and Assessment, 21*(3), 251-263.
- Jacelon, C. S., & Imperio, K. (2005). Participant diaries as a source of data in research with older adults. *Qualitative Health Research, 15*(7), 991-997.
- Janis, I. L., & Mann, L. (1977). *Decision making: A psychological analysis of conflict, choice and commitment*. New York: Free Press.
- Jing, J. X., Newman, B. M., Prochaska, J. M., Leon, B., Bassett, R. L., & Johnson, J. L. (2004). Applying the transtheoretical model of change to consumer debt behavior. *Journal of Financial Counseling & Planning, 15*(2), 89-100.
- Judge, T. A., & Ilies, R. (2002). Relationship of personality to performance motivation: A meta-analytic review. *Journal of Applied Psychology, 87*(4), 797-807.
- Kegan, R., & Lahey, L. L. (2009). *Immunity to change: How to overcome it and unlock the potential in yourself and your organization*. Boston: Harvard Business School Publishing.

- Knowles, M. S., Holton III, E. F., & Swanson, R. A. (1998). *The adult learner: The definitive classic in adult education and human resource development* (5th ed.). Houston, TX: Gulf.
- Kontoghiorghes, C. (2001). Factors affecting training effectiveness in the context of the introduction of new Technology—A US case study. *International Journal of Training & Development*, 5(4), 248.
- Kontoghiorghes, C. (2002). Predicting motivation to learn and motivation to transfer learning back to the job in a service organization--A new systemic model for training effectiveness. *Performance Improvement Quarterly*, 15(3), 114-29.
- Kontoghiorghes, C. (2004). Reconceptualizing the learning transfer conceptual framework: Empirical validation of a new systemic model. *International Journal of Training & Development*, 8(3), 210-221.
- Kotter, J. P. (2012). *Leading change*. Cambridge, MA: Harvard Business Review Press.
- Kozlowski, S. W. J., Brown, K. G., Weissbein, D. A., Cannon-Bowers, J., & Salas, E. (2000). A multilevel approach to training effectiveness: Enhancing horizontal and vertical transfer. In K. J. Klein, & S. W. J. Kozlowski (Eds.), (pp. 157-210). San Francisco: Jossey-Bass.
- Kozlowski, S. W. J., & Salas, E. (1997). An organizational systems approach for the implementation and transfer of training. In J. K. Ford (Ed.), *Improving training effectiveness in work organizations* (pp. 247-287). Mahwah, NJ: Lawrence Erlbaum Associates.
- Kubler-Ross, E. (1969). *On death and dying*. New York: Touchstone.
- La Lopa, J. & Day, J. (2011). Pilot study to assess the readiness of the tourism industry in wales to change to sustainable tourism business practices. *Journal of Hospitality and Tourism Management*, 18(1)

- Laker, D. R., & Powell, J. L. (2011). The differences between hard and soft skills and their relative impact on training transfer. *Human Resource Development Quarterly*, 22(1), 111-122.
- Lam, C. S., Wiley, A. H., Siu, A., & Emmett, J. (2010). Assessing readiness to work from a stages of change perspective: Implications for return to work. *Work*, 37(3), 321-329.
- Lee, C. D., & Kahnweiler, W. M. (2000). The effect of a mastery learning technique on the performance of a transfer of training task. *Performance Improvement Quarterly*, 13(3), 125-139.
- Leimbach, M. (2010). Learning transfer model: A research-driven approach to enhancing learning effectiveness. *Industrial & Commercial Training*, 42(2).
- Levesque, D. A., Ciavatta, M. M., Castle, P. H., Prochaska, J. M., & Prochaska, J. O. (2012). Evaluation of a stage-based, computer-tailored adjunct to usual care for domestic violence offenders. *Psychology of Violence*, 2(4), 368-384.
- Levesque, D. A., Driskell, M., Prochaska, J. M., & Prochaska, J. O. (2008). Acceptability of stage-matched expert system intervention for domestic violence offenders. *Violence and Victims*, 23(4), 432-445.
- Levesque, D. A., Prochaska, J. M., & Prochaska, J. O. (1999). Stages of change and integrated service delivery. *Consulting Psychology Journal: Practice and Research*, 51(4), 226-241.
- Levesque, D. A., Prochaska, J. M., Prochaska, J. O., Dewart, S. R., Hamby, L. S., & Weeks, W. B. (2001). Organizational stages and processes of change for continuous quality improvement in health care. *Consulting Psychology Journal: Practice and Research*, 53(3), 139-153.

- Lewin, K. (1947). Frontiers in group dynamics. In D. Cartwright (Ed.), *Field theory in social science*. London: Social Science Paperbacks.
- Lim, D. H. (2000). Training design factors influencing transfer of training to the workplace within an international context. *Journal of Vocational Education & Training: The Vocational Aspect of Education*, 52(2), 243-57.
- Lim, D. H., & Johnson, S. D. (2002). Trainee perceptions of factors that influence learning transfer. *International Journal of Training and Development*, 6(1), 36-48.
- Lim, D. H., & Morris, M. L. (2006). Influence of trainee characteristics, instructional satisfaction, and organizational climate on perceived learning and training transfer. *Human Resource Development Quarterly*, 17(1), 85-115.
- Lincoln, Y. S. (2005). Context, lived experience, and qualitative research. In R. A. Swanson, & E. F. Holton III (Eds.), *Research in organizations: Foundations and methods of inquiry* (pp. 221-232). San Francisco: Berrett-Koehler.
- Loucks, S. F., Newlove, B. W., & Hall, G. E. (1975). *Measuring levels of use of the innovation: A manual for trainers, interviewers, and raters*. Austin, TX: The University of Texas at Austin, Research and Development Center for Teacher Education.
- Lyons, J. B., Swindler, S. D., & Offner, A. (2009). The impact of leadership on change readiness in the US military. *Journal of Change Management*, 9(4), 459-475.
- Machin, M. A., & Fogarty, G. J. (2003). Perceptions of training-related factors and personal variables as predictors of transfer implementation intentions. *Journal of Business & Psychology*, 18(1), 51-71.
- Machin, M. A., & Fogarty, G. J. (2004). Assessing the antecedents of transfer intentions in a training context. *International Journal of Training and Development*, 8(3), 222-236.

- Madsen, S. R. (2003). A model for individual change: Exploring its application to human resource development. *Human Resource Development Review, 2*(3), 229-251.
- Martin, H. J. (2010). Workplace climate and peer support as determinants of training transfer. *Human Resource Development Quarterly, 21*(1), 87-104.
- Mason, J. (2002). *Qualitative researching* (2nd ed.). Thousand Oaks, CA: SAGE.
- McConaughy, E. N., Prochaska, J. O., & Velicer, W. F. (1983). Stages of change in psychotherapy: Measurement and sample profiles. *Psychotherapy: Theory, Research and Practice, 20*, 368-375.
- McConaughy, E. A., DiClemente, C. C., Prochaska, J. O., & Velicer, W. F. (1989). Stages of change in psychotherapy: A follow-up report. *Psychotherapy: Theory, Research, Practice, Training, 26*(4), 494-503.
- McGuire, D., & Cseh, M. (2006). The development of the field of HRD: A Delphi study. *Journal of European Industrial Training, 30*, 653-667.
- McGuire, L. E. (2004). The transtheoretical model: Welfare to work as a change process. *Journal of Human Behavior in the Social Environment, 10*, 33-56.
- Merriam, S. B. (1998). *Qualitative research and case study applications in education*. San Francisco: Jossey-Bass.
- Merriam, S. B., & Simpson, E. L. (2000). *A guide to research for educators and trainers of adults*. Malabar, FL: Krieger Publishing.
- Mihalko, B. (2010). *The influence of transfer system factors and training elapsed time on transfer in a healthcare organization* (Unpublished doctoral dissertation), Wayne State University, Detroit, MI.

- Miles, M. B., & Huberman, A. M. (1994). *Qualitative data analysis* (2nd ed.). Thousand Oaks, CA: SAGE.
- Morin, L., & Latham, G. P. (2000). The effect of mental practice and goal setting as a transfer of training intervention on supervisors' self-efficacy and communication skills: An exploratory study. *Applied Psychology: An International Review*, 49(3), 566.
- Naquin, S. S., & Holton III, E. F. (2002). The effects of personality, affectivity, and work commitment on motivation to improve work through learning. *Human Resource Development Quarterly*, 13(4), 357-376.
- Nigg, C.R., Burbank, P., Padula, C., Dufresne, R., Rossi, J. S., Velicer, W. F., Laforge, R. G. & Prochaska, J. O. (1999). Stages of change across ten health risk behaviors for older adults. *Gerontologist*, 39, 473-482.
- Noe, R. A., & Schmitt, N. (1986). The influence of trainee attitudes on training effectiveness: Test of a model. *Personnel Psychology*, 39(3), 497-523.
- Noe, R. A. (1986). Trainees' attributes and attitudes: Neglected influences on training effectiveness. *Academy of Management Review*, 11(4), 736-749.
- Norcross, J. C., Krebs, P. M., & Prochaska, J. O. (2011). Stages of change. *Journal of Clinical Psychology*, 67(2), 143-154.
- Patton, M. Q. (2002). *Qualitative research & evaluation methods* (3rd ed.). Thousand Oaks, CA: Sage.
- Petrocelli, J. V. (2002). Processes and stages of change: Counseling with the transtheoretical model of change. *Journal of Counseling & Development*, 80(1), 22.

- Peters, S., Cossette, M., Bates, R., Holton, E., Hansez, I., & Faulx, D. (2014). The influence of transfer climate and job attitudes on the transfer process: Modeling the direct and indirect effects. *Journal Of Personnel Psychology, 13*(4), 157-166.
- Phillips, T. M. (2005). *Individual behavior change in the context of organizational change: Towards validation of the transtheoretical model of change in an organizational environment* (Unpublished Doctoral Dissertation). University of North Texas, Denton, TX.
- Pidd, K. (2004). The impact of workplace support and identity on training transfer: A case study of drug and alcohol safety training in Australia. *International Journal of Training & Development, 8*(4), 274-288.
- Plummer, B. A., Velicer, W. F., Redding, C. A., Prochaska, J. O., Rossi, J. S., Pallonen, U. E., & Meier, K. S. (2001). Stage of change, decisional balance and temptations for smoking. measurement and validation in a large, school-based population of adolescents. *Addictive Behaviors, 26*(4), 551-571.
- Prochaska, J. O., & DiClemente, C. C. (1982). Transtheoretical therapy: Toward a more integrative model of change. *Psychotherapy: Theory, Research & Practice, 19*(3), 276-288.
- Prochaska, J. O., & DiClemente, C. C. (1983). Stages and processes of self-change of smoking: Toward an integrative model of change. *Journal of Consulting and Clinical Psychology, 51*(3), 390-395.
- Prochaska, J. O., DiClemente, C. C., & Norcross, J. C. (1992). In search of how people change: Applications to addictive behaviors. *American Psychologist, 47*(9), 1102-1114.
- Prochaska, J. O., Velicer, W. F., Rossi, J. S., Goldstein, M. G., Marcus, B. H., Rakowski, W., . . . Rossi, S. R. (1994). Stages of change and decisional balance for 12 problem behaviors. *Health Psychology, 13*(1), 39-46.

- Prochaska, J. M. (2000). A transtheoretical model for assessing organizational change: A study of family service agencies' movement to time-limited therapy. *Families in Society, 81*(1), 76-84.
- Prochaska, J. M., Paiva, A. L., Padula, J. A., Prochaska, J. O., Montgomery, J. E., Hageman, L., & Bergart, A. M. (2005). Assessing emotional readiness for adoption using the transtheoretical model. *Children and Youth Services Review, 27*(2), 135-152.
- Richman-Hirsch, W. (2001). Posttraining interventions to enhance transfer: The moderating effects of work environments. *Human Resource Development Quarterly, 12*(2), 105-119.
- Rogers, E. M. (2003). *Diffusion of innovations* (5th ed.). New York: Free Press.
- Rosen, C. S. (2000). Is the sequencing of change processes by stage consistent across health problems? A meta-analysis. *Health Psychology, 19*(6), 593-604.
- Rouiller, J. Z., & Goldstein, I. L. (1993). The relationship between organizational transfer climate and positive transfer of training. *Human Resource Development Quarterly, 4*(4), 377-390.
- Roulston, K. (2010). *Reflective interviewing: A guide to theory and practice*. Thousand Oaks, CA: SAGE.
- Ruona, W. E. A. (2005). Analyzing qualitative data. In R. A. Swanson, & E. F. Holton III (Eds.), *Research in organizations: Foundations and methods of inquiry* (pp. 233-263). San Francisco: Berrett-Koehler.
- Ruona, W. E. A., Leimbach, M., Holton III, E. F., & Bates, R. (2002). The relationship between learner utility reactions and predicted learning transfer among trainers. *International Journal of Training and Development, 6*(4), 218-228.

- Russ-Eft, D., Dickison, P., & Levine, R. (2010). Taking the pulse of training transfer: Instructor quality and EMT certification examination results. *Human Resource Development Quarterly, 21*(3), 291-306.
- Saks, A. M. (2001). So what is a good transfer of training estimate?: A reply to Fitzpatrick. *The Industrial- Organizational Psychologist, 39*, 29-30.
- Saks, A. M., & Belcourt, M. (2006). An investigation of training activities and transfer of training in organizations. *Human Resource Management, 45*(4), 629-648.
- Saks, A. M., & Burke, L. A. (2012). An investigation into the relationship between training evaluation and the transfer of training. *International Journal of Training & Development, 16*(2), 118-127.
- Saldaña, J. (2013). *The coding manual for qualitative researchers* (2nd ed.). Thousand Oaks, CA: SAGE.
- Saunders, R. (2012). Assessment of professional development for teachers in the vocational education and training sector: An examination of the concerns based adoption model. *Australian Journal of Education (ACER Press), 56*(2), 182-204.
- Seyler, D. L., Holton III, E. F., Bates, R. A., Burnett, M. F., & Carvalho, M. A. (1998). Factors affecting motivation to transfer training. *International Journal of Training & Development, 2*(1), 16.
- Shotsberger, P. G., & Crawford, A. R. (April, 1996). *An analysis of the validity and reliability of the concerns based adoption model for teacher concerns in education reform*. Paper presented at the Annual Meeting of the American Educational Research Association, New York.

- Slough, S. W., & Chamblee, G. E. (2007). Looking beyond short-term implementation and low-level concerns: Assessing the full impact of the concerns based adoption model (CBAM). *Proceedings of Society for Information Technology & Teacher Education 2007 International Conference, AACE*, Chesapeake, VA. 952-957.
- Song, H., Wang, W., & Liu, C. (2011). A simulation model that decreases faculty concerns about adopting web-based instruction. *Educational Technology & Society*, 14(3), 141-151.
- Sta. Maria, R. F., & Watkins, K. E. (2003). Perception of learning culture and concerns about the innovation on its use: A question of level of analysis. *Human Resource Development International*, 6(4), 491-508.
- Stake, R. E. (1995). *The art of case study research*. Thousand Oaks, CA: SAGE.
- Stake, R. E. (2005). Qualitative case studies. In N. K. Denzin, & Y. S. Lincoln (Eds.), *The sage handbook of qualitative research* (3rd ed., pp. 443-466). Thousand Oak, CA: SAGE.
- Stake, R. E. (2010). *Qualitative research: Studying how things work*. New York, NY: The Guilford Press.
- Swanson, R. A., & Holton III, E. F. (2001). *Foundations of human resource development*. San Francisco: Berrett-Koehler.
- Taylor, P. J., Russ-Eft, D., & Chan, D. W. L. (2005). A meta-analytic review of behavior modeling training. *Journal of Applied Psychology*, 90(4), 692-709.
- Tracey, J. B., Tannenbaum, S. I., & Kavanagh, M. J. (1995). Applying trained skills on the job: The importance of the work environment. *Journal of Applied Psychology*, 80(2), 239-252.
- Tracey, J. B., & Tews, M. J. (2005). Construct validity of a general training climate scale. *Organizational Research Methods*, 8(4), 353-374.

- Tunks, J., & Weller, K. (2009). Changing practice, changing minds, from arithmetical to algebraic thinking: An application of the concerns-based adoption model (CBAM). *Educational Studies in Mathematics, 72*(2), 161-183.
- Tyler, C. L., & Tyler, J. M. (2006). Applying the transtheoretical model of change to the sequencing of ethics instruction in business education. *Journal of Management Education, 30*(1), 45-64.
- Tziner, A., Haccoun, R. R., & Kadish, A. (1991). Personal and situational characteristics influencing the effectiveness of transfer of training improvement strategies. *Journal of Occupational Psychology, 64*(2), 167-177.
- Velada, R., & Caetano, A. (2007). Training transfer: The mediating role of perception of learning. *Journal of European Industrial Training, 31*(4), 283-296.
- Velada, R., Caetano, A., Michel, J. W., Lyons, B. D., & Kavanagh, M. J. (2007). The effects of training design, individual characteristics and work environment on transfer of training. *International Journal of Training and Development, 11*(4), 282-294.
- Velicer, W. F., DiClemente, C. C., Prochaska, J. O., & Brandenburg, N. (1985). Decisional balance measure for assessing and predicting smoking status. *Journal of Personality and Social Psychology, 48*(5), 1279-1289.
- Velicer, W. F., DiClemente, C. C., Rossi, J. S., & Prochaska, J. O. (1990). Relapse situations and self-efficacy: An integrative model. *Addictive Behaviors, 15*(3), 271-283.
- Velicer, W. F., Prochaska, J. O., Fava, J. L., Norman, G. J., & Redding, C. A. (1998). Smoking cessation and stress management: Applications of the transtheoretical model of behavior change. *Homeostasis, 38*, 216-233.

- von Treuer, K., McHardy, K., & Earl, C. (2013). The Influence of Organisational Commitment, Job Involvement and Utility Perceptions on Trainees' Motivation to Improve Work through Learning. *Journal Of Vocational Education And Training*, 65(4), 606-620.
- Wang, G. G., & Wilcox, D. (2006). Training evaluation: Knowing more than is practiced. *Advances in Developing Human Resources*, 8(4), 528-539.
- Watkins, K. E., & Marsick, V. J. (1996). *Dimensions of the learning organization questionnaire*. Warwick, RI: Partners for the Learning Organization.
- Watkins, K. E., Lysø, I. H., & deMarrais, K. (2011). Evaluating executive leadership programs: A theory of change approach. *Advances in Developing Human Resources*, 13(2), 208-239.
- Wehrmann, K. C., Shin, H., & Poertner, J. (2002). Transfer of training: An evaluation study. *Journal of Health & Social Policy*, 15(3), 23-37.
- Weissbein, D. A., Huang, J. L., Ford, J. K., & Schmidt, A. M. (2011). Influencing learning states to enhance trainee motivation and improve training transfer. *Journal of Business and Psychology*, 26(4), 423-435.
- West, R. (2005). Time for a change: Putting the transtheoretical (stages of change) model to rest. *Addiction*, 100(8), 1036-1039.
- Xiao, J. J., Newman, B. M., Prochaska, J. M., Leon, B., Bassett, R. L., & Johnson, J. L. (2004). Applying the transtheoretical model of change to consumer debt behavior. *Journal of Financial Counseling & Planning*, 15(2), 89-100.
- Yaghi, A., Goodman, D., Holton III, E. F., & Bates, R. A. (2008). Validation of the learning transfer system inventory: A study of supervisors in the public sector in Jordan. *Human Resource Development Quarterly*, 19(3), 241-262.

- Yamkovenko, B., & Holton, E. (2010). Toward a theoretical model of dispositional influences on transfer of learning: A test of a structural model. *Human Resource Development Quarterly*, 21(4), 381-410.
- Yamnill, S., & McLean, G. N. (2001). Theories supporting transfer of training. *Human Resource Development Quarterly*, 12(2), 195-208.
- Yelon, S., Sheppard, L., Sleight, D., & Ford, J. K. (2004). Intention to transfer: How do autonomous professionals become motivated to use new ideas? *Performance Improvement Quarterly*, 17(2), 82-103.
- Yin, R. K. (2014). *Case study research: Design and methods* (5th ed.). Thousand Oaks, CA: SAGE.
- Young, J. C. (2013). Understanding transfer as personal change: Concerns, intentions, and resistance. *New Directions for Adult & Continuing Education*, (137), 71-82.

## APPENDIX A

### Researcher Subjectivities Statement

My first experience with formalized training in the workplace was as a young caseworker in a public child welfare agency. I came to the position without formal education in the field of social work. I attended the required in-service training program, which was an intensive six - week program of classroom and on-the-job training. At the end of this process, I received a certificate and was sent back to my county office where I was promptly given a caseload that carried with it full responsibilities concerning the safety and well-being of children. When I tried to put my training into practice, I frequently experienced comments such as, “That’s what they teach in training, but we don’t do it like that in this county.” When I asked a question, I would sometimes get responses such as, “Didn’t you learn that in training?” These two responses seemed completely contradictory to me. I wasn’t sure if I was to value and follow the training I received or disregard it in favor of practice norms in my county office. I quickly figured out that I was ill equipped to do this very important job and decided to return to school to earn a Master’s Degree in Social Work.

I discovered my passion for adult education a few years after graduate school while working in a position that involved planning and implementing learning opportunities for case managers and adoptive parents. This led to an opportunity to work in continuing education in social work. Eventually, I landed back in child welfare in training and staff development. At the start of my dissertation research, I had worked in various aspects of child welfare training for 12 years. It is my connection to the social work and child welfare community of practitioners and scholars that prompted me to choose child welfare as the context for my study.

I came to my research topic of transfer of learning through a series of experiences I had while working in training and staff development in child welfare. It was in this context that I was exposed to the politics and power involved in the planning and implementation of adult, continuing, and workplace education programs. I witnessed how organizations attempt to resolve every performance problem through training, and then blame the training department when performance does not improve. I survived several administration changes during which entire training programs were thrown out, along with infrastructure and personnel, and remade in the image of the newest director. I knew instinctively that all of the ills of the organization could not be laid at the foot of training, and I never forgot how I felt as a new caseworker desperately in need of learning opportunities that would at least give me a chance to be successful. So, I began to look for reasons why training was not resulting in the desired staff performance improvement. This is when I was exposed to the concept of transfer of learning.

There are different disciplinary lenses, theories through which to view learning transfer and individual and organizational performance improvement. I brought to this study an embrace of the performance paradigm of HRD, which suggests the outcome from training interventions should not just be learning, but individual and organizational performance. I also brought a constructivist epistemology to the study. Constructivism holds that all knowledge is constructed through human interaction and is contingent on general agreement on or acceptance of certain practices, human perception, and social experience. It is this intersection of theories related to individual and organizational performance and the constructivist view of individuals interpreting and constructing reality based on their interactions with their environment that informed my desire to study learning transfer through the lens of individual change.

The different facets of who I am --- woman, African-American, Christian, wife, mother, southerner, social worker, human resource developer, and adult educator -- also influenced my approach to this research. These different facets of my adult self are influenced by my childhood experiences in my family of origin where there were certain social mores, community standards, and family traditions that guided my conduct and the expectations that were set for me. For example, in my community and family of origin, education was valued, but yet kept in perspective. Young people were expected to not abandon all “common sense” as a result of the “book sense” they gained. As a result, I approached this research with a healthy respect for formal training, yet not believing that formal training, in and of its self, can impel individuals to change their work-related behaviors. Just as my upbringing and family of origin impacts who I am as a scholar, I entered this research with the assumption that the same was true for my study participants. The values they brought to their work and the interactions they had in their organizations likely impacted how they responded to and interpreted their training and training transfer experience. The experiences they had before and after their formal training were also a part of their learning and certainly impacted their ability to create change in their work behaviors. It was these personal experiences that I tried to draw out during my interviews with participants.

Also, I was aware that I hold certain values about what the standard should be for professionals who work in the field of social work. I knew that everyone encountered in this study would not necessarily hold these same values. At the start of the study, I knew that potential value conflicts might shape the way I viewed and understood the data and the way I interpreted my experiences with participants and the systems in which they work. The value conflicts did arise, but I was attuned to when this was happening and tried to be reflective and reflexive in dealing with these issues. In addition, although I view myself as being an insider in

the field of child welfare, which was probably beneficial in establishing relationships with participants, I was prepared to encounter participants who may have perceive me differently. Some may have viewed me as an academic who does not understand their condition because I am no longer doing “real work” with children and families. Others may have questioned my motives for conducting the study, as they routinely deal with scrutiny from the public and the media that is frequently unfavorable. As a result, I was acutely aware of the need to develop rapport and trust with the study participants, to make them comfortable in sharing information with me, to reassure them of the confidential nature of our discussions, and to conduct this research with sensitivity and understanding of the multiple, and often competing, demands they face on a daily basis. I think I accomplished this goal. Finally, I began this research knowing that in human service organizations, resources tend to be scarce and work demands overwhelming. These conditions can contribute to negative organizational climates and cultures, which can influence staff morale and motivation. All of these factors added to the complexity of training, learning transfer, and performance improvement examined in this study. Looking back on the research experience, I can admit I was challenged in different ways over the course of the study, including by my own closely held values and commitment to child welfare. The participants’ stories, which were shared so openly and honestly with me, sometimes made me feel hopeful and at other times saddened and discouraged me. I can only hope I have represented my participants and their stories as accurately and fairly as I could.

## APPENDIX B

## Permission to use the LTSI

**Learning Transfer Systems Inventory User's Agreement**

Permission is hereby granted to use the Learning Transfer Systems Inventory (LTSI), an organizational assessment instrument, owned by Elwood F. Holton III and Reid A. Bates. Permission is granted to the following people for the timeframe, payment and purposes specified below:

Permission granted to: <i>(Name, company, address, phone number, e-mail, etc.)</i>	Deidre H. Carmichael Doctoral Student at the University of Georgia College of Education Department of Lifelong Education, Administration, and Policy Adult Education/Human Resource and Organization Development Major Professor: Wendy Ruona
Purpose	The LTSI will be used in my dissertation study that examines how characteristics of the learning transfer system manifested and influenced transfer in cases of successful and non-successful individual performance following training.
Time Period	<del>September 2012 through September 2013</del> <b>Revised to: June 2014 through June 2015</b> <b>Permission granted by R. Bates 5/29/2014</b>
Other Conditions	
Payment	Waived.

It is understood that, by agreeing to use the Learning Transfer Systems Inventory, you are accepting the following conditions:

1. Any use other than that specified above is prohibited without prior written authorization by the authors (E. F. Holton III & R. A. Bates).
2. No changes whatsoever can be made to the LTSI without prior written consent of the authors.
3. The authors retain full copyright authority for the LTSI and any translations that are developed as a result of granting this permission. Every copy of the LTSI must carry the following copyright notice

4. Discussion and presentation of the LTSI will accurately reflect the composition of the instrument and will use only original scale names and scale definitions.
5. Users of the LTSI may not publish or otherwise disseminate into the public domain the survey items or item groupings.
6. If the LTSI is to be translated into a new language as part of this project, the authors of the LTSI must be included in the translation process as per their supplemental instructions.
7. A copy of all data collected with the instrument must be given to the authors free of charge and in a timely manner. This data will only be used for research purposes and will not be reported in such a manner that would identify individual organizations, without written permission of the organization.
8. Users of the LTSI who enter into a collaborative research partnership with authors may use the LTSI free of charge. In these cases, unless otherwise acceded, the authors will share in the authorship of any publications that result from the use of the instrument or the data collected with the LTSI.
9. In the absence of a collaborative research partnership LTSI users will be charged a per copy fee for use of the LTSI.
10. The authors reserve the right to withdraw the LTSI from use at any time if any terms or conditions of this agreement are violated.
11. In the absence of a collaborative research partnership, any reports published or presented resulting from data collected using the LTSI shall clearly indicate that instrument authors did not participate in preparing the reports.
12. By signing this agreement, LTSI users acknowledge that the scoring algorithms will be retained by the authors and that the data collected with the LTSI must be submitted to the authors for scoring.

A copy of this Permission Agreement should be signed and returned to indicate your agreement with the above restrictions and conditions. A fully executed copy will be returned to you for your records. Upon receipt of the signed agreement and payment of any applicable royalty/license fee you will be sent a copy of the LTSI that you may reproduce.

LTSI user (print name) Deidre H. Carmichael	
Title Doctoral Student, The University of Georgia	
LTSI user signature	Date
Elwood F. Holton III or Reid A. Bates, LTSI authors	Date

## APPENDIX C

## Coding Methods Description

Coding Method	How Used in Study
<b>First Round/Initial Coding</b>	
Open coding: Breaking data apart and delineating concepts to stand for blocks of raw data. Includes comparing discrete parts of data for similarities and differences (Corbin & Strauss, 2008)	Used inductively in the first round of coding to identify concepts apparent in the data.
<b>Subsequent Coding</b>	
Attribute coding: Coding of basic descriptive information. For example, demographics, field setting/context, data format (interview, field note, etc.), and time frame (Saldaña, 2013).	To code demographics such as educational background, years worked for organization, and length of time supervising before attending training
Structural coding: Applying a content-based or conceptual phrase to a segment of data that relates to specific research questions (Saldaña, 2013)	To code data that appeared to be reflective of learning transfer system or other transfer factors. These codes related to research question two. Also to code data deemed to be evidence of transfer (actions that participants took related to knowledge and skill learned in training). These codes were related to the assessment of change.
Process coding: Uses gerunds (ing words) to connote action in the data. Focuses on the search for ongoing action/interaction/emotion taken in response to situations or problems. (Corbin & Strauss, 2008)	To code data that denoted action or process in the data. Primarily used for coding change experiences (related to research question one). For example, <i>being stuck between two worlds, feeling like you want to quit, making it work despite the obstacles</i>
Evaluation coding: Combination of descriptive coding to note the topic and sub-coding to note the specific evaluative comment (Saldaña, 2013).	To code data about participants' reactions to the classroom training or other training experiences (e.g., the skill building activities)
Values coding: Codes that reflect participants' values, attitudes, and beliefs representing his or her perspective or worldview (Saldaña, 2013).	To code data that reflected participants' values, attitudes, and beliefs. For example, <i>respect, everyone can succeed, staff should feel appreciated, people/family/community</i>