Volition to Transfer Training:

An Examination of the Role of Volition in Supporting Study Abroad Students' Adherence to the Transfer of Intercultural Skills

A DISSERTATION

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Abstract

The transfer of training is a long-standing challenge for training and development researchers and practitioners. It is a form of positive of behavioral changes many employers anticipate from their employees to demonstrate the value of the organization's training investment. Like most behavioral changes, the transfer of training is a challenging task given that the trainee must make changes which involves a high demand for self-regulation efforts to ensure that trainees transfer their newly acquired skills at work. Few trainees successfully adhere to the new training skills while the rest give in to the convenience of static practices at work. The disappointing transfer of training reality highlights the need for Human Resource Development (HRD) to be aware of an implicit barrier to the transfer of training—habit intrusion—and trainees' tendency to revert back to their habits at work which, in many cases, contradict the desired behaviors associated with the training goals. Thus, there continues to be persistent transfer of training issues, performance gaps, and the loss of training investments. This study recognized these impediments to trainees' ability to apply training skills. Additionally, the study investigated volition, a key variable, to unlock HRD's understanding about the goal-shielding role in the transfer of intercultural adjustment skills over 14 weeks of a study abroad program. Selecting intercultural adjustment skills was based on similarities in intercultural adjustment needs between expatriates and study abroad students. A number of studies have suggested that these two populations experience mental health-related issues (e.g., depression) and other negative adjustment outcomes because many of them are unable to effectively use intercultural skills to make progress in their cross-cultural transition. The purpose of the study was twofold: (a) to examine whether volition

(implementation intention) maintained students' adherence to the use of training skills over 14 weeks, and (b) to examine the relationships among goal intention, implementation intention, and the transfer of training, especially the moderating role of implementation intention between the other two variables. This longitudinal study employed a randomized control trial design. Data were collected at three time points: pre-departure (week 0), week 6, and week 14. The total study sample (N=195) included 82 students in the treatment group and 113 students in the control group. They were all undergraduate students from two U.S. higher education institutions who studied abroad for one semester. The treatment group received a 5-minute online volitional intervention at the end of the online intercultural skills training while the control group received only the training. As expected, the volitional intervention (mental contrasting with implementation intention (MCII)) promoted trainees' maintenance of goal intention, implementation intention, and the transfer of training over 14 weeks. The examination of within-person changes revealed a U-shape trajectory for most cases. A decrease in mean transfer of training scores at week 6 suggested the overriding effect of habit intrusion on goal-intended actions (i.e., the transfer of intercultural skills training). Additionally, volition was found to strengthen the positive relationship between goal intention and the transfer of training. The confirmed moderating effect echoed previous research findings that a combination of volition and goal intention are crucial for successful behavioral change. A volitional perspective of the transfer of training problem has the potential to change how HRD practitioners promote training effectiveness (e.g., increased skills practice time, emphasize repetition of skills practice, and changing trainees' environment

to facilitate new habit formation). The study concludes with a discussion of several contributions and directions for future research.

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CHAPTER 1: INTRODUCTION

This chapter provides an overview of the need for a study concerning a psychological mechanism behind trainees' implementation of the skills they learn in training. This chapter includes the background, purpose of the study, research questions and hypotheses, significance of the study, and definitions of key terms.

Background

Maintaining a competitive edge is an absolute necessity for anyone who wants to thrive in today's economy. Rapid changes in the economic environment (e.g., customers' needs, emergence of new technology, spread of a pandemic) in the 21st century can disrupt anything that does not have the capacity to adapt to these changes. One way to stay competitive in this environment is to continuously learn and fine-tune skills to meet the changing needs. Thus, the importance of training and development is recognized by both employees and organizations. In one study, 94% of employees reported that learning and development opportunities are the reason they remain at their organization (LinkedIn learning, 2020). Most, if not all, organizations have responded to the need for a competitive edge by pouring a large sum of money into training programs and expecting the investment to reflect a positive change in the organizations.

Over the last five years, the total U.S. training expenditure has ranged from 70.5 billion to 90.5 billion dollars (Training Industry Report, 2015, 2016, 2017, 2018, 2019). While this high training expenditure signals the value of employee learning and development, only 38% of learning and development professionals ranked the impact of training among their top priorities (LinkedIn learning, 2020), and only 35% evaluated the business results of the training programs (Association of Talent Development Research,

2016). These statistics suggest that approximately two-thirds of practitioners do not know if the training skills were integrated into work behaviors to improve work performance. Grisenthwaite (2015) also pointed out that 45% of the learning content was not put into action, suggesting that there is a waste of nearly half of the training investment, a remaining skills gaps, and a failure to gain a competitive edge. The problem Grisenthwaite (2015) described is referred to in this study as the transfer of training.

The impact of the transfer of training goes beyond organizations' financial loss. Many training skills are crucial for trainees to maintain high work performance and psychological well-being. The inability to transfer skills learned in training can have a negative impact on trainees, including stress, depression, and lower motivation to work. For instance, some managers may have a stressful relationship with their subordinates because of their inability to effectively apply emotional intelligence skills (e.g., a self-regulation of negative emotions). The stress may be heightened and have a damaging impact over time if the skills gap remains. In a worst-case scenario, stress can cause all employees including managers to be demotivated at work and leave their organizations.

Despite employees' desire for their employers to invest in training and promote the organizations' effort to create a competitive edge, one important question remains: Why are employee trained skills not used after training? There are no easy answers for this question. For over 40 years, studies on transfer effectiveness (e.g., Blume et al., 2019; Burke & Hutchins, 2007; Grossman & Salas, 2011; Holton et al., 2000; Massenberg et al., 2015) have agreed on three domain factors known to affect the transfer of training: factors residing within the trainee (e.g., motivation to learn, motivation to transfer training), factors related to the training design and delivery (e.g., the trainer's

personality, training content), and environmental factors (e.g., supportive climate for the transfer of training, supervisor support). While the answer may be a combination of these factors, existing motivation literature offers some insights about the intention-behavior gap including a theoretical model that can be used to explain implicit obstacles to the transfer of training. This area of research has the potential to illuminate unrecognized barriers to using training skills and reshaping transfer enhancement approaches in transfer-related domains.

Problem Statement

This study investigated an implicit psychological process in which trainees' volitional strength affects their long-term adherence to the transfer of training. Specifically, this study investigates the effect of trainees' volition level on their ability to adhere to the transfer of intercultural skills during cross-cultural immersion program. The investigation is based on the idea that the volitional resources within a person are depleted over time and that the depletion allows habitual offensive behaviors to override the transfer of intercultural skills, which results in more stress and delayed adjustment. In this study, I draw on problems associated with expatriate adjustment, maladjustment of study abroad students, and the limited Human Resource Development (HRD) knowledge about volition to delineate the interconnected issues the study attempts to uncover.

Expatriate adjustment is a critical concern in global mobility management. Past research has suggested that most international assignments have not satisfied the intended goals of organizations (Brookfield Global Relocation Services, 2015, 2016). Issues related to expatriate adjustment include pre-mature return, family-related problems, depression, burnout, and substance abuse (McNulty, 2015; Saquib et al., 2019; Silbiger et

al., 2017). When expatriates prematurely return to their home country from an assignment, the cost associated with an unsuccessful international assignment is between $250,000 to $1,000,000 USD (Nowak & Linder, 2016). Besides the cost of early termination of an international assignment, another important management concern is the psychological well-being of expatriates.

Expatriates are exposed to constant stress related to work, life, and cultural adjustment as a part of their expatriation experience (e.g., Bussin et al., 2016; Kumarika et al. 2017; Leung et al., 2017; Mayrhofer & Reiche, 2014; McNulty, 2015; Zhu et al., 2016). Bounded by stressful circumstances, expatriates are pressured to apply their intercultural knowledge as well as their professional skills at an optimal level. Ineffective transfer of training such as getting along with employees at the international location will likely add to existing layers of stress from acculturation efforts to the point that they are unable to cope with the stress. If ignored, the mental health of expatriates can negatively impact both the expatriates and their organizations.

Similar to the expatriate population, undergraduate students who study abroad often report stressful intercultural adjustment experiences. Although the stress usually does not lead to prematurely returning to their country of origin, study abroad students' cross-cultural adjustment is an equally concerning matter. Many study abroad students experience psychological distress such as depression, anxiety, and hostility (e.g., Hartjes et al., 2009; Hunley, 2010), which can lead to negative behavior such as heavy drinking to cope with their maladjustment (Aresi et al, 2016; Hummer et al., 2010; Mitchell et al., 2016; Pedersen et al., 2010). This negative behavior can have negative consequences such as unprotected sex (e.g., Marcantonio et al., 2019), being a victim of sexual violence

(e.g., Pedersen et al., 2019), blacking out or alcohol-related injuries (e.g., Pedersen et al., 2010; Pedersen et al., 2012).

From a training effectiveness perspective, expatriates' compromised mental health (and maladjustment in study abroad students) may stem from an inability to effectively transfer training, which, over time, depletes expatriates' willpower (volition) to strive for a successful mission. During an international assignment, these expatriates must apply the skills acquired in their professional development training (e.g., leadership, cross-cultural) and life experiences to have a smooth intercultural transition. However, the transfer of many of these skills requires active experimentation (Kolb, 1984; Kolb & Kolb, 2009) to develop suitable skills. In addition, the result of active experimentation may be positive or negative depending on many factors (e.g., the transfer approach, personality, the context in which the transfer behavior was implemented). At the same time, expatriates must be aware of their default behaviors and thinking patterns that could offend someone from a different culture. For instance, western expatriates in an East Asian country must avoid their default competitive nature and be more team-oriented when taking credit or blame. Failing to do so may lead to misunderstandings, which could eventually turn into a hostile working relationship. These negative outcomes from ineffective transfer of training can increase and overwhelm expatriates to the point that they stop navigating through the intercultural challenges. Expatriates' and study abroad students' volition to commit to and strive for acculturation can deteriorate over time as they face pressure from acculturative stress and challenges associated with the transfer of intercultural adjustment training. Thus, this group of people needs to learn how to shield

their volition and continue implementing intercultural training skills until they have become acculturated.

Volition is a psychological construct known for its goal-adherence benefit. While this construct has been well-researched in psychology literature, it is still an underexplored topic in HRD literature. A lack of understanding about volition prevents HRD from advancing both theoretically and practically. First, volitional knowledge offers an opportunity to understand the psychology behind human actions: How do people translate goal intentions into actions? and Why do motivated people fail to follow through on their goals? Understanding the psychology of human actions is extremely important to the field because it is the underlying mechanism behind a positive change in individuals, groups, and organizations, which is the mission that HRD community strive to achieve. Without this knowledge, the field may not be able to fully understand human psychology in the process of change. Additionally, HRD could miss the opportunity to understand volition interventions as a potential solution for a strengthened will and positive behavioral change. Studies have shown that implementation intentions (II) and mental contrasting with implementation intentions (MCII) effectively promote adherence to many types of behavioral changes (e.g., smoking cessation, regular dental flossing, study habits, compliance with driving speed). Given that volitional interventions are effective in diverse settings, HRD scholars and practitioners should consider promoting intentions for further development of transfer of training interventions. Paying attention to volitional research is a key to advancing cross-cultural adjustment research as well as other change-related topics in the HRD discipline.

Purpose of the Study

The purpose of this study was to examine the facilitating role of volition in supporting adherence to intercultural adjustment and resilience training skills over 14 weeks of a study abroad program. Specifically, the study attempted to answer two research questions: (a) Does volition (implementation intention) moderate the relationship between motivation to transfer (goal intention) and the transfer of training? and (b) Does volition (implementation intention) help students maintain adherence to skills learned in training over 14 weeks?

Research Hypotheses

In this study, I investigated seven hypotheses (see Figure 1). Four hypotheses assume a volitional intervention effect on two outcome variables. The remaining hypotheses represent assumptions about the relationships among goal intention (i.e., a person's desire to attain a specific goal), implementation intention (i.e., a person's desire to initiate and strive for actions necessary to achieve the intended goal), and transfer of training (i.e., the application of training skills to the trainees' job to improve work performance).

Hypothesis 1: Students in the treatment group have higher goal intention scores than those in the control group.

Hypothesis 2: Goal intention is positively associated with transfer of training.

Hypothesis 3: Goal intention mediates a positive relationship between the treatment condition and transfer of training.

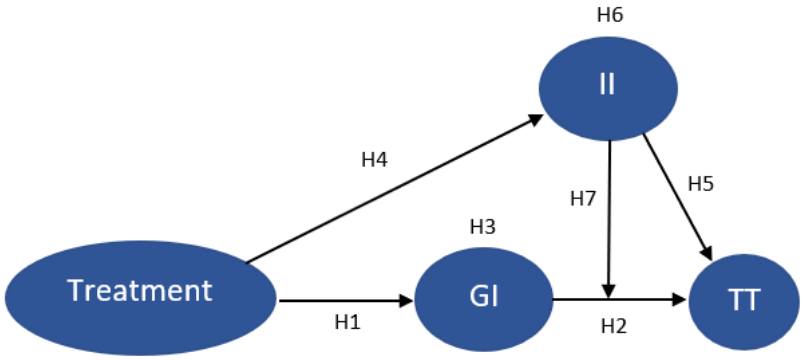
Hypothesis 4: Students in the treatment group have higher implementation intention scores than those in the control group.

Hypothesis 5: Implementation intention is positively associated with transfer of training.

Hypothesis 6: Implementation intention mediates a positive relationship between the treatment condition and transfer of training.

Hypothesis 7: Implementation intention moderates a positive relationship between the goal intention and transfer of training.

Figure 1
Research Model



Note. All relationships in the hypothesized model are positive. Treatment refers to research participants in the treatment group (ISB training + volitional intervention), II = implementation intention, GI = goal intention, TT = the transfer of (ISB) training.

Significance of the Study

This study will make significant contributions to the transfer of training research and practice in at least three major ways: (a) the study offers an alternative way to conceptualize training ineffectiveness, (b) the integration of psychology literature into HRD literature advances how HRD understands the psychological mechanisms of behavioral change, and (c) the study recommends that HRD practitioners use a volition intervention as a behavioral change support tool.

Transfer ineffectiveness is mostly because of avoidable causes such as the lack of supervisor support, peer support, unconducive work environment to the transfer of training, poor training design, trainer's characteristics, and lack of motivation to learn. Past studies seem to imply that these issues, when properly managed, will improve the transfer of training rate. However, it is important to also recognize an inevitable cause to the problem: habit intrusion. Habit intrusion is an automatic process where default behaviors take over goal-intended actions, which can lead to inhibiting behavioral change. For instance, it may be difficult for managers to resist giving harsh comments to their team members even though they were trained and intended to give constructive feedback. Based on this perspective, training ineffectiveness is a product of unintentional and inevitable action. This fresh perspective of training transfer could change how HRD practitioners promote training effectiveness (e.g., increased practice time, emphasis on repeated practicing of skills, and changing the training environment) to facilitate new habits.

This study integrates psychology research into HRD literature to explain the psychological mechanism of behavioral change. Considering that a positive change in individuals, groups, and organizations is a central component of the three primary foci of HRD (i.e., organizational development, training and development, and career development), it is important that the field develop a thorough understanding of psychological elements that influence behavioral change. In this study, I draw on several studies in psychology to propose an unconventional perspective on training ineffectiveness. I argue that habit intrusion is an inevitable aspect of transfer of training

and that volition intervention is an alternative instrument to support training effectiveness. This fresh view of training ineffectiveness sheds light on the automatic, non-intentional behavior of humans, and is an important impediment to adherence to new training skills. The findings of this study have a great potential to change the training design and environmental support for the transfer of training. I believe this research and the results are possible because integrating the literature of the two fields allows new knowledge to emerge and advance the HRD discipline.

Finally, this study describes with a promising intervention for HRD practitioners to promote adherence to using training skills. This study shows that MCII helps students use intercultural adjustment and resilience skills and promotes goal intention and implementation intention across 14 weeks. The proven efficacy of the volition intervention presented in this study is a promising sign that the intervention is generalizable to other skill training programs and potentially to some organizational change programs.

Definitions of Key Terms

The following terms are defined in accordance with their use in this research study.

Goal intention

Goal intention is a specific state one intends to attain (Heckhausen & Gollwitzer, 1987). According to Gollwitzer (1999), goal intention can also refer to a motivation state. In this study, goal intention is used interchangeably with motivation to transfer training.

Implementation intention

Implementation intention is an action plan specifying when, where, and how one wants to initiate a goal-directed action. The thought process of implementation intention is "If cue X occurs, then I will perform behavior Y!" Implementation intention creates a strong link between a critical cue (i.e., either a situation or an inner state specified in the if-component (Achtziger et al., 2008) and a goal-directed behavior (specified in the then-component) by a single conscious act of the will. According to Gollwitzer (1999), implementation intention can also refer to a volition state. In this study, the term refers to both the volition and willpower to transfer training.

Intercultural adjustment

Intercultural adjustment is the extent to which individuals understand and accept the behaviors, beliefs, and values that are dominant in a new culture (Black & Mendenhall, 1990; Matsumoto et al., 2004; Searle & Ward, 1990).

Motivation

Motivation is the desire of trainees to apply the knowledge and skills mastered in the training program to their jobs (Noe, 1986, p.743). This state of motivation tends to be temporal. The term motivation is used interchangeably in this study with goal intention.

Volition

Volition is a mediating factor of the relationship between cognition and behavior. According to Kuhl (1985), volition “energizes the maintenance and enactment of intended actions” (p. 90). In this study, volition refers to both implementation intention and willpower.

Resilience

Resilience is the extent to which individuals demonstrate dynamic capacity to reintegrate themselves and grow following stress from acculturation (Becker & Newsom, 2005; Flores et al., 2005).

Perceived content validity

Perceived content validity is the extent to which the training content is perceived to be valid and accurately reflects trainees' job requirements (Burke & Hutchins, 2007).

Training transfer self-efficacy

Training transfer self-efficacy is the extent to which individuals believe that they can successfully apply the training skills to their own work environment (Wood & Bandura, 1989)

Transfer of training

Transfer of training is the degree to which trainees apply new knowledge, skills, and abilities to their work setting (Baldwin & Ford, 1988). The first aspect of the transfer of training is generalization, which is trainees' ability to apply training skills in a scenario that is identical to or divergent from the training content, or both. The other aspect is the ability to maintain the transfer of training (Baldwin & Ford, 1988; Laker, 1990). In this study, both aspects of the intercultural adjustment and resilience strategies are anticipated outcomes. The transfer of training is also used interchangeably with training effectiveness.

Chapter Summary

Chapter 1 is an introduction to the study. In particular, it outlines the gaps in the transfer of training literature that need to be addressed, the purpose of the study, the main

research questions, research hypotheses, significance of the study, and definitions of the key terms. In the following chapter, a literature review on volition is presented to explain the relationship with the transfer of training and other key variables.

CHAPTER 2: LITERATURE REVIEW

This chapter reviews the transfer of training literature with the central theme of theories and relevant concepts related to the motivation process, volition to transfer training, and the intercultural adjustment of study abroad students.

Training has long been touted as a powerful tool to enhance individual and organizational performance (Bell et al., 2017). It equips trainees with the necessary knowledge, skills, and attitudes to perform their jobs to meet organizational standards (Baldwin & Ford, 1988). It also empowers employees to realize personal and career growth, prepares organizations and their people to adapt to the competitive market environment, and reinforces employees' compliance to the company's code of conduct and laws and regulations pertaining to their industry or job function. However, these outcomes can be fulfilled only if trainees translate what they learned in training into action (i.e., transfer training to on-the-job behaviors).

To date, most transfer of training research, scholars, and practitioners have focused on factors influencing trainees' transfer behavior, especially the "motivation to transfer" construct. Most motivation to transfer studies has limited the focus to the general definition of motivation by Noe (1986). As a result, many other aspects of this construct remain underexplored including volition, motivation process, autonomous motivation, and motivation regulation, as well as how these motivational-related concepts play a role in trainees' ability to initiate and sustain transfer behaviors (Huang et al., 2017). Failure to understand these concepts under the umbrella of motivation to transfer training has constrained the advancement of HRD knowledge and the opportunity to understand why some trainees successfully transfer training while others do not.

Volition as a motivational variable has been mostly overlooked in the past training transfer research. According to psychology literature, it is a mechanism that helps people initiate and maintain goal-directed action until their goal is achieved (Gollwitzer, 1996, 1999; Kuhl, 1985; Oettingen & Gollwitzer, 2010). Although the concept of volition seems to be relevant to the transfer research, it has rarely been examined in this context.

The structure of this paper follows the central themes: Motivation process, Volition, and Intercultural adjustment. First, motivation from the lens of psychology and management is described to show the lack of a holistic view of this construct in HRD. This first theme describes volition and the need for this construct in the current study. The paper proceeds with a discussion of definitions of volition, the function of volition in the motivation process, and major theories supporting the concept of volition. The third theme—Intercultural adjustment in the context of education abroad—introduces along with a review of intercultural adjustment and resilience strategies and sources of stress in the acculturation process. Finally, the chapter concludes with a summary of the relationship between transfer of training, volition, and intercultural adjustment.

Motivation Process

Motivation to attain a goal is important yet insufficient to realize the goal. This first theme discusses an intention-behavior gap as the psychological reason behind failed attempts to read a goal (Gollwitzer, 1999; Oettingen & Gollwitzer, 2010). Next, motivation and volition—two necessary components of the motivation process (Achtziger & Gollwitzer, 2007; Heckhausen, 1991) are explained to show how to close the gap.

Intention-Behavior Gap: an Impediment of Goal Attainment

The most common problem people encounter while pursuing a goal is their inability to initiate and maintain goal-directed actions (Duckworth et al., 2011). They are often distracted by other competing goals and discouraged by other factors (e.g., low self-efficacy, failure to recognize and seize opportunities to act, reluctance to act). For example, people who intend to exercise before going to work twice a week may decide not to keep their goal due to a busy work schedule. People who have this problem struggle and most fail to attain their goal. Metaphorically, the gap is between intention and behavior. A path that leads individuals to act on their intention encompasses (a) a specific end goal they want to achieve, (b) a desire for the goal (motivation), and (c) an ability to initiate and maintain their attention despite distractions (volition). When one or more of these components are missing, their ability to achieve the goal may be compromised.

In addition to competing goals and distractions, people often fail to translate their intentions into goal-directed actions because they have a difficult time recognizing an opportunity to act on their goals (Gollwitzer, 1999). The failure to detect action cues coupled with humans' propensity to procrastinate could lead to delayed initiation of goal-directed behavior.

Understanding Volition and Its Mechanism

To understand this intention-behavior gap, it is important to recognize the complex relationship between motivation and volition.

Motivation vs. Volition. A motivation process which moves a person to perform an action involves two sub-processes: motivation and volition (Achtziger & Gollwitzer,

2007; Heckhausen, 1991). Motivation refers to the choice of a goal or "the reasons underlying behavior" (Guay et al., 2010, p. 712). In contrast, volition is defined as the pursuit of a goal (Heckhausen, 2007). It helps a person implement the goal-striving intention formed in the earlier process. The intention will then transform their desire for the goal into a specific goal-directed behavior and continue that behavior until the goal is achieved despite obstacles or distractions (Heckhausen, 2007). These two components of the motivation process are necessary for individuals to successfully reach their desired goals. Motivation forms a person's intention to attain a goal while volition protects and supports the person's ability to stay on track with goal-directed behaviors. Without volition or the regulation of motivation, the likelihood of not achieving the goal increases greatly because it diminishes the motivation (Deci & Flaste, 1995).

Change is possible because individuals make it a reality. Rather than just talking about change, they can take a further step to pursue the change they want and take goal-directed actions. In other words, people who create change are the change themselves. Although everyone is capable of bringing about change, most people find it challenging to translate a goal into behavior.

Volition

The second aspect of the motivation process, volition, has received very little attention in the literature in the past three decades. In Gegenfurtner et al.'s (2009) integrative literature review on motivation to transfer, the authors recommended that future research should focus on volition. In particular, they called for research on the volition processes underlying training application and mediating analyses on the "motivational-volitional processes in training transfer" (p. 418).

Definitions of Volition

The most common definitions of volition are as follows. Merriam-Webster's dictionary defined volition as will— the power of choosing or determining and an act of decision-making. However, volition is colloquially understood as the strength of will (Corno, 2001), but definitions do not reflect the developmental meanings researchers have used to characterize volition.

The concept of volition has greatly evolved over a century of research. Ach, a German psychologist, was the first to differentiate the constructs of motivation and volition as different aspects of will. He defined motivation as the formation of the intention, and volition as the determination arising from an intention or decision (Ach, 1910). Lewin (1926b) soon proposed that volition is a form of motivation involving the regulation of motivation in the pursuit of existing goals. This aspect of the definition concerns the translation of existing goals into action and regulation of these processes. In 1985, Kuhl drew a firm line between motivation and volition and called them choice motivation and control motivation, respectively. Kuhl described volition as a mediating factor that "energizes the maintenance and enactment of intended actions" (p. 90). In contrast, motivation is the process by which an individual's decision to take action (i.e., goal selection) is based on values and expectancies of the action (Kuhl, 1985). More recently, Binswanger (1991) emphasized the cognitive self-regulation role of volition, likening it to "focus" in the realm of optics (p. 163). He suggested that volition should be understood as the rise of one's level of awareness, the focus of one's mind, and one's conscious act of focus. Corno (1993) also included the protective function of volition in her definition. She viewed volition as a dynamic system of the psychological process that

shields attention and effort from personal and/or environmental distractions. Volition also has received attention from neuropsychology, particularly neuroimaging research. Zhu (2004) summarized three concepts of volition as the mental act of (a) decision-making, (b) voluntary action initiation, and (c) executive control. He suggested that volitions are "special mental events or activities by which an agent consciously and actively exercises his agency to voluntarily direct his thoughts and actions" (Zhu, 2004, p. 303). Lastly, volition has been defined as an "array of self-regulatory strategies to support explicit action tendencies against competing behavioral impulses" (Kehr, 2004, p. 485) and the capability to inhibit distracting behaviors to attain a higher goal (Duckworth & Seligman, 2006).

In sum, volition involves two main sub-processes. The first sub-process involves cognition where one autonomously decides which goal to pursue, if and how to take action to reach the goal, regulating the motivation to act on the decision, and maintaining the goal progress. The other sub-process focuses on the actual goal-directed actions indicating the alignment between one's words and behaviors. In this sub-process, actions taken to achieve the goal are not only initiated but also maintained by one's motivation regulation. Put simply, when people have volition, they are fully conscious of the what and the why of the goal they are pursuing. They also demonstrate perseverance toward the goal despite obstacles.

Volition and Closely Related Terms

Persistence and grit are terms not to be confused with volition. They may appear to be very similar to volition, but they are more likely to be the outcomes of the process volition takes to achieve a goal. The process of volition involves one's commitment to a

desired wish, initiation of goal-directed actions, and motivation maintenance, which result in resilience against setbacks in the course of goal striving. From this perspective, grit and persistence are qualities a person needs for volition: grit being the "unyielding courage in the face of hardship or danger" (Duckworth et al., 2007, p.1087-1088), and persistence generally being the "directed effort extended over time" (Locke, 1996, p. 120).

The Rubicon Model of Action Phases: the Key Volition Framework

Heckhausen and Gollwitzer (1987) elaborated on the translation of one's intention to initiate behavior using the Rubicon model of action phases. They proposed four consecutive tasks or phases individuals must complete to successfully strive for a goal: pre-decisional, pre-actional, actional, and post-actional phases.

Pre-Decisional Phase. In this phase, people form goal intentions by choosing one or a few goals. This is an important initial stage where people feel motivated to pursue their own goals after they realize what they want to obtain (Heckhausen & Gollwitzer, 1987). Theories supporting this action phase include goal-setting theory (Locke & Latham, 1990) and expectancy-value theory (Vroom, 1964).

Pre-Actional Phase. Once individuals set goals, the next task is to plan for appropriate actions that help them attain the goals. The transition between the earlier phase and this phase is often referred to "the transition of the Rubicon" named after Julius Caesar's decision to stop considering the pros and cons of his intended action and commit to crossing the Rubicon River knowing he was initiating a civil war and that there was no going back. In this phase, an individual decides to embrace the intended action without hesitation. However, many factors could derail people from completing

this second course of action. Most people procrastinate and are not, by default, programmed to strive for their goals without distractions. In addition to the distractions (e.g., competing goals, demanding situations, time pressure), they may find it difficult to realize opportunities to take goal-directed actions. Action cues are not always clear or easy to realize. Therefore, creating a specific plan for when, where, and how to take goal-directed actions (Gollwitzer, 1996, 1999) helps them detect the action cues more effectively and maintain their intention to achieve their goals. Gollwitzer (1996, 1999) suggested a self- regulatory tool to help people transition from the pre-decisional phase to the pre-actional phase. The intervention, "implementation intentions (II)," is an if-then plan that specifies a condition after the "if" and a response to the condition following the "then." For example, an if-then plan for people whose goal is to exercise regularly may be "if I miss an evening workout, I will go a gym the next morning." According to Gollwitzer (1996, 1999), this intervention creates a mental link between a specific future situation and a goal-directed response which prompts an effective automatic response to an anticipated scenario, particularly a difficult one (Brandstätter et al., 2001).

Actional Phase. To fulfill this phase, individuals will have to direct their own efforts to implement the plan and bring it to a successful conclusion. This phase also requires that they persist in pursuing their goal despite difficulties and interruptions (Achtziger & Gollwitzer, 2010; Heckhausen & Gollwitzer, 1987; Lewin, 1926b). Their ability to resume goal-directed actions under such circumstances is determined by the volitional strength of the goal intention (Achtziger & Gollwitzer, 2010).

Post-Actional Phase. This fourth and final action phase entails individuals' evaluation of their achievement to determine if it is effective and corresponds with the

original goal intention (Achtziger & Gollwitzer, 2010; Heckhausen, 2007). Information individuals gain from this evaluation informs their decision regarding future attempts to reach the same or similar goals (Heckhausen, 2007).

Important Theories for Explaining the Mechanism of Volition

Four theories support the existence and mechanism of volition: expectancy-value theory (Vroom, 1964), action control theory (Kuhl, 1985), theory of planned behavior (Ajzen, 1991), self-regulation theory (Kanfer, 1977), and goal-setting theory (Locke & Latham, 1990). These theories are relevant to volition because they explain volition mechanisms, especially how some people are motivated to select, commit, take action, and guard against distractions while pursuing their goals.

Expectancy-Value Theory. Before people make choices, they typically weigh their desires to determine if the choice is worth their efforts. They may consider the consequences (i.e., pros and cons), the effort required to take a selected action, and task difficulty (e.g., put in terms of the Rubicon model, Heckhausen & Gollwitzer,1987). This consideration is part of the pre-decisional phase. In the work motivation literature, Vroom's (1964) theory predicted that three psychological variables are predictive of an individual's decision to try and change work-related behaviors. The variables are (1) expectancies, a person's beliefs about the extent his behavioral efforts will be translated into performance; (2) instrumentalities, a person's perception about the relationship between performance and outcomes (e.g., promotion, bonus, recognition); and (3) valence, the perceived importance and value of the outcomes. When one of these beliefs is missing, employees will not select the course of action (Porter & Lawler, 1968)

because they cannot see the worthiness and reasons for taking the action (Grant & Shin, 2012).

Goal-Setting Theory. Locke and Latham's (1990) goal setting theory of motivation explains why some people perform work-related tasks better than others. They posited that setting one's own goal facilitates performance because it directs the person's attention to goal-relevant activities, mobilizes and sustains efforts, and promotes the use of task-relevant knowledge (Locke et al., 1981). However, under some conditions, goal setting does

not effectively motivate individuals to strive towards their set goals (e.g., when the goal conflict swith other goals, when it is vague, when it is not perceived as attainable).

To create optimal performance, goals must be specific and challenging (Mento et al., 1987), and be used together with performance feedback (Erez, 1977) and high goal commitment (Klein et al., 1999). Having a set goal is crucial to for the motivation process since it is the reason people have a desire, plan, and commitment to the plan, and that they ultimately take action. Based on goal-setting theory, both motivation and volition are only triggered in the presence of a goal.

Theory of Planned Behavior. The theory of planned behavior (Ajzen, 1991), derived from the theory of reasoned action (Ajzen & Fishbein, 1980), posits that behavior is guided by three determinants: (1) the attitude towards a particular behavior (attitude), (2) the beliefs about the extent to which individuals care about opinions from their reference groups (subjective norm), and (3) an the perceptions about the extent to which the behavior is under their volitional control (perceived behavioral control). These factors affect individuals' behavioral intentions, which, in turn, lead to their decision to enact the

behavior or not. In this theory, volition is reflected in the third component: perceived behavioral control. Individuals need to feel that they are in control of their behavior or they will not act on their intention.

Action Control Theory. Kuhl (1985) developed the theory of action control to describe the mechanisms that enable people to maintain what Kuhl called action orientation: the ability to protect an intention from competing action alternatives and external distractions. Conversely, state orientation is the opposite of action orientation. People who are in state orientation are disengaged, passive, and lack persistence (Kuhl, 1994). The action control mechanism involves three synonymous actions: volition, self-regulation, and action control (Menec, 1995). Kuhl (1985) also proposed six action control strategies to help individuals maintain and protect their intention to perform goal-oriented actions. The six strategies are as follows: (1) Selective attention: This strategy requires that individuals inhibit themselves from processing information related to competing actions so their current intentions are shielded. (2) Encoding control: This strategy involves selectively encoding only stimuli related to the current intention and ignoring irrelevant features. (3) Emotional control: This strategy promotes the current intention and positive emotions must be maintained while emotions that do not promote the intention (e.g., sadness, attraction) must be suppressed. (4) Motivation control: It is also important to maintain and reestablish saliency of the current intention, especially when motivation to perform goal-related actions is weak. (5) Environmental control: An environment that supports regulation action involves social commitments and is distraction-free, and (6) Parsimonious information processing: This strategy refers to individuals' ability to decide whether they should stop or continue active behaviors to

support the current intention. These action control strategies are sometimes regarded as volitional strategies. Together, they help individuals shield their attention from distractions and maintain volition towards the goal.

Self-Regulation Theory. Self-regulation refers to the psychological processes by which individuals strive to attain a goal (Kanfer, 1977). It provides "the very basis for purposeful action" (Bandura, 1991, p.248) and "mobilizes self-directed change" (Bandura, 1991, p. 249). According to Bandura (1977), self-regulation involves three interrelated activities: self-monitoring, self-evaluation, and self-reactions. Self-monitoring refers to the attention paid to events, behaviors, and feedback related to the goal to gauge goal progress. Self-evaluation is a comparison of the discrepancy between a goal state and a current state. Individuals will know how far they are from reaching the desired goal through the act of self-evaluation. As a result, self-regulated individuals react to a discrepancy with affective and motivational responses. This final activity of self-regulation is called self-reaction. Similar to the role of volition in action control theory (Kuhl, 1985), volition is depicted in self-regulation theory as the self-regulation process that helps individuals maintain their attention and efforts towards a goal.

Volition in Job Performance and the Transfer of Training Context

Most organizations want to promote performance goals in their employees. Not all people come to work with one or more performance goals in mind; even the best employees may not have a goal to do good job and improve job performance every day. Tiredness, job dissatisfaction, and perceived injustice may derail employees' ability to reach their performance goals. Some employees may have other goals instead of a performance goal (e.g., to earn enough money). Given that the motivation to do well in a

job varies, it is important to know how motivation helps employees strive for a goal in general and in a workplace learning context.

Volitional Behaviors at Work. In workplace settings, volition could be demonstrated in terms of persistence in the face of obstacles so employees can meet a goal set for their job, have the determination to accomplish the goal, and follow through with behavioral intention directed by the goal. Put simply, volitional behaviors are purposeful goal-striving actions.

Since intention and goals are key ingredients that drive volition, volitional behaviors at work can be very beneficial or be destructive to the well-being of an organization, based on whether these two ingredients are directed towards productive or counterproductive actions. For example, good use of volition is demonstrated when a research and development (R&D) officer shows dedication to an invention for a new or improved product, despite a number of failed test runs. Volition may also be when a group of manufacturing workers continue to maintain a new safety working procedure, even though many people said it would not make a difference. Volition could also be negative such as the will to perform unproductively and/or act unlawfully (e.g., a sales representative randomly brings home company products for personal use). In this case, the volition is used to support counterproductive work behavior (CWB). CWB is a volitional act an employee purposefully does to harm an organization and/or its members. Facets of CWB could include abuse, theft, absenteeism, or sabotage (Sackett & DeVore, 2001).

It is important to recognize that both types of volition exist and could play a key role in many individual and organizational outcomes, including motivation to learn and

transfer of training. However, for the purpose of this paper, only employees' volition to transfer training is discussed.

Volition to Transfer Training and Potential Factors. Volition to transfer training is a resource that is depleted or replenished in a given situation. To nurture trainees' volition to apply training skills at work, it is important that HRD scholars and practitioners understand the factors to which the volitional resource is potentially sensitive. Factors discussed in this section include attitudes towards a training program, stress at work, existing work habits, ego depletion, defensiveness, and self-concordance.

Attitude Towards a Training Program. Trainees develop attitudes towards a training program based on their evaluation of the training topic, the nature of training participation (voluntary vs. mandatory), relevance of the training program to the current job, and the perceived value of the training skills (e.g., Bhatti et al., 2013; Gegenfurtner et al., 2009). Attitudes towards a training program can influence a person's intention to learn and apply training skills, which is a prerequisite for the development of volition. Research has indicated that trainees' attitudes towards training, content relevance, perceived utility, and value are necessary factors for the transfer of training (Burke & Hutchins, 2007; Yelon et al., 2004). When trainees have a positive attitude towards training, and perceive content relevance and usefulness of the training, they are more likely to have high motivation to transfer. However, when trainees' attitudes and perceptions are not positive about the training program, their motivation to use the training at work is low. The power to decide to attend training also influences the transfer of training. Curado et al. (2015) reported that voluntary-based training enrollment has a higher impact on motivation to transfer than when the training is mandatory.

Occupational Stress. Another challenge related to successful transfer of training could be high stress at work (e.g., heavy workload). Stress is known to weaken people's ability to act consistently with their wishes and therefore reduce the likelihood of behavioral change (Payne et al., 2002). Budden and Sagarin (2007) conducted a study examining the relationship between occupational stress and participants' volition to exercise. After manipulating participants with a volition intervention (i.e., implementation intention), they found no volition to exercise among participants with high occupational stress. Although the explanation of this finding is yet to be explored, it may be reasonable to anticipate a similar effect of an implementation intention intervention on the transfer of training for stressed professionals.

Existing Work Habits. Asking trainees to transfer training to their jobs is asking them to make a behavioral change. Change is difficult even with early adopters (trainees who already embrace the training transfer initiative). People struggle to unlearn old work habits and to pick up new behaviors. According to the two process theories (Evans & Frankish, 2009; Evans & Stanovich, 2013), human behavior is driven by both conscious decision-making as well as habits that have automatic context-behavior associations to specific situations. Behaviors at work, for instance, how an employee completes a task, can be habitual, making the habit difficult to unlearn because it is outside of the employee's awareness and conscious control. For example, in medical research, several studies have reported that many clinical practices of healthcare professionals are habitual (e.g., Gupta et al., 2017; Linder et al., 2014; Vaughn et al., 2004).

Habits are an integral part of human functions. One of the key benefits is that it allows individuals to accomplish mundane tasks effortlessly and efficiently with minimal

focal attention (Posner & Snyder, 1975; Schneider & Shiffrin, 1977; Shiffrin & Schneider, 1977). For example, habits allow an administrative officer to fill out a form the same way every day without having to think about matching information with labels on blank boxes in the form. Habits also save cognitive resources and energy for more difficult and stressful tasks. In the same example, habits help the officer save cognitive space for forms that are not filled out on a regular basis or for exceptional cases to the same form.

In psychology, habits are generally defined as learned dispositions to automatically repeat past responses that are triggered by frequent opportunities to exercise the same performance, with the same or similar performance locations, performance sequences, and similar people (Verplanken & Aarts, 1999; Wood & Neal, 2007). As one performs a new action, a mental association between the situational context and action is formed in the person's memory. The association is strengthened over time through performance reinforcement (Wood & Neal, 2009); thus, the behavior becomes more automatic and easier to retrieve from memory. This automatic repetition also means that people engage in minimal cognitive processing and consciousness when they perform habitual behavior. The more often the behavior is practiced, the less accessible alternative actions are to the situation. An example of a habitual behavior could be a regular interval for email checking at work.

Most employees gain competencies in their job through months or years of work experience. Like most jobs, employees are likely to complete certain tasks every day (e.g., completing paperwork, talking to customers, ordering a specific medication for patients, operating common kitchen appliances) while other tasks in are performed less

frequently (e.g., troubleshooting rare customer service issues, working with new production materials, using a new technology/software at work). The habit formation process makes it possible to gain mastery on tasks that are performed most frequently and to develop procedural knowledge to accomplish the tasks over several repetitions. When employees can perform the tasks like a reflex, work habits are finally ingrained their performance.

Habitual behaviors, however, could also contribute to performance errors. A performance errors influenced by habits are "skilled-based errors" (Rasmussen & Jensen, 1974; Rasmussen, 1982; Reason, 1990). Skilled-based errors occur when the highly practiced routine based on stored habitual patterns of behavioral responses to specific context cues override the intended performance, leading to an action (or error) that the performer did not intend. In most cases, it is either a lack of attention to goal-directed actions or a memory failure that gives way to the overriding habit. Skill performance that is prone to this type of error is usually fast and effortless (Gluyas & Morrison, 2014)

Two types of skill-based errors are slips and lapses (Rasmussen, 1982; Reason, 1990; Sarter & Alexander, 2000). The former refers to an error in which the performer fails to pay close attention to the execution of the intended action. This failure leads to an incorrect action or one that leaves out a step in a process. An example of an action slip in a workplace context could be a nurse's incorrect reading of a patient's lab results. Lapses, on the other hand, are the omission of an action due to memory failure—in most cases, forgetfulness. Lapsses usually occur when the performer is distracted by someone (or something) in the contextual environment where the intended action is to be performed.

For instance, a nurse forgets to administer medication because s/he was distracted by someone in the ward.

Many studies on human factors (Burns, 2017; Lenné, Ashby, & Fitzharris, 2008; Lenne et al., 2012; Lloyd et al., 2018; Patterson & Shappell, 2010; Sarter & Alexander, 2000) indicate that skill-based errors (slips and lapses) are the primary causes of performance errors in aviation, mining, and medical contexts compared to other two types of errors (e.g., rule-based errors, knowledge- based errors). Sarter and Alexander (2000) reported that for U.S. aviation accidents, the frequency of skill-based errors was (this agrees with frequency) almost twice the frequency of the other two error types. Berry's (2010) meta-analysis of causes of accidents and near miss cases across industries (aviation, rail, food, entertainment, and mining companies) also revealed that 46% of the investigated cases were skill-based errors while knowledge-based and rule-based errors accounted for 32% and 5%, respectively.

Although skill-based errors are the most prevalent source of performance errors across multiple contexts, apparently, this type of error is rarely recognized by individuals making these mistakes. Wood et al. (2002) asked their participants to record what they were thinking, feeling, and doing once every hour to determine if there were behavioral patterns in their daily lives. The results revealed that approximately 43% of actions were performed almost daily and usually in the same context. Another interesting fact in their study was that the participants did not realize that they had repeated behaviors. If behaviors individual perform at work are somewhat habitual, then it is very likely that they have developed working habits and made performance errors without consciously thinking about the performance patterns.

Transfer of training requires that trainees have to work hard to change their current habitual work behaviors. When applying new training skills, the path from the mind to action is not well-rehearsed. This allows a well-repeated pattern of work habits to intrude on trainees' intention to transfer training. Habit intrusion is a pervasive issue not only in daily life, but also in employees' performance at work even if they are well-trained. An individual who comes to work with an intention to perform well at work and to transfer training, could end up making errors due to work habits that are deeply engrained in their performance. For example, Berntsen (2004) found that a group of well-trained nurses and a surgeon forgot to check the compatibility of a patient's blood type and that of the organ donor before an organ transplant operation, resulting in the death of the patient.

Ego Depletion. In pursuit of a long-term goal, it is required that one exerts volition to control the (Kanfer & Karoly, 1972; Mischel et al., 1989) temptation to take an immediate (vs. long-term) reward which may interfere with reaching the goal (Baumeister et al., 2018; Muraven & Baumeister, 2000). In Freud's terms (Freud, 1923a, 1961b), ego depletion is a result of a conflict between one's id (a drive to pursue what one wants to do) and ego (a drive to stay on track and do what one should do). He theorized that the ego's attempt to suppress the id leads to ego depletion (i.e., a depletion of self-regulation resources). In the transfer of training context, a reduction in self-regulatory resources suggests that trainees are distracted from competing goals and procrastination, which later interfere with peoples' ability to commit to goal-directed behaviors.

Defensiveness. An unconscious defense mechanism is a natural human reaction to change. It is the habitual response individuals develop to protect themselves from change and to help them cope with psychological discomfort the change causes (Coghlan, 1993; Steinburg, 1992; Zaltman & Duncan, 1977). Forms of defensive reactions to change can vary from person to person. For example, from skepticism (Ledford et al., 1989) to self-justification (Staw, 1981), to defensive reasoning (Argyris, 1990). In change management literature, these behaviors are commonly described to as resistance to change.

Defensiveness may post a challenge to volition induction and a successful transfer of training initiative as, on the one hand, trainees vary in their attitudes towards training and motivation to use new learning at work. Defensive trainees are expected to be less sensitive to volitional intervention and less motivated to transfer training. On the other hand, being defensive can jeopardize one's self-regulation process and goal attainment. Receptivity to feedback during the behavioral change process is critical since it can lead to modifications in goal striving strategies. Trainees who successfully adopt transfer behavior in their work routines are expected to actively engage in self-evaluation and adaption from feedback.

Self-Concordance. Self-concordance refers to the extent to which individuals perceive that their goal-directed behaviors are aligned with their personal interests and values (Sheldon & Elliot, 1999). It increases people's energy to commit and exert efforts to pursue their goals, which includes making necessary life-style changes to accommodate that behavior (Deci et al., 1994).

Gaudreau, Carraro, and Miranda (2012) found that self-concordance significantly predicted goal progress and explains 80% of the indirect relationship between self-

concordance and goal progress through self-regulation. The concept of self-concordance is crucial to behavioral persistence in the pursuit of a goal. Many studies (e.g., Koestner et al., 2006; Koestner et al., 2008) have shown that individuals with self-concordant goals displayed the greatest goal progress following an implementation intention intervention.

Volition, the Transfer of Training, and Self-Regulation

Volition has been well-recognized as helping individuals successfully strive for goal-related behaviors and maintain positive behavioral changes, especially in health psychology research (Schwarzer et al., 2011; Sudeck & Höner, 2011) and education (Corno, 1993; Corno & Kenfer, 1993; Novak, 2014). However, volition has received little attention in the extant training and development research.

Application of training skills and knowledge on the job requires employees to regulate their motivation and cognition and maintain them over time. Ideally, organizations not only hope for evidence of training transfer from their training programs, but they also expect trainees to maintain these behaviors over the long run. However, for continuity of transferred behaviors to occur, trainees need to (a) unlearn previously inefficient work-related knowledge and behavior, (b) adopt what they have learned in the training, (c) put the new learning into action in their job performance, and finally (d) keep track of their progress and maintain the transfer behavior. When trainees are exposed to these self-regulatory challenges, they need to align their thoughts, feelings, and action with their intentions (Gollwitzer & Sheeran, 2006, 2009) and focus their attention and efforts on reaching the final outcome: the transfer behaviors. For example, a trainee needs to work hard over time to give up existing and potentially automatic work behaviors (e.g., the previous sequence of job procedures, talking to

customers with a certain tone of voice) and repeatedly practice the new knowledge and skills they learned in training to gain competence. During that time, if trainees cannot remain focused to learn and unlearn behaviors and overcome setbacks (e.g., obstacles, distractions) in the transfer process, there will be little possibility of the transfer of training.

Volition and the Regulation of Motivation

Trainees' regulation of their own motivation is not a synonym of volition. In his action control theory, Kuhl (1985) described six volitional strategies. He indicated that these control strategies are vital because they facilitate people's initiation and maintenance of the desired actions that are necessary to achieve a goal. Wolters (2003) viewed the regulation of motivation, as the broad social cognition of self-regulated learning in which motivation interacts with cognitive and other self-regulatory processes. Chow (2009) added that motivation only concerns the regulation of motivation while volition concerns both regulation of motivation and regulation of cognition (Chow, 2009).

Once behavioral intention is formed, the journey to control volition over goal-directed actions has just started (Gollwitzer & Moskowitz, 1996). Unfortunately, numerous problems await along the journey. Sheeran and Webb (2016) suggested that pursuit of goals can be "derailed by competing goals, bad habits, and disruptive thoughts and feelings" (p. 10). In the transfer process, a trainee may experience a series of events that lead to derailment of the transfer goal. Distractions and setbacks may include forgetting to transfer, heavy workload, outside-of-work commitments, inadequate supervisor and peer support (Burke & Hutchins, 2007; Martin, 2010), no opportunity to

transfer the knowledge (Burke & Hutchins, 2007; Clarke, 2002), and failure to implement transfer behavior. These potential distractions and setbacks may demotivate trainees from their commitment to transfer training. However, the degree of impact on trainees' motivation to transfer may vary depending on their context. For trainees to overcome these distractions and setbacks and the impact of motivation, they need to have the volition to initiate transfer behaviors, guard against other sources of distractions and setbacks, and focus on striving towards the transfer goal. In this sense, the concept of volition may provide a psychological explanation for why some trainees successfully apply new learning at work, while others do not.

The Importance of Volition to Training and Development

The ultimate purpose of using training and development in an organization is to help individuals and the organization adapt to the changes, which could be rapid, radical, or continuous. Training could prepare the workforce, individually and collectively, so they have adequate knowledge, skills, abilities, and other characteristics (KSAOs) to perform their jobs efficiently. It could also involve improving trainees' existing knowledge and skills. Both situations demand a certain level of commitment to meet the training objectives. Thus, these individuals need to (1) be persistent in changing despite distractions and obstacles; and (2) regulate their motivation and cognition to remain focused on the pursuit of the goal so they can unlearn inefficient work practices, and/or transfer new learning to the job. A change of trainees' behavior is an extremely challenging task; thus, only those who have volitional control can successfully perform the action they desire.

Workplace learning in the 21st century has changed extensively with the increasing popularity of online training platforms and experiential learning. In the 21st century, globalization, a dispersed workforce, and an intense focus on cost reduction to enhance competitiveness has driven organizations to place more emphasis on employee accountability for their own learning. Thus, volition is even more important. With this fast-changing environment, it may not be practical for a company to rely too heavily on the traditional face-to-face training format. The traditional approach to training is becoming cost-inefficient and difficult to arrange, given the growing work-from-home and virtual organizational trends. Individual members of an organization are also expected to constantly build their expertise through years of on-the-job experience, reflect upon their observations of those experiences, make sense of the information they learn from observation, and test their understanding of the information in a new context. In such cases, in-class training may not always be a useful method to develop a competent workforce. While both of these approaches give trainees more freedom to learn on demand and at their own pace, two challenges arise from this new style of workplace learning: (1) trainees need to be active agents of their own learning, and (2) trainees are likely to be more exposed to distractions that could jeopardize their motivation to learn and transfer. Hence, trainees who learn new knowledge and skills through these approaches need volition to regulate their attention and exert more effort to achieve a learning and/or transfer goal throughout the process.

Volitional Measurements

To utilize the concept of volition as it relates to transfer training, we need to measure individual trainee's level of volition. There are several ways to measure volition.

Some of them focus on one aspect of the term (e.g., action initiation) while others conceptualize volition from a more integrative perspective. For example, the Action Control Scale (ACS; Kuhl, 1994a), the Locomotion and Assessment Questionnaire (LAQ; Kruglanski et al., 2000), and the Self-Regulation Scale (SRS; Luszczynska, 2004) emphasize either one's ability to initiate a goal-oriented action, or one's ability to maintain focus and emotions regardless of distractions. In contrast, the Volitional Components Inventory (VCI; Kuhl & Fuhrmann, 1998) and the Volitional Components Questionnaire (VCQ; Kuhl & Fuhrmann, 2000) include multiple sub-scales of self-regulation (e.g., explicit attention control, implicit attention control, motivation control, emotion control).

In the last 10 years, volition has been measured using a volition scale, namely the Volitional Components Questionnaire (VCQ; Kuhl & Fuhrmann, 2000), and an implementation intention scale. Both measurements are well-received in volitional research across different fields. For instance, a number of studies have used VCQ to measure athletes' volition (e.g., Elbe et al., 2005; Moesch et al., 2013), entrepreneurs' volition (e.g., Hikkerova et al., 2016; Ilouga et al., 2014), and students' volition (e.g., Schmitz & Perels, 2011). The implementation intention scale has been employed by many volition researchers (e.g. Gollwitzer, & Oettingen, 2013; Kirk et al., 2013; Sheeran & Webb, 2006) interested in testing volitional intervention and different behavioral outcomes as a result of goal intention and implementation intention for a specific goal.

Volitional Intervention

Most people find it very challenging to act on and maintain goal-directed actions partly because they fail to detect action cues, do not anticipate distractions, or they have

ineffective coping responses (Gollwitzer, 1999). Thus, it is important that they receive treatment to help them stay focused on their goals. Volitional intervention can also help people detect action cues, initiate actions more promptly, and maintain goal-directed actions. Gollwitzer (1999) suggested the use of implementation intentions to promote cue detection, action initiation, and self-regulation for successful goal-directed behaviors. Gollwitzer and his colleagues combined the original II intervention with mental contrasting (MC) (Oettingen, 2000, 2012), another psychological intervention to create an even more powerful volitional intervention (e.g., Adriaanse et al., 2010; Duckworth et al., 2013; Kirk et al., 2013) called mental contrasting with implementation intention (MCII). These two interventions are sometimes referred to as a self-regulation strategy.

Mental Contrasting with Implementation Intention (MCII). Both II and MCII focus on successfully striving for a goal by breaking unwanted habits and replacing them with new ones. The II portion of the two interventions creates a strong linkage between counter-habitual implementation intention and the desired response, which cancel out habitual influences on one's behavior. The effect of II allows individuals to choose between performance choices when they encounter a habit-intrusion-prone scenario (Adriaanse et al., 2010; Oettingen et al., 2015; Marquardt et al., 2017). Mental contrasting (MC) helps individuals stay energized in the pursuit of a goal, strengthen the association between reality and actions to overcome negative situations, and finally, realize performance discrepancies between reality and the desired future state (Oettingen, 2000, 2012; Oettingen & Schwörer, 2013).

Although the effectiveness of II and MCII has been well-established in health psychology research, both tools have been expanded to other contexts (e.g., recycling

behaviors (Holland et al., 2006), promoting speed limit compliance (Elliot & Armitage, 2006), sustainable food consumption (Loy et al., 2016), and promoting integrative bargaining (Kirk et al., 2011). This may suggest that many activities, whether personal or professional, are prone to habit intrusion. Given this conclusion and that many work tasks are skill-based, II and MCII should promote adherence to the use of new training skills.

II has been used to promote attendance in safety training (Sheeran & Silverman, 2003) and the the transfer of organizational sales training and active listening skills (Friedman & Ronen, 2015). The findings from these two studies suggest that II facilitates corporate learning and work performance.

Intercultural Adjustment in a Study Abroad Context

Study abroad programs are educational programs that are conducted outside the students' country of origin or where they are currently studying (Carlson et al., 1990). The length of the programs range from two weeks to a year. This type of international education program requires students to be immersed in a new cultural environment in the host country. Although participating in such a program could be an exciting experience, it could also present stressors (i.e., language barriers, difficult social interactions, academic stress, practical problems associated with changing environments) in the acculturation process to fit into the new culture (Smith & Khwaja, 2011). The host culture could be subtly or vastly different than the students' home culture. Thus, it could be overwhelming for some individuals given the differences between the home and host cultures ranging from a granular level (i.e., daily functioning activities) to a more macro scale (i.e., understanding the work culture or banking system).

In this paper, the term *acculturation* is used interchangeably with the following terms: intercultural adjustment and cross-cultural adjustment. The focus of this study is intercultural adjustment for students in a semester-long study abroad program.

Acculturation Process

Berry, Trimble, and Olmedo (1986) defined intercultural adjustment as an adaptation process by which individuals change behaviors, beliefs, and values, as a result of contact with members of the host culture. The process cycle runs in a cumulative-progressive manner, starting with the individual's encounter with acculturative stress (Berry, 1997), defined as stress one encounters when having difficulty conforming to norms and values of a new culture. The individual then goes through a process of adaptation, grows from the experience, and finally cycles back to a new stress (Kim, 2001, 2006). The repetitive cycle becomes tighter over time and the individual is more interculturally seasoned (Basor & Gaugler, 2017). This implies that individuals can deal with acculturative stress better and more efficiently in each successive cycle. In other words, each exposure to acculturative stress helps the individual "re-organize and re-engage in the activities of cultural learning and internal change, bringing about a new self-reintegration" (Kim, 2012, p. 234). As a result of this process, the individual develops resiliency.

The acculturation process can also be understood from the perspective of intercultural adjustment in transitional stages. Lysgaard (1995) proposed four phases of intercultural adjustment (i.e., the U-curve theory): honeymoon, crisis, adjustment, and biculturalism. Although the length of time each individual spends on each phase varies, on average, people experience the honeymoon phase over the first two months, enter the

crisis phase six months after that, adjust between months 9-48, and finally reach the last phase after week 48.

Types of Intercultural Adjustment

Two types of intercultural adjustment are (a) psychological adaptation and (b) sociocultural adaptation. The first entails subjective well-being (Ward, 1996) indicated by high self-esteem and life satisfaction and low psychological problems (i.e., anxiety, depression, psychosomatic symptoms). The latter refers to behavioral responses related to how one can fit in and connect with people in the new culture (Ward et al., 2001).

Variables Influencing the Acculturation Process

Research has identified several variables that influence the acculturation process including general knowledge about a new culture (Ward & Searle, 1991), length of residence in a host culture (Ward et al., 1998), quantity and quality of contact with host nationals (Bochner, 1982), language proficiency (Furnham, 1993), cultural distance (Ward & Kennedy, 1993a, 1993b), and cross-cultural training (Deshpande & Viswesvaran, 1992).

Geeraert and Demoulin (2013) identified three main variables that fit into the three categories of acculturation predictors: intrapersonal, interpersonal, and intergroup. The intrapersonal predictors include individual personality (Van der Zee & Van Oudenhoven, 2000; Ward et al., 2004), locus of control (Ward & Kennedy, 1992, 1994), intercultural adjustment readiness at pre-departure (Masgoret & Ward, 2006), homesickness (Zheng & Berry, 1991), and the level of psychological adjustment (Ward & Kennedy, 1994; Ward & Rana-Deuba, 2000). Interpersonal factors such as building a social network of support (Furnham & Alibhai, 1985; Vega & Rumbaut, 1991) is an

important acculturation strategy. Lastly, the intergroup factor refers to one's social identification with the people and culture of the host country while still maintaining their own identity. Liebkind (2006) and Phinney (1990) suggested that social identification plays a key role in sojourners' well-being and self-esteem.

Intercultural Adjustment and Resilience

Resilience refers to ''the process of adapting well in the face of adversity, trauma, tragedy, threats or even significant sources of stress'' (The American Psychological Association, 2014, para. 4). In the most traditional sense, it is an ability to overcome psychopathology or symptoms of maladjustment due to trauma in one's life (Luthar et al., 2000; Masten & Reed, 2002). While the definition is accurate, definitions of resilience can differ based on the context (Southwick et al., 2014). Therefore, resilience is "a robust phenomenon emerging in response to widely varying stressful experiences" (Bonanno et al., 2011, pp. 518-519). In a cross-cultural context, acculturation is a stressful experience as individuals are required to juggle multiple aspects of adjustment demands: work/study, interaction, and general adjustment (Black et al., 1991). For example, a change in routine activities and life conditions in a new culture (e.g., making friends, engaging in everyday conversations using the local language) can be frustrating. At the same time, individuals must perform well in their work or study while building relationships and a social identity with people in the host culture. A person who demonstrates effective coping abilities, strong host country identification, and high interaction with host nationals is considered resilient while those who fail to do so are likely to be poorly adjusted (Ward & Kennedy, 1993a; Ward & Rana-Deuba, 2000).

Conner (1993) suggested that a resilient person must have the following characteristics: an ability to be positive about life, confidence in him/herself, can look at a situation from multiple angles, can establish social support, able to deal with ambiguity, and can act decisively in the face of uncertainty. Consistent with other studies on resilient coping, resilience is an adaptive problem-solving approach (e.g., Beardslee & Podorefsky, 1988; Fonagy et al.,1994; Kumpfer, 1999) "to situations or stressors and (it) is manifested as cognitive skills, problem-solving ability, and attributes that indicate a capacity for action in facing a situation" (Polk, 1997, p. 6). Development of one's resiliency is achieved by practicing realistic goal setting, an assessment of consequences following an action, and active problem-solving behavior (e.g., flexible thinking, perseverance, and resourcefulness) (Sinclair & Walston, 2004).

Resilience Characteristics

Studies, dating back to the late 1970s and 1980s, have identified several similar characteristics of a resilient person. Rutter (1985), a primary researcher on this topic, identified several characteristics to define resiliency including having social support, self-efficacy, close relationships with others, a sense of humor, and past achievements. Other researchers (Connor & Davidson, 2003; Kobasa, 1979; Lyon, 1991) have suggested that being resilient means an ability to view change or stress as a challenge/opportunity, commitment, recognition of factors beyond one's control, optimism, and faith. Conner (1993) also proposed seven characteristics of resilient people: optimism about life, positive thinking about oneself, an ability to look at a situation from multiple angles, an ability to build and make use of social support, commitment to a goal, an ability to stay

organized during chaotic moments and manage how one acts under ambiguity, and active engagement in change.

Connor and Davidson (2003) introduced the most widely used measurement scale of resilience due its reliability, sound psychometric property, and applicability with both clinical and non-clinical samples. The content of the adjustment and resilience training used in this study is informed by the list of resilience characteristics cited in Connor and Davidson (2003).

The Relevance of Intercultural Adjustment to Volition and the Transfer of Training

Acculturation is a demanding process. It requires that individuals change the many already engrained cognitive, affective, and behavioral habits they bring into a new culture. How they think and interact with people, the food they like to eat, the things they like to do in their free time, the facial expressions they make are a few examples of habitual behaviors that are extremely difficult to change. Prior to going abroad, students may learn adjustment and resilience strategies and know that certain changes are required to maintain a healthy and integrative self abroad. However, students may have a difficult time overriding the existing habits despite their intention to use the strategies when they encounter acculturative stress. The reasons for not applying the strategies may be forgetfulness, distractions from other commitments/interests, or fear of failure with their intercultural contacts. These reasons are indications of a lack of volition (i.e., the ability to initiate and strive for necessary goal-directed actions). The perils of having motivation but not volition to strive for a goal are that the longer the acculturation difficulties persist, the more likely students are to give up on trying the adjustment and resilience strategies or they may become marginalized, depressed, or avoid future intercultural contacts

(Berry, 1997). Thus, a volitional intervention must be used to help them move beyond the state of a desire for the goal (i.e., a motivation state), and act on a path that leads to intercultural adjustment.

Online Intercultural and Resilience Skills Training

Online training (or e-learning) has become a popular alternative mode of delivering training in the 21st century. Organizations, including higher education institutions, gravitate towards online courses because they offer great flexibility for learners and are cost-efficient learning solutions for organizations (Döös & Wilhelmson, 2011; Grollman & Cannon, 2003). Online training also allows trainees who are geographically dispersed to attend a training simultaneously (Bell et al., 2017; Clarke et al., 2005; Noe et al., 2014), which is an important benefit for intercultural learning in an education abroad context.

To develop intercultural learning skills in study abroad students, students must engage in constant reflection that is facilitated in each phase of the study abroad program. Online training is an appropriate form of learning for this audience given that students live across the globe and have varying adjustment needs. In this study, an asynchronous online training program (i.e., interaction does not occur simultaneously) was designed to equip students for intercultural adjustment. The training aimed to offer flexible, non-graded content that students could access at any time. Both pre-arrival and post-arrival content was included in the training modules.

Online Transfer of Training Support

Asynchronous online learning is very different from traditional in-person learning in many ways (e.g., level of communication (Lim et al., 2007). For example, learners

have autonomy over their own learning (Brown, 2001; Steinberg, 1989), they are required to use some technical skills (Chen & Jang, 2010), and discussions are not live. Given these limitations, students are more prone to lack motivation and, as a result, learner attrition is a common problem with online courses (Aragon & Johnson, 2008; Serwatka, 2005), which could ultimately affect the transfer of training. Similarly, Lim and colleagues (2007) found a direct effect in two relationships: (a) learning motivation and learning performance, and (b) learning motivation and the transfer of online learning. To combat these potentially negative relationships, two commonly suggested approaches to support motivation are follow-up learning activities and job aids.

Learning Follow-up. Understanding the training content (declarative and procedural knowledge) is the basic foundation of near and far transfer of training. Declarative knowledge represents factual information acquired in the beginning of skill acquisition while procedural knowledge (Anderson, 1982; Kim et al., 2013) entails task knowledge (e.g., steps taken to perform a task). When rehearsed and practiced, declarative knowledge will be consolidated and turn into procedural knowledge, and eventually form a skill through overlearning (Kim et al., 2013). Using this rationale, researchers recommend regular skill repetition to encourage skill retention and proficiency (Card et al., 1978; Kim et al., 2013; Ritter & Schooler, 2001; Seibel, 1963). Skill repetition is especially important in the early stage of skill acquisition because declarative knowledge will decay and be forgotten with a lack of practice. Organizations may also consider tracking the use of training skills, setting small achievable training transfer outcomes over time, providing regular follow-up feedback, providing an

opportunity for learning refreshment, and other follow-up strategies. However, organizations often perceive that these activities are expensive.

Job Aids. An economical solution to support the transfer of e-learning is to use a job aid (Sasson et al., 2006) such as a cheat sheet developed to prompt learners' retrieval of learning memory and guide targeted performance (Durgin et al., 2014; Gravina et al., 2008; Palmer & Johnson, 2013). In many cases, a job aid also serves as a verbal or visual reference for performing the steps of the task. Forms of job aids may include checklists, flowcharts, and signs (Sasson et al., 2006). Besides reducing the cognitive load of declarative and procedural knowledge of the target performance, job aids also serve as immediate, and on-demand performance assessment support prior to, during, and after training (Grossman & Burke-Smalley, 2018)

Conclusion

Training goal attainment demands that trainees put high attentional effort in every stage of goal-striving to make optimal use of training skills (i.e., goal setting, initiating, and following through on the goal-directed course of actions). The same logic applies to the implementation of intercultural adjustment skills to acculturate to a new setting. Beyond the realization of an intercultural adjustment goal, people who relocate to accomplish a mission overseas must be cognizant of when, where, and how to appropriately apply intercultural adjustment skills, and most importantly, act on them. At the same time, they have to pay close attention to their behavioral patterns to avoid offending people in the host culture. These activities not only require high attentional effort, but also great mental strength to cope with overwhelming stress (Baumeister & Heatherton, 1996; Wagner & Heatherton, 2015) and a depletion of self-control (Inzlicht

& Schmeichel, 2012)—the two conducive conditions for habit intrusion and are obstacles to the transfer of training.

To date, both expatriates and study abroad students are two large populations who struggle to exercise intercultural skills to gain the maximum benefits. Many of them are maladjusted and/or experiencing the consequences of negative coping (e.g., alcohol abuse). A study by Aetna International (Aetna, 2017), highlighted a 19%-33% increase in expatriates' insurance claims related to mental illness, primarily depression and anxiety. Similarly, Poyrazli and Mitchell (2020) found that more than half of U.S. study abroad students in their study experienced minimal to moderate depression (54%) and anxiety (69%). In addition to the prevalence of mental health issues among these populations, many studies have consistently reported a continuing problem with substance abuse among expatiates and study abroad students along with negative impacts following the abuse (e.g., Bader & Berg, 2013; Faeth & Kittler, 2017; Kraimer & Wayne, 2004; Pedersen et al., 2017; Wurtz, 2018). These problems, if ignored, may significantly compromise expatiates and study abroad students' ability to live up to the performance level that they and their organizations expect. Based on these adjustment issues, it appears that both groups of people are in critical need of support for mental strength and attentional effort.

Psychology literature about volition may shed light on this problem. Volition, colloquially known as willpower, is a capacity to self-regulate goal-directed attentional effort and behavior despite setbacks. Volition explains "how people act to reach their goals, given the opportunities and the obstacles they are facing" (Keller et al., 2019, p.5). Volition is particularly a process by which one addresses goal-striving issues that

motivation cannot. These issues include the inability to get started and stay on track or overextending oneself and engaging with unattainable goals (Gollwitzer, 2015). Becoming acculturated by implementing intercultural skills means individuals overcame these issues. Expatriates and study abroad students also need volition to maintain attentional effort and goal motivation (i.e., a desire for acculturation)—an important determining transfer of training factor—to maximize the likelihood of achieving a goal. For these reasons, I hypothesize that:

Hypothesis 2: Goal intention is positively associated with transfer of training.

Hypothesis 5: Implementation intention is positively associated with transfer of training.

Hypothesis 7: Implementation intention moderates a positive relationship between the goal intention and transfer of training.

Volitional interventions (i.e., MCII/WOOP, II) has been backed by over 20 years of behavioral change research for their effectiveness (Adriaanse et al., 2010; Duckworth et al., 2013; Houssais et al., 2013; Kirk et al., 2013; Marquardt et al. 2017; Orbell et al., 1997; Sheeran & Orbell, 2000). The interventions primarily target a reduction of automatic undesirable habitual behaviors and a promotion of preferable habits formation. Volitional interventions help people subconsciously recognize goal-related action cues (e.g., a suitable place and time to implement intercultural skills), feel energized to pursue the goal, and take the necessary actions that lead to goal achievement (Oettingen, 2000, 2012; Oettingen & Schwörer, 2013; Oettingen et al., 2015). Furthermore, the interventions protect goal-striving individuals from distractions and shifting away from goal attainment, thus increasing the likelihood of two outcomes: (a) a successful

behavioral change (e.g., the transfer of training), and (b) adherence to behavioral change. Given this rationale, I hypothesize that:

Hypothesis 1: Students in the treatment group have higher goal intention scores than those in the control group.

Hypothesis 3: Goal intention mediates a positive relationship between the treatment condition and transfer of training.

Hypothesis 4: Students in the treatment group have higher implementation intention scores than those in the control group.

Hypothesis 6: Implementation intention mediates a positive relationship between the treatment condition and transfer of training.

Chapter Summary

This chapter reviewed four important bodies of literature that are central to the proposed study: motivation process, volition, intercultural adjustment, and transfer enhancement strategies for online training. The chapter starts with an introduction of a motivation construct as a state and a process, followed by a psychological mechanism of the motivation process. This first body of research serves as foundational knowledge to understand volition. The discussion includes reasons why behavioral change efforts often fail, and why it is a necessary ingredient for a successful goal pursuit even when there is high motivation. Volition, which is the main variable of interest in this study, was then discussed in more depth (e.g., theories related to the concept of volition, volitional interventions, the relationship between volition and habit intrusion, volition and the transfer of training). The following section discusses volitional interventions as a solution to students' implementation of adjustment and resilience training skills to cope with life

and academic challenges in a different culture. The discussion also focuses on their overall improvement in resilience. Next is a remark about two commonly used transfer support tools: follow-up activities and job aids. Finally, the chapter ends with rationale for the hypotheses of this study and a chapter summary.

CHAPTER 3: METHODOLOGY

This chapter describes several approaches to capture and empirically examine volition in a transfer of training process. Topics include the research design, population of the study, study sample, instruments used to collect the data, procedures for collecting the data, and methods for analyses of the data.

Research Design

The research design of this study was informed by the two research questions: (a) What is the role of volition to transfer training in the transfer of training process? and (b) How would a trajectory of volition, goal intention, and the transfer of training unfold over time?

Given these questions and the need for a volition trigger, I chose a longitudinal experimental design for the study. The design is not only appropriate for the questions the study is trying to answer, but also provides the highest level of objectivity. First, it allows the researcher to objectively compare the results between the control group and the treatment group. A causal relationship can also be drawn from the findings given that the design assigns a completely random condition. Another important benefit of this design is that it is compatible with an intervention study. A volitional intervention is necessary because individuals rarely form volition on their own and frequently struggle with the following issues: getting started, staying on track, and overextending themselves (e.g., Marquardt et al., 2017; Oettingen et al., 2015). The volitional intervention will help them act on their intentions and successfully reach their goal(s). The sample was assigned at

random to either the control or treatment condition using *GraphPad,*[1] an online randomization generating tool. The sample in both conditions received training and the first survey was conducted at baseline. The treatment sample received the volitional intervention at the end of the training while the control sample did not.

The context of this study is the transfer of intercultural adjustment and resilience skills training for study abroad students across 14 weeks. I chose this context for two main reasons: its similarity to business expatriate adjustment to an overseas assignment, and its contribution to students' intercultural learning prior to departure. At a fundamental level, study abroad students and business expatriates have the same cross-cultural adjustment process (e.g., Berry, 1997; Church, 1982). They both are exposed to tasks overseas (e.g., study abroad classes, a business assignment) starting almost immediately after arrival. At the same time, they have a limited time to deal with culture shock and to reconcile their emotions at each adjustment state. A considerable change in their lives in a short transitional period may add to acculturative stress and, in turn, could lead to a difficult adjustment. Given this rationale, the study could be generalizable to expatriate adjustment periods. The second reason pertains to the online intercultural learning content as a part of study abroad preparation. Intercultural learning is often discussed briefly in a typical pre-departure orientation. The most common content is an adjustment curve. This study prepares students for their study abroad experience at a deeper level. The detailed content and examples present four strategies for strengthening intercultural adjustment and resilience. A volitional intervention aimed to help the

[1] See https://www.graphpad.com/quickcalcs/randomize1/

treatment group let go of the habits that were ingrained in their daily functioning such as food choices, way of thinking, and traditions (Kim, 2008; Thayer, 1975). The volitional intervention was meant to break habits and, simultaneously, allow for the development of new (desired) habits. It was expected that the intervention would increase students' cross-cultural adjustment and their use of intercultural adjustment and resilience strategies through in the online training.

This study measured variables of interest at three continuous points in time. At baseline, all students who voluntarily participated in the study participated in an online training course meant to prepare them for intercultural adjustment and resilience before going abroad. The treatment group also participated in the volitional intervention (mental contrasting with implementation intention; MCII) in addition to the training. All participants were encouraged to participate in the two follow-up surveys (week 6 and week 14). Here, I anticipated a 30% attrition rate from one time point to another.

Population and Sample

The sample for this study was undergraduate students who attended study abroad programs through a public research university (institution A) and a private liberal arts college (institution B). Both are located in the Midwest, United States. All students in the research sample were enrolled in a semester-long study abroad program in the 2019-2020 academic year.

The two institutions have a learning abroad office that overseas college-sponsored and partnered study abroad programs. Institution A provides several types of study abroad programs (e.g., regular study abroad, internships, community engagement, research, and volunteer experience courses) in over 70 countries worldwide. The center

offers 250 programs which comprise of short-term and long-term programs catered to students' diverse needs. Students enrolled in a program through this institution are offered a free enrollment in a Global Identity (Globe) course, a semester-long course meant to scaffold students' development through an intercultural lens (e.g., ethno-relativism). Students in this course complete several learning activities (e.g., reading assignments, blogging, reflection journal) that facilitate a deeper understanding of their own cross-cultural transition and the host culture. Institution B offers fewer programs with limited destinations. Students enrolled in a study abroad program in institution B did not have access to intercultural learning or a similar Global Identity course. Nevertheless, both institutions are similar in terms of the study abroad application procedure, pre-departure and re-entry procedures, and assigned staff to administer each program.

An appropriate sample for this research was obtained through two means. One was an advertising video that was shown to students during pre-departure orientation. The video briefly described skills students would learn from the online learning module called "Intercultural Skills Builder (ISB)", time commitment, voluntary participation, and incentives. Following the orientation, students were told they would receive an email describing the same content as in the advertising video, a frequently asked questions (FAQs) sheet, and a web address to the ISB module for their randomly assigned[2] condition. See the email template in Appendix D. Students who decided to participate

[2] Students in the treatment and control groups received different web addresses to the ISB module. The web addresses are as follows.
http://interculturalskillsbuilder.dash.umn.edu/wwcc14sp2020/story_html5.html (treatment group)
http://interculturalskillsbuilder.dash.umn.edu/nwcc11sp2020/story_html5.html (control group)

were presented with a consent form (see Appendix C1 and C2) and a confirmation of their right to withdraw from the study without any repercussions.

Participants had to meet the following criteria to be included in the final sample: (a) They had a study abroad registration record at one of the two institutions; (b) They completed at least the baseline survey; (c) They completed the online training module; (d) They agreed to participate in the study on a voluntary basis; and (e) They gave consent for this study.

Prior to data collection, a power analysis was conducted to calculate the minimum sample size for retaining power. RStudio version 1.2.5033, package *pwr* was the main tool for this analysis. To reject the null hypothesis with 0.8 power, an effect size of 0.5 and alpha of 0.01, a minimum number of 192 participants were required for the paired t-test analysis. Additionally, a regression analysis with three predictors required a minimum sample of 76 to achieve a power of 0.8, given an effect of 0.5 and Cronbach's alpha of 0.05.

Data Collection Procedure

Data collection procedures began shortly after the Institutional Review Board (IRB) approval was received from the University of Minnesota (see Appendix H). There was no risk associated with the study and all collected identifiers were used only to match data from the same students over time. However, the identifiers were removed from the dataset before analysis. The procedures are described in a chronological order in Figure 2.

Randomization of condition assignment

The random assignment was carried out using a random number calculator in a website called *GraphPad*. The procedure was as follows. First, I combined a list of study abroad students at two institutions. Based on the total number of students, I indicated on the website to randomly assign them into either group number 1 or number 2. Group number 1 was the treatment condition whereas group number 2 was the control group. Students in both groups were then sent the invitation via email to participate in the study.

Adjustment and Resilience Strategies Training

In addition to the standard in-person orientation, students learned coping strategies to deal with challenging and stressful experiences abroad. This online asynchronous module included four components: (a) Manage your expectations, (b) Openness to new experiences, (c) Build social support, and (d) Maintain positivity and self-confidence. These strategies were expected to be used or "transferred" by students when they were abroad. Each lesson contained a 5-minute animated presentation and a learning activity. After the training was completed, students could continue to access the information any time they needed. Descriptions of the content in the modules are presented below.

Manage Your Expectations

This part of the module aimed to help students anticipate realistic challenges living abroad. Students learned about sources of acculturative stress (e.g., unmet expectations regarding academic requirements, cultural differences, loneliness) and about the acculturation process. Finally, they learned tips to manage expectations (e.g., gain knowledge about the host culture, expect challenges as part of the learning curve).

Openness to New Experiences

This part of the module encouraged students to push themselves out of their comfort zone by trying new food, joining local activities, and making local friends. They were told that engagement with elements in the host culture could enhance cultural understanding while establishing a social identity with the host culture.

Build Social Support

This part of the module drew on the importance of building relationships while study abroad. Students learned tips to start a connection, foster relationships, and reach out to trusted individuals for support (co-nationals and local friends, host family, instructors, and on-site staff).

Maintain Positivity and Self-Confidence

The next module presented information about positivity. They were taught that another key to intercultural adjustment/acculturation was to see the bright side of things, to understand a situation from multiple perspectives, to be kind to oneself when making mistakes, and to believe in their own ability to deal with challenges they would face abroad.

Baseline Measurement

A baseline measurement was taken immediately after students completed the online learning module. The baseline measurement was administered using a self-administered electronic survey tool, *Qualtrics*®. The purpose of the baseline measurement was to examine the sample's current state of resilience using the Connor and Davidson Resilience Scale (CD-RISC 10), the transfer of the adjustment and resilience strategies training, perceived content validity, training transfer self-efficacy,

motivation to transfer training (goal intention), volition to transfer training (implementation intention), and gathered demographic information including age, gender, years in school, type of housing, type of program (internship vs. non-internship course), number of local contacts, time spent with local contacts, and prior experience living/studying abroad. The baseline measurement could be completed any time prior to departure up to the first day of the program start date.

Treatment Condition

Students who were assigned to the treatment condition received the MCII intervention (10 minute-online module) at the end of the learning module.

MCII Intervention Session. The MCII intervention is also called the Wish-Outcome-Obstacle Plan (WOOP). In the online ISB module, students watched a video describing habit intrusion, WOOP, and how WOOP could help them overcome challenges in their intercultural adjustment. Following the video, students read a WOOP script meant to scaffold a composition they would write based on the WOOP statement (see script in Appendix G). Students were asked to compose four WOOP statements, one for each skill learned in the online module.

Control Condition

At the end of the baseline measurement, students in this group were thanked and reminded of the next follow-up surveys (week 6 and week 14).

Follow-Up Sessions

The follow-up sessions (20 minutes each) were administered online at weeks 6 and 14 of the study abroad program. Each session had two components: a 2-page course refresher (job aid) and a 10-minute follow-up survey. The job aid was used to remind

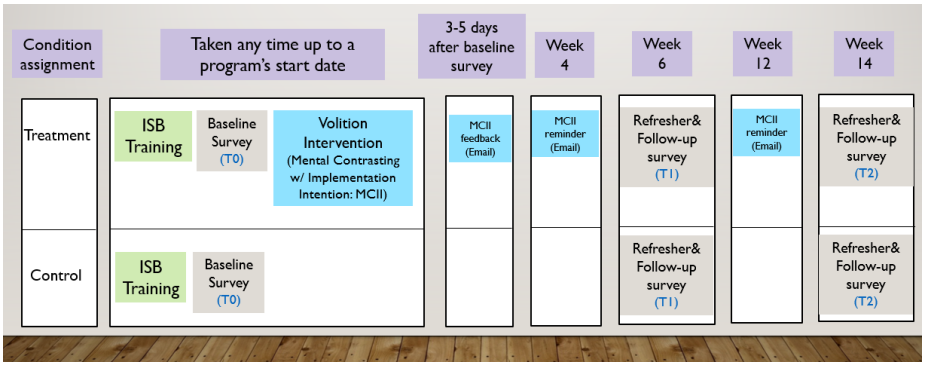
students of key takeaways from the training as well as examples of skills use. Job aids are a well-recognized for reducing cognitive load and facilitating the transfer of training (e.g., Rossett & Schafer, 2007; Salas et al., 2006). The survey instruments included question items from four scales: goal intention, implementation intention, the transfer of training (the ISB learning module), and transfer self-efficacy scales. The job aid content (see Appendix B) was identical to the original adjustment and resilience strategies training. To encourage student participation in the follow-up surveys, students were entered into a raffle for a $150 Amazon gift card, which was awarded to one student who took all the surveys and won the raffle. Students who completed at least one follow-up survey were eligible to win a $50 Amazon gift card.

Debrief

At the end of the study (week 14), the purpose of the study was revealed after students in both conditions completed their responses to all survey instruments and signed a consent form. Students were also asked (online) if they were aware of the purpose of manipulations in both conditions. Then they were thanked for their participation (see script in Appendix E).

Figure 2

The Data Collection Model



Note: Green, gray, and blue colors in the data collection model represent activities in which students participated in the study. Green represents the intercultural adjustment and resilience skills training while gray represents the three waves of data collection. Blue represents a volitional intervention added to the training and a series of intervention follow-up emails, which were unique to the treatment group. Purple represents the titles of the columns.

Survey Response Rate

Following the pre-departure orientation, an email invitation was sent out to 1,054 students who were going to study abroad in the Fall 2019 (288 students) and Spring 2020 (766 students). The data collection over the academic year yielded 195 students who studied abroad for one semester (N=85 (29.5% response rate) in Fall 2019; N=110 (14.4% response rate) in Spring 2020). These numbers also represent students who responded to the baseline survey (T0) at both waves of data collection. Of this total sample size, 82.56% (N=161) attended institution A, 11.28% (N=22) attended institution B, and 6.2% (N=12) students attended other institutions who studied abroad through the Learning Abroad Office at institution A. On week 6, the number of respondents to the

first follow-up survey (T1) dropped by approximately 28% and 39%, respectively. The attrition rate is consistent with past volitional intervention literature (Marquardt et al., 2017; Stadler et al., 2010). From there, responses to the second follow-up survey, which was administered at week 14, decreased by approximately 16.4% (T2, Fall 2019). No data were collected for the second follow-up survey (week 14) in Spring 2020 due to a suspension of all study abroad programs in response to the coronavirus pandemic effective on March 15, 2020 (see the official announcement in Appendix F). More demographic information about the survey respondents are presented in Table 8. Table 1 provides a summary of the survey responses at each data point.

Table 1

Survey Responses (Breakdown by Institution)

Condition	Time	Total (N)	Institution A	Institution B	Others
Treatment	Baseline	82	69 (84.15%)	11 (13.41%)	2 (2.44%)
	Time 1	51	43 (84.31%)	6 (11.76%)	2 (4.65%)
	Time 2	22	16 (72.73%)	4 (18.18%)	2 (9.09%)
Control	Baseline	113	100 (88.50%)	12 (10.62%)	1 (0.88%)
	Time 1	76	63 (82.89%)	12 (15.79%)	1 (1.32%)
	Time 2	29	16 (55.17%)	12 (41.38%)	1 (3.44%)

Variables and Instrumentation

Six survey instruments were employed in this study to measure the following: the transfer of training, CD-RISC 10), goal intention (representing the motivation to transfer construct), implementation intention (representing the volition to transfer construct),

perceived content validity, and transfer self-efficacy. They were all self-reported measures. Students' demographic information was also collected. Appendix A includes all the questionnaires measuring these variables. Table 1 summarizes the constructs used in this study, including the number of items for each construct and the response format. The survey instruments were in English.

Of the six survey instruments, only one was the original version. The rest were either adapted to meet an international education context or newly developed (see Table 2). To ensure internal validity of the study, all non-original measurements were validated with a panel of HRD scholars, and two subject matter experts (SMEs) from the International Education Office at institution A. The purpose of this validation was to examine whether the survey items were appropriate for the intended sample. Based on their feedback, the survey measures were further revised accordingly before the baseline measurement was administered.

Table 2

Construct of the Survey

Construct	No. of Items	Response Format	Scales
Goal intention	4	5-point Likert Scale	*N/A (A newly-developed scale)*
Implementation intention	6	5-point Likert Scale	**Adapted from:** Machin & Forgarty (2002)
Connor-Davidson Resilience Scale (CD-RISC 10)	10	5-point Likert Scale	**Original:** Campbell-Sills & Stein (2007) ($\alpha = 0.85$)
The transfer of training	12	5-point Likert Scale	*N/A (A newly developed scale)*

Perceived content validity	4	5-point Likert Scale	**Adapted from:** Holton et al. (2000)
Transfer self-efficacy	4	5-point Likert Scale	**Adapted from:** Holton et al. (2000)
Demographic information (age, gender, race, current educational degree, type of housing abroad, prior experience living/studying abroad, internship status, number of local contacts, time spent with local contacts, internship status, language of instruction)	11	Fill-in-the-blank questions/Multiple choice	*N/A*

Goal Intention

Goal intention measures the extent to which one is committed to applying the adjustment and resilience strategies in their daily life abroad. It is a four-item, 5-point Likert scale (1=Strongly disagree, 5=Strongly agree) which was newly developed. Sample items are as follows: "I intend to use the adjustment and resilience strategies in my everyday life abroad" and "I intend to use what I learned from the adjustment and resilience training in my daily life abroad." In this study, goal intention also represents motivation to transfer training.

Implementation Intention

Implementation intention measures the extent to which one is committed to his/her action plans specifying where, when, and how to use the four adjustment and resilience strategies on the job. The measure is a 5-point Likert scale (1=Strongly disagree, 5=Strongly agree). It includes six question items adapted from Machin and Forgarty's (2002) implementation intention scale. Sample items include "I will look for opportunities to use adjustment and resilience strategies in my daily life abroad," "I will

practice using the adjustment and resilience strategies in my daily life abroad," "I will set specific goals for maintaining the adjustment and resilience strategies during my time abroad," and "I will monitor my success at using the adjustment and resilience strategies during my time abroad." In this study, implementation intention also represents volition to transfer training.

Connor-Davidson Resilience Scale

The Connor-Davidson Resilience Scale (CD-RISC 10; Campbell-Sills & Stein, 2007) is a brief version of Connor and Davidson's (2003) original measure of the ability to cope with stress and adversity. It was chosen for this study because of its brevity and excellent psychometric properties (Campbell-Sills & Stein, 2007). This instrument includes 10 items with response options of "Not true at all" (0) to "True nearly all the time" (4). Scores range from 0 to 100 with higher scores indicating greater resilience. Sample items include: "I can handle unpleasant feelings," "I tend to bounce back after illness or hardship," and "I am able to adapt to change." Many researchers (e.g., Burns & Anstey 2010; Campbell-Sills & Stein, 2007; Gucciardi et al., 2011; Notario-Pacheco et al., 2011; Ye et al., 2017) have found that CD-RISC 10 has better psychometric properties, is more robust, and is more parsimonious than the original scale.

The Transfer of Training

The training transfer scale measures trainees' frequency in their application of adjustment and resilience strategies in daily life while studying abroad. The scale is newly developed and has 12 items. The scale ranges from 1 (never) to 5 (every time). Sample questions include, "I expect to feel more comfortable with a new culture as time

progresses," "No matter what happens, I will always find a solution," and "I will be open to find out local foods and activities I like."

Training Transfer Self-Efficacy

This scale measures the extent to which one is confident about his/her ability to demonstrate the use of adjustment and resilience strategies while making intercultural adjustments to life abroad. The wording in the scale is adapted from the English version of the Learning Transfer System Inventory (LTSI; Holton et al., 2000). The scale ranges from 1 (strongly disagree) to 5 (strongly agree). Sample items include, "I am confident in my ability to use adjustment and resilience strategies in my everyday life abroad" and "I have no doubt in my ability to apply adjustment and resilience strategies in my everyday life abroad." The scale has four items.

Perceived Content Validity

This scale measures the extent to which one perceives that the training content is of high quality and relevant to the context they are in. The scale is adapted from the English version of the Learning Transfer System Inventory (LTSI; Holton et al., 2000). The scale ranges from 1 (strongly disagree) to 5 (strongly agree). Sample items include, "Examples discussed in the training are similar to the scenario I am experiencing" and "I like training because I can easily relate to my situation abroad."

Demographic Information

In addition to the variables presented above, the following demographic characteristics of the survey participants were collected: name, age, gender, race, current educational degree, type of housing, type of program (internship vs. non-internship

course), experience living/studying abroad, number of local contacts, and time spent with local contacts.

Data Analysis Procedure

This study used multiple analysis approaches to answer the research questions. In this section, all approaches are described chronologically.

Reliability and Validity Analysis

Data analysis procedures began with reliability and validity analysis of all instruments.

Confirmatory factor analysis (CFA) was conducted to measure whether the instruments measured what they intended to measure. CFA analysis procedures and results are reported in this chapter.

Descriptive Statistics and Correlation Analysis

The second step was to analyze the descriptive statistics of the variables collected in this study. Descriptive statistics were gathered for two purposes. The first purpose was to examine the general data trends between the control and treatment groups based on the mean, standard deviation, and percentage of responses for each demographic variable. Another purpose of the analysis was to closely examine the frequency of non-demographic variables collected at each time point. A series of correlation analyses were also conducted to examine if there was evidence of multicollinearity (i.e., a high correlation between two or more explanatory variables) in the data set. Procedures and results of both analyses are described in Chapter 4. Together, the results of these analyses provide a potential explanation to the similarity and differences in study results.

T-Tests

Next, I conducted t-tests with all ordinal scale variables at each time point and for each group. The paired t-tests allowed me to validate the unbiased random assignment. For the randomization check to be valid, there must be no differences in an aggregated baseline response for each variable between the control and treatment groups. This type of analysis also allowed for an examination of whether the MCII volitional intervention was successfully manipulated. Additionally, paired t-tests were employed to examine within-person changes in GI, II, TT, and Open across the three data waves. The results from this analysis allowed for comparisons among the three pairs of aggregated scores of the variables (week 0 vs. week 6, week 6 vs. week 14, week 0 vs. week 14). The t-test results are described in Chapter 4.

Regression Analysis

Simple and multiple regression analyses were completed to test the hypothesized relationships (Kerlinger & Pedhazur, 1973; Knofczynski & Mundfrom, 2008). See Figure 1 for the hypothesis model. Linearity, normality, independence, and homogeneity of variance assumptions were tested to ensure pre-requisite conditions prior to the regression analysis (e.g., Cohen et al., 2003; Montgomery et al., 2012). After all the assumptions were proven to be tenable, each hypothesis was tested using data from each wave, and the control variables were added to the confirmed hypotheses (see procedures and results in Chapter 4). The seven hypotheses examined in this study were as follows:

Hypothesis 1: Students in the treatment group have higher goal intention scores than those in the control group.

Hypothesis 2: Goal intention is positively associated with transfer of training.

Hypothesis 3: Goal intention mediates a positive relationship between the treatment condition and transfer of training.

Hypothesis 4: Students in the treatment group have higher implementation intention scores than those in the control group.

Hypothesis 5: Implementation intention is positively associated with transfer of training.

Hypothesis 6: Implementation intention mediates a positive relationship between the treatment condition and transfer of training.

Hypothesis 7: Implementation intention moderates a positive relationship between the goal intention and transfer of training.

Reliability and Validity Testing of Instruments

This section describes the CFA procedures and results.

Confirmatory Factor Analysis (CFA)

This study employed seven measures: four adapted, two original, and one new scale. To ensure internal validity, CFA was conducted using list-wise deletion to verify the underlying theoretical constructs within the instruments in a context of study abroad students at U.S. higher education institutions. Variables being examined were TT, GI, II, Open, Resc, TTSE, and Val. All CFA was conducted using RStudio version 1.2.5033. Next, I described the procedures taken to complete the analyses.

First, multivariate outliers were identified and excluded from the analyses. The variables were examined for the 193 participants in the study. Six multivariate outliers were found using Mahalanobis distance with $p < .001$. These outliers were deleted, leaving 187 cases. Following this step, I ran bivariate correlations to check for

multicollinearity and singularity for all variables. No variables were too highly correlated (*rs* < .90). The normal Q-Q plot of the standardized residuals showed that the variables were linear. The normality assumption was also met, but slightly skewed to the right. A standardized residuals scatterplot indicated that there was homogeneity of variance.

Next, I created a four-factor model for the transfer of training scale, an instrument supported by literature resilience and cross-cultural adjustment techniques. Sub-dimensions of the four-factor measurement scale corresponded with the pre-departure training for all students taken at baseline. The sub-dimensions are (a) manage expectations, (b) openness to experience, (c) build social support, and (d) maintain positivity and self-confidence. The results from the analyses supported the transfer of training model. Item loadings ranged from -0.16 to 0.80 (see Table 3) indicating that the model needed refinement. Two of the three scale items were reverse-coded. Comparative fit indices (CFI: cut off value is ≥ 0.90) and standardized root mean residuals (SRMR: cut off value is < 0.08) with values from 0.88 to 0.07 both indicated that the model has a plausible fit. $\chi^2(48) = 121.63$, $p < .001$ (see Table 4). Root mean square error of approximation (RMSEA) of 0.08 did not show a good fit. However, there was no concern with the RMSEA value as it is irrelevant indicator when computing model fit using small sample data (N<200) and a small degree of freedom (Kenny, Kaniskan, & McCoach, 2014; Kline, 2010). Consistent with these researchers, Taasoobshirazi and Wang (2016) found that RMSEA values were smaller as the sample size and degree of freedom increased (e.g., For N=200, RMSEA rejection rate for 2, 5, and 20 degree of freedom are 20.1%, 14.6%, 2.7%). Therefore, they concluded that researchers “should avoid reporting

the RMSEA when sample sizes are smaller than 200, particularly when combined with small degrees of freedom." (p.38).

Table 3

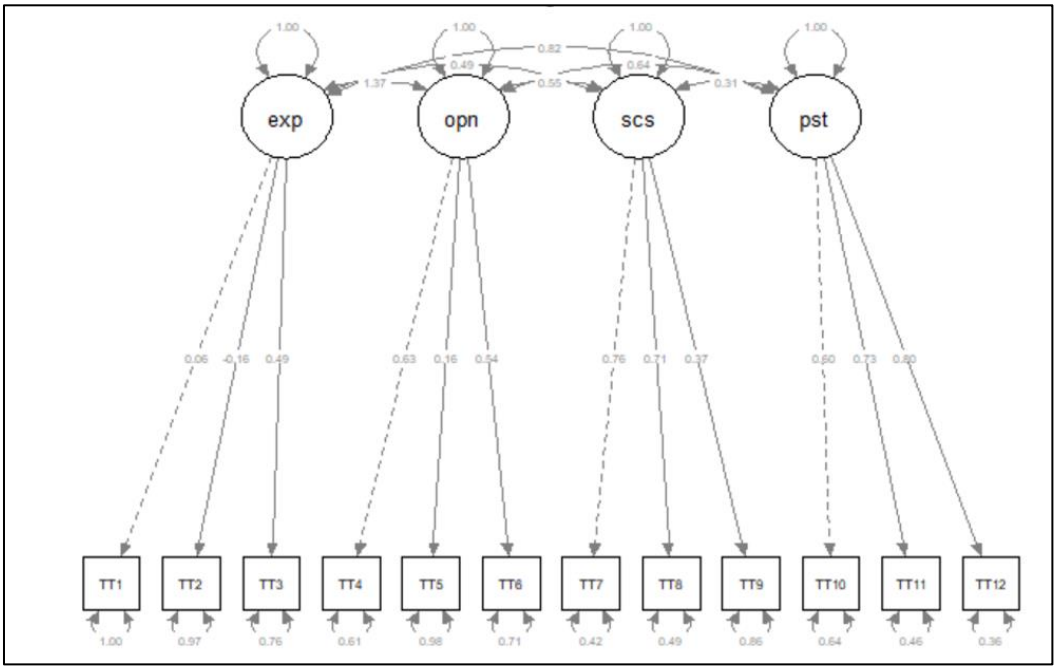
Standardized Loadings by Confirmatory Factor Analysis for the Four-Factor Transfer of Training Model

Item	Factor loading			
	Exp	Opn	Scs	Pst
1. I expect challenges (e.g., homesickness, language barrier, culture shocks) during my time abroad, especially the first few weeks.	0.06			
2. **(Reverse coded*)** I expect to make many close local friends the first week I arrive.	-0.16			
3. I expect to feel more comfortable with a new culture as time progresses.	0.49			
4. I navigate a new culture through trial and error.		0.63		
5. **(Reverse coded*)** I am hard on myself every time I make mistakes.		0.16		
6. I am open to find local foods and activities I like.		0.54		
7. I reach out to people for help and advice.			0.76	
8. I spend time with local friends/families.			0.71	
9. I keep in touch with my family and friends back home.			0.37	
10. I look at the bright side of things whenever I face challenges.				0.60
11. No matter what happens, I always find a solution.				0.73
12. I believe in my ability to deal with difficult times.				0.80

Note. exp = manage expectations, opn = openness to experience, scs = build social support, and pst = maintain positivity and self-confidence, tt= the transfer of training

Figure 3

CFA Diagram of the Transfer of Training Model



Note. exp = manage expectations, opn = openness to experience, scs = build social support, and pst = maintain positivity and self-confidence, tt= the transfer of training.

Goal intention, another newly developed measure, demonstrated good factor loading. CFI (Cut off value of ≥ 0.90) was 0.99 while the SRMR (Cut off value of < 0.08) was 0.01 (See Table 4).

Three measures (implementation intention, training transfer self-efficacy, and perceived content validity) were adapted from the original versions to fit the context of study abroad adjustment. The factor loading, SRMR, and CFI values suggested a good model fit (See Table 4).

The resilience (CD-RISC 10) and openness to experience (Mowen & Spears, 1999) scales demonstrated excellent CFI values (0.93 and 0.97, respectively). Table 4 shows the chi-square, degree of freedom, a range of factor loadings, SRMR, and *p*-value.

Table 4

Confirmatory Factor Analyses of all Latent Variables in the Study

Model	*df*	χ^2	Beta range	CFI	SRMR	TLI	*p*-value
TT	48	121.63	-0.16-0.80	0.88	0.07	0.83	~.00
GI	2	2.61	0.83-0.90	0.99	0.01	1.01	~.00
II	14	150.44	0.62-0.79	0.80	0.08	0.72	~.00
Open	5	17.32	0.54-0.91	0.97	0.05	0.98	~.00
Resc	35	86.73	0.60-0.75	0.93	0.05	0.92	~.00
TTSE	2	10.84	0.65-0.85	0.97	0.04	0.88	~.00
Val	The model is saturated. A goodness of fit test is not applicable.						

Note. TT = the transfer of training, GI = goal intention, II = implementation intention, Open = openness to experience, Resc Pre = resilience (Pre-test), TTSE = training transfer self-efficacy, Val = perceived content validity.

Chapter Summary

In this chapter, I presented the research design, population and sample, data collection procedure, and instruments used in this study. Measurement items are provided in Appendix A. Finally, I concluded this chapter with a verification of the validity and reliability of the survey instruments. The CFA results indicated a goodness of fit for all variables.

CHAPTER 4: RESULTS

This chapter presents empirical evidence pertaining to the role of volition within the transfer of training mechanism in three sections. Each section includes highlights from the analysis and summary tables. The first section provides descriptive statistics of the main and demographic variables. The following section is a series of student t-test results. Finally, the results from hypothesis testing are presented.

Descriptive Statistics

The sample included 195 students who participated in the study: 82 students (42.05%) in the treatment group and 113 students (57.95%) in the control group. It is important to keep in mind that the results of this study reflect an approximately 16% difference in sample size between the two groups. In this section, all variables are reviewed and compared between the two experimental conditions.

Independent and dependent variables

At baseline (T0), the mean scores of all ordinal variables were relatively similar between the two groups. The variables being measured at baseline included the transfer of training (TT), goal intention (GI), implementation intention (II), openness to experience (Open), resilience (Resc), training transfer self-efficacy (TTSE), and perceived content validity (Val). Overall, for each variable, there was a small mean difference between the two conditions. The treatment group had a slightly higher mean score than the control group in TT, Open, Resc, and TTSE. Although the volition manipulation was given to the treatment group prior to the baseline measurement, the mean II score of the control group exceeded that of the treatment group. The two largest differences in the mean scores between the two conditions were in TTSE (0.13 points)

and Val (0.12 points). Skewness and kurtosis were also examined. TT and TTSE were positively skewed for the treatment group while the other variables were not. For the control group, a positive skewness was found in GI, II, Resc, and TTSE. Table 5 for a comparison of the standard deviation, minimum and maximum values, skewness, and kurtosis.

Table 5

Descriptive Statistics for Variables Measured at Baseline (T0)

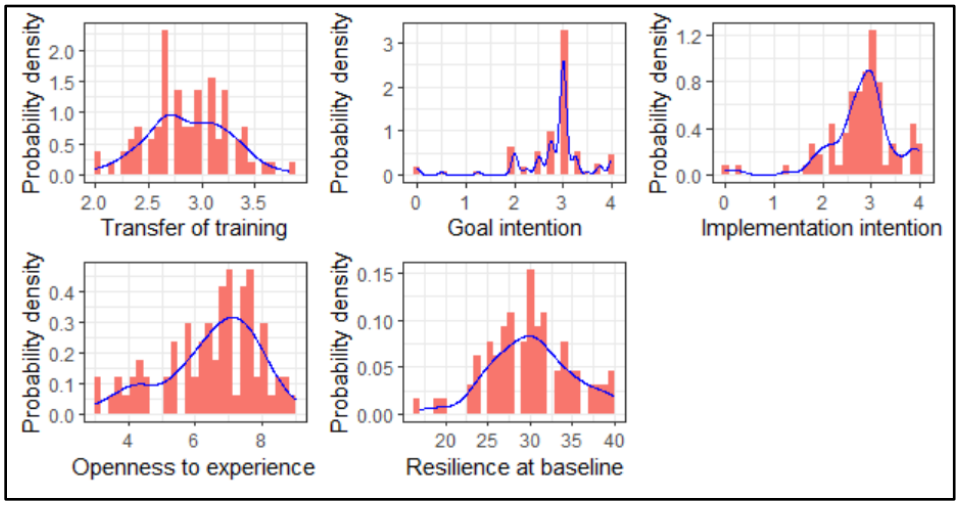
	N	$\bar{X}$	Min	Max	SD	Skewness	Kurtosis
TT	195	2.87	2	3.83	0.36		
Treatment	82	2.87	2	3.83	0.38	0.04	2.64
Control	113	2.86	2	3.67	0.34	-0.24	3.26
GI	195	2.84	0	4	0.64		
Treatment	82	2.81	0	4	0.72	-1.75	8.04
Control	113	2.87	1	4	0.58	0.05	3.47
II	195	2.83	0	4	0.62		
Treatment	82	2.79	0	4	0.70	-1.30	6.85
Control	113	2.86	1.43	4	0.56	0.19	2.91
Open	195	6.42	2.4	9	1.34		
Treatment	82	6.49	3	9	1.38	-0.67	2.75
Control	113	6.38	2.4	9	1.32	-0.51	3.38
Resc Pre	194	30.10	17	41	5.07		
Treatment	82	30.15	17	41	4.92	-0.02	2.89
Control	112	30.07	17	40	5.21	0.02	2.58
TTSE	195	3.14	1.75	8	0.63		
Treatment	82	3.22	2	8	0.73	3.47	23.56
Control	113	3.09	1.75	4	0.55	0.16	2.50
Val	194	2.67	0	4	0.64		
Treatment	81	2.60	0	4	0.72	-1.08	5.84
Control	113	2.72	0.67	4	0.58	-0.19	3.93

Note. TT = the transfer of training, GI = goal intention, II = implementation intention, Open = openness to experience, Resc Pre = resilience (Pre-test), TTSE = training transfer self-efficacy, Val = perceived content validity.

Figure 4 reveals evidence of unimodal marginal distribution in most variables: TT, II, Open, and Resc. However, the marginal distribution of the mean GI score was multimodal. Various peaks in the plot indicated that the mean GI score of the students in the treatment group varied greatly from one student to another.

Figure 4

Density Plot of All Variables Measured at Baseline (T0), Treatment Condition

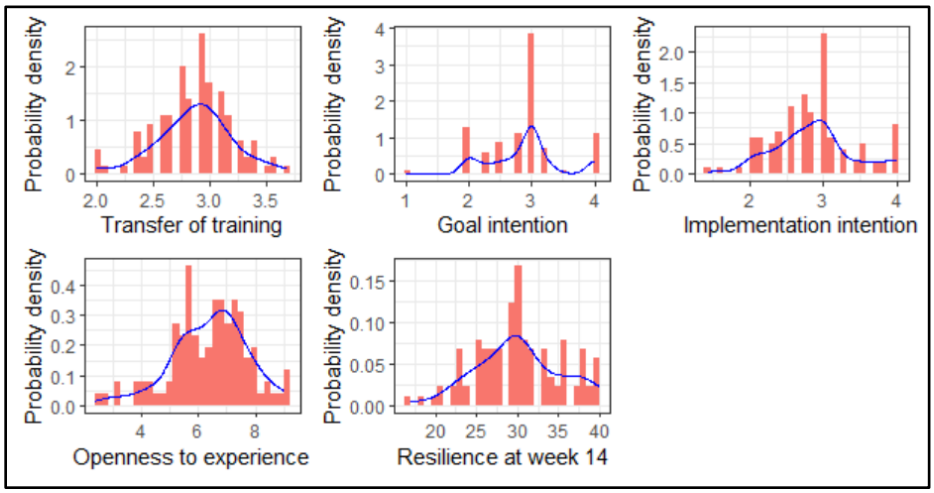


Note: The plot shows marginal distribution of mean score in each variable, using both a histogram and a density line in blue.

Figure 5 shows a similar trend of a marginal distribution of mean scores between the two conditions. The marginal distribution of mean GI score for students in the control group was bimodal. The distributions of scores in the other four variables were relatively normal.

Figure 5

Density Plot of All Variables Measured at Baseline (T0), Control Condition



Note: The plot shows marginal distribution of mean score in each variable, using both a histogram and a density line in blue.

A follow-up survey was administered at week 6 (T1) to measure the levels of TT, GI, II, and Open. Mean scores of the variables, except TT decreased from those measured at baseline. Mean scores of all variables for both groups were negatively skewed. Similar to the baseline data, a leptokurtic was found in all variables. There were some similarities between the marginal distribution of variables measured at T1. Both conditions were found to have unimodal and approximately normal distribution of TT. The distributions of GI and II were unimodal, but they were slightly left-skewed. The treatment group had a wide, bimodal a distribution of Open score while the control group had a fairly normal distribution of Open scores. See Table 6 for the summary statistics at week 6. Also, see Figures 6 and 7 for the density plot of all variables measured at T1.

Table 6

Descriptive Statistics for Variables Measured at the First Follow-Up (T1)

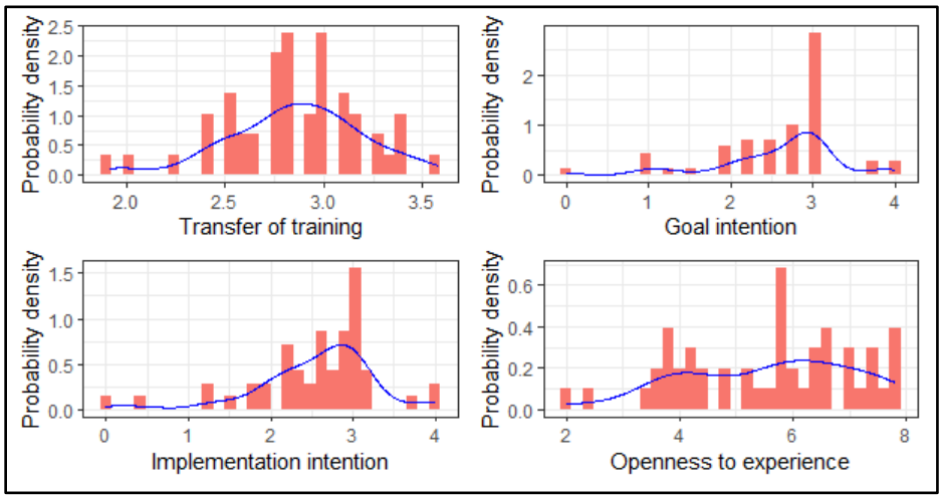
		N	$\bar{X}$	Min	Max	SD	Skewness	Kurtosis
TT		128	2.87	1.92	3.58	0.36		
	Treatment	51	2.85	1.92	3.58	0.35	-0.39	3.30
	Control	77	2.88	1.92	3.58	0.37	-0.27	2.62
GI		128	2.56	0	4	0.78		
	Treatment	51	2.59	0	4	0.77	-1.08	4.79
	Control	77	2.54	0	4	0.79	-0.99	4.46
II		127	2.57	0	4	0.69		
	Treatment	51	2.54	0	4	0.74	-1.11	5.48
	Control	76	2.59	0.29	4	0.66	-0.86	4.78
Open		128	5.6	0.8	9	1.49		
	Treatment	51	5.57	2	7.8	1.50	-0.33	2.23
	Control	77	5.62	0.8	9	1.50	-0.24	3.35

Note. TT = the transfer of training, GI = goal intention, II = implementation intention, Open = openness to experience.

Figure 6 and 7 show a similar trend of a marginal distribution of mean scores between the two conditions. The mean GI scores for both conditions became more evenly distributed at week 6 of the study (T1). However, the marginal distribution of mean Open scores for students in the treatment group showed a bimodal trend. The mean Open scores (treatment group) were spread out across the x-axis while those of the control group had a smaller distribution span and a higher peak.

Figure 6

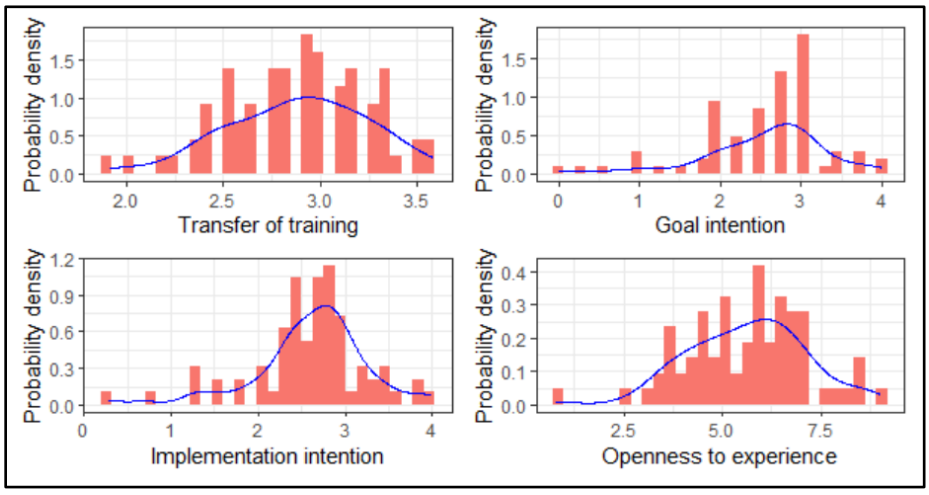
Density Plot of All Variables Measured at the First Follow-Up (T1), Treatment Condition



Note: The plot shows marginal distribution of mean score in each variable, using both a histogram and a density line in blue.

Figure 7

Density Plot of All Variables Measured at the First Follow-Up (T1), Control Condition



Note: The plot shows marginal distribution of mean score in each variable, using both a histogram and a density line in blue.

On the second follow-up (week 14; T2), TT, GI, II, Open, and Resc were measured. The treatment group had higher mean scores of GI and II than the control group. Mean scores of TT increased from those measured at the first follow-up (T1). The scores of TT, GI, and Open were negatively skewed whereas Resc mean score was positively skewed. See Table 7 for summary statistics at week 14. Also, see Figures 8 and 9 for density plot of all variables measured at T2.

Table 7

Descriptive Statistics for Variables Measured at the Second Follow-Up (T2)

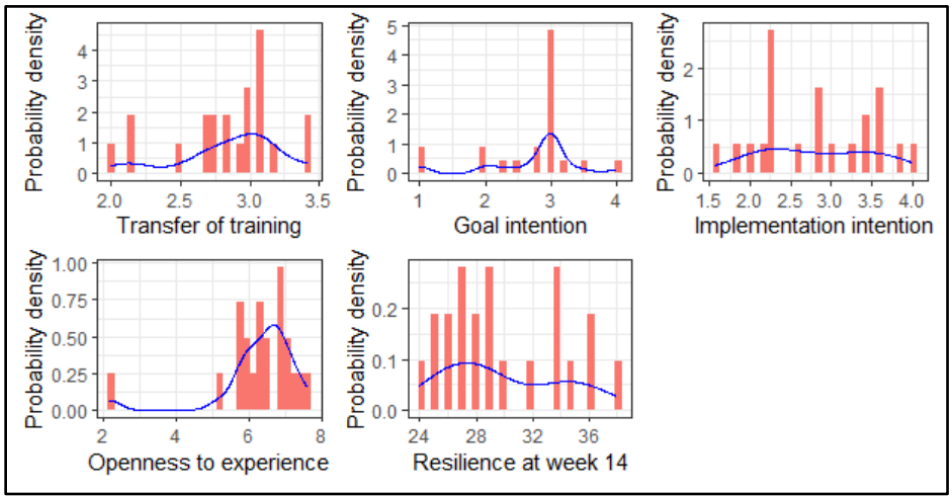
	N	$\bar{X}$	Min	Max	SD	Skewness	Kurtosis
TT	51	2.95	2	3.67	0.39		
Treatment	22	2.85	2	3.42	0.38	-0.76	3.03
Control	29	3.02	2	3.67	0.39	-0.55	2.98
GI	51	2.70	0	4	0.94		
Treatment	22	2.73	1	4	0.71	-1.13	4.21
Control	29	2.68	0	4	1.10	-1.00	3.19
II	51	2.67	0.57	4	0.77		
Treatment	22	2.81	1.57	4	0.70	0.05	1.83
Control	29	2.56	0.57	4	0.81	-0.49	3.11
Open	51	6.35	2.2	9	1.32		
Treatment	22	6.31	2.2	7.6	1.09	-2.49	10.41
Control	29	6.39	3.2	9	1.48	-0.15	2.72
Resc Post	51	30.29	21	40	4.92		
Treatment	22	29.95	24	38	4.19	0.41	1.87
Control	29	30.55	21	40	5.47	0.11	2.03

Note. TT = the transfer of Training, GI = goal intention, II = implementation intention, Open = openness to experience.

The density plots showed in Figure 8 and 9 were based on T2 data. Among all the variables measured at week 6 (T2), the average resilience score for both conditions spread widely across the score continuum. The marginal distribution of II mean score for the treatment group (Figure 8) also share a similar trend. Most variables in both conditions had a unimodal distribution with a moderate skewness.

Figure 8

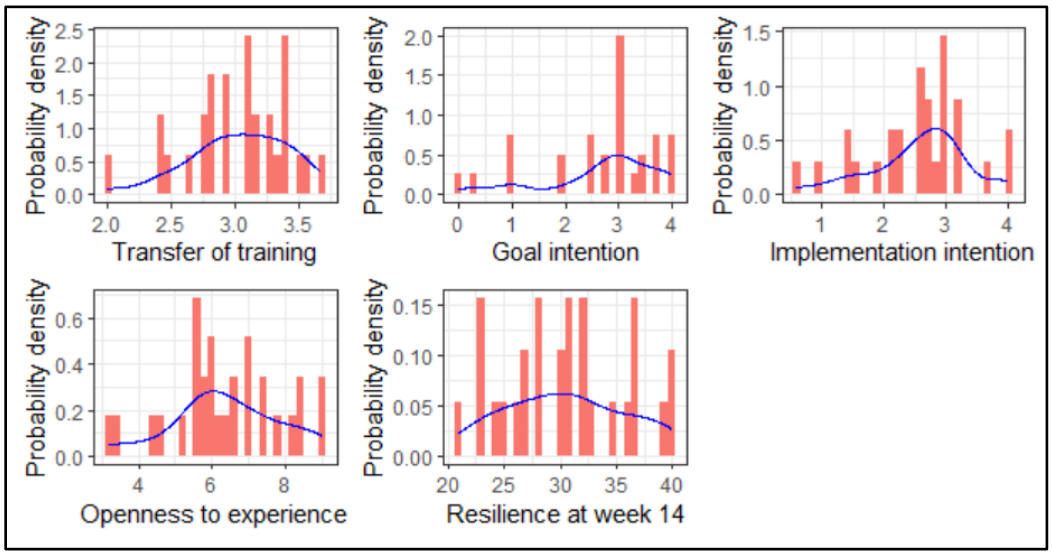
Density Plot of All Variables Measured at the Second Follow-Up (T2), Treatment Condition



Note: The plot shows marginal distribution of mean score in each variable, using both a histogram and a density line in blue.

Figure 9

Density Plot of All Variables Measured at the Second Follow-Up (T2), Control Condition



Note: The plot shows marginal distribution of mean score in each variable, using both a histogram and a density line in blue.

Demographic variables

In this section, highlights of demographic information are reviewed for each experimental condition.

Treatment. There were 82 students in the treatment group. Students in the treatment group are mostly 20-25 years old (81.71%), and approximately 17% of them were 19 years old or younger. One student was older than 46 years old. Female students accounted for 75.61% of the students in the group. Most students were White/Caucasian (85.37%). The rest were Asian/Native Hawaiian/Pacific Islander (8.54%), Chicano/Latino (1.22%), and Bi-racial (4.88%). Approximately 99% of the students were domestic students, and 53.66% of students in this group enrolled in the Global Identity course while 46.34% did not. Most students were from institution A (80.49%). Senior year students made up almost half of the students in this group (45.12%). The number

students who enrolled in the internship course during study abroad was three times smaller than those who were not. Similarly, the proportion of students who took classes in the local language to those who took classes in English was approximately 1:3. Approximately 30% of the students had no experience living or studying abroad while about 25% of them had been abroad at least once; 8.54% had lived or studied abroad for at least 9 months; 69 out of 82 students had less than one month experience abroad. Students in this group studied in five continents: Europe (75.61%), Asia (8.54%), Oceania (4.88%), South America (3.66%), and Africa (7.32%). Out of 53 students who responded to the question about local friends at week 6, 29% had between 1-3 local friends. About 16% had made no local friends while about 13% had made at least 4 local friends. Most of the students chose to live in an apartment with America friends (18.29%). Responses regarding time spent with local friends were as follows: 0 hour (12.20%), ≤3 hours (13.41%), 4-6 hours (13.41%), 7-10 hours (9.76%), and ≥10 hours (15.85%).

Control. A total of 113 students were in the control group, 95 of whom were from institution A and 12 from Institution B. In this group, 83.19% were between 20 and 25 years old. Almost three times more female students were in this group than male students. The racial identity of the students in this group included African-American/African/Black (2.65%), Asian/Native Hawaiian/Pacific Islander (9.73%), Chicano/Latino (1.76%), Middle Eastern (1.76%), Caucasian/White (77.88%), Biracial (10%), and Multiracial (0.88%). Approximately 95.58% of the students were domestic students. The number of students who took the Global Identity course in the control group was slightly higher than those in the treatment group (61.95%). Senior and sophomore students made up 80% of

the students in this group. Similar to the treatment group, students who chose English as a language of instruction and enrolled in the non-internship course were at least three times higher than those who enrolled in the internship course. In terms of experience living/studying abroad, approximately 74% of the students had never lived or studied abroad. The percentage of students who had lived or studied abroad once, twice, three times or more were 18.58%, 4.42%, and 3.54%, respectively. About 85% of the students had less than a month of experience abroad. Students in this group studied abroad on five continents: Europe (76.11%), Asia (11.50%), Oceania (4.42%), South America (5.31%), and Africa (2.65%). Out of the 77 students who responded to the question about local friends at week 6, 34.51% had 1-3 local friends. About 16.81% had no local friends while about 17% had at least 4 local friends. Most of the students chose to live in an apartment with America friends (17.70%). Responses regarding time spent with local friends varied: 0 hour (9.73%), ≤3 hours (16.81%), 4-6 hours (18.58%), 7-10 hours (8.85%), and ≥10 hours (14.16%).

Table 8

Summary of Demographic Information

Characteristics	N (%)		
	All (195)	Treatment (82)	Control (113)
Age			
≤19	31	14 (17.07%)	17 (15.04%)
20-25	161	67 (81.71%)	94 (83.19%)
26-30	1	0	1 (0.88%)
41-45	1	0	1 (0.88%)
≥46	1	1 (1.22%)	0
Gender identity			
Female	145	62 (75.61%)	83 (73.45%)
Male	47	18 (21.95%)	29 (25.66%)
Genderqueer/Gender	3	2	1

non-conforming		(2.44%)	(0.88%)
Racial identity			
African American/ African/Black	3	0	3 (2.65%)
American Indian/ Alaskan Native	0	0	0
Asian/Native Hawaiian/ Pacific Islander	18	7 (8.54%)	11 (9.73%)
Chicano/Latino	3	1 (1.22%)	2 (1.76%)
Middle Eastern	2	0	2 (1.76%)
Caucasian/White	158	70 (85.37%)	88 (77.88%)
Biracial	10	4 (4.88%)	6 (5.31%)
Multiracial	1	0	1 (0.88%)
Global identity			
Enrolled	114	44 (53.66%)	70 (61.95%)
Did not enroll	81	38 (46.34%)	43 (38.05%)
Status			
Domestic students	189	81 (98.78%)	108 (95.58%)
International students	6	1 (1.22%)	5 (4.42%)
Affiliation			
Institution A	161	66 (80.49%)	95 (84.07%)
Institution B	23	11 (13.41%)	12 (10.62%)
Unknown	11	5 (6.10%)	6 (5.31%)
Year in school			
Sophomore	16	10 (12.20%)	6 (5.31%)
Junior	80	24 (29.27%)	46 (40.71%)
Senior	86	37 (45.12%)	49 (43.36%)
Missing	23	11 (13.41%)	12 (10.62%)
Discipline			
Business	42	22 (26.83%)	20 (17.70%)
Biological science	10	1 (1.22%)	9 (7.96%)
Design	2	1 (1.22%)	1 (0.88%)
Education	16	9 (10.98%)	7 (6.19%)
Engineering	14	5 (6.10%)	9 (7.96%)
Food, Agricultural, Natural resource science	5	1 (1.22%)	4 (3.54%)
Healthcare	4	1 (1.22%)	3 (2.65%)
Liberal arts	66	26 (31.71%)	40 (35.39%)

Continuing education	1	0	1 (0.88%)
Missing	35	17 (20.73%)	18 (15.93%)
Internship course			
Yes	55	24 (29.27%)	31 (27.43%)
No	140	58 (70.73%)	82 (72.57%)
Language of instruction			
English	132	57 (69.51%)	75 (66.37%)
Local language	46	17 (20.73%)	29 (25.66%)
Both	16	7 (8.54%)	9 (7.96%)
Unsure/TBD	1	1 (1.22%)	0
Lived/Studied abroad in the past			
Never	145	62 (75.61%)	83 (73.45%)
Once	34	13 (15.85%)	21 (18.58%)
Twice	7	2 (2.44%)	5 (4.42%)
Three or more times	9	5 (6.10%)	4 (3.54%)
Length of previous experience abroad			
Less than 1 month	165	69 (84.15%)	96 (84.96%)
4 months	12	6 (7.32%)	6 (5.31%)
9 months	2	2 (2.44%)	0
12 months	1	0	1 (0.88%)
≥12 months	15	5 (6.10%)	10 (8.85%)
Study abroad destination (by continent)			
Europe	148	62 (75.61%)	86 (76.11%)
Asia	20	7 (8.54%)	13 (11.50%)
Oceania	9	4 (4.88%)	5 (4.42%)
South America	9	3 (3.66%)	6 (5.31%)
Africa	9	6 (7.32%)	3 (2.65%)
Local friends made at week 6			
0	32	13 (15.85%)	19 (16.81%)
1-3	68	29 (35.37%)	39 (34.51%)
4-6	22	8 (9.76%)	14 (12.39%)
≥7	8	3 (3.66%)	5 (4.42%)
Missing	65	29 (35.37%)	36 (31.86%)
Time spent with local friends/family			

0 hr.	21	10 (12.20%)	11 (9.73%)
≤3 hrs.	30	11 (13.41%)	19 (16.81%)
4-6 hrs.	32	11 (13.41%)	21 (18.58%)
7-10 hrs.	18	8 (9.76%)	10 (8.85%)
≥10 hrs.	29	13 (15.85%)	16 (14.16%)
Missing	65	29 (35.37%)	36 (31.86%)
Type of housing (collected only in SP'20, week 6)			
Homestay	15	7 (8.54%)	8 (7.08%)
Dormitory	12	3 (3.66%)	9 (7.96%)
Hotel	1	1 (1.22%)	0
Apartment w/ American friends	35	15 (18.29%)	20 (17.70%)
Apartment w/ local friends	4	1 (1.22%)	3 (2.65%)
Other	2	1 (1.22%)	1 (0.88%)
Missing	126	54 (65.85%)	72 (63.72%)

Note. Percentages in the parentheses are percentages of breakdown items within a category. They are calculated based on a total number of the sample in each experimental condition.

Correlation

Next, I performed Pearson correlation to measure the strength and direction of the linear relationship between two random variables (Cleophas & Zwinderman, 2018; Pearson, 1896) within the study. The correlation coefficient typically ranges from -1 to +1. A negative coefficient value indicates that the two random variables change in the opposite direction (e.g., one increases when the other decreases). Cut-off coefficient values for small, medium, and large effects are ±0.1, ±0.3, ±0.5, respectively (Field, 2009). Three correlation matrixes (Tables 9, 10, and 11) show the correlation coefficients between variables at each data wave.

Table 9

Mean, Standard Deviation, and Pearson Correlation Coefficients of Study Variables at Baseline

Measures	*M*	*SD*	1	2	3	4	5	6	7
1. TT	2.87	0.36	-						
2. GI	2.85	0.64	0.33***	-					
3. II	2.82	0.62	0.29***	0.64***	-				
4. Open	6.43	1.35	0.29***	0.35***	0.38***	-			
5. Resc	30.10	5.09	0.54***	0.35***	0.31***	0.37***	-		
6. TTSE	3.14	0.63	0.33***	0.04	0.07	0.26**	0.50***	-	
7. Val	2.68	0.64	0.23**	0.60***	0.50***	0.29***	0.14	-0.04	-

Note. * $p<0.05$, ** $p<0.01$, *** $p<0.001$, TT = the transfer of training, GI = goal intention, II = implementation intention, Open = openness to experience, Resc = resilience, TTSE = training transfer self-efficacy, and Val = perceived content validity.

Table 9 shows a positive correlation for every pair of variables measured at baseline, except for the correlation between TTSE and Val (r= -0.04). No variables were too highly correlated ($r>0.09$). II and GI had the strongest correlation in the table (r=0.64, $p<0.001$). The second strongest correlation was the relationship between Val and GI (r=0.6, $p<0.001$). The third strongest correlation was the relationship between Resc and TT (r=0.54, $p<0.001$). The next strongest correlation was the relationship between Resc and TTSE (r=0.5, $p<0.001$). TTSE did not have a statistically meaningful association with either GI or II. The majority of the variable pairs had a medium correlation.

Table 10

Mean, Standard Deviation, and Pearson Correlation Coefficients of Study Variables at T1

Measures	*M*	*SD*	1	2	3	4
1. TT	2.87	0.36	-			
2. GI	2.56	0.78	0.26**	-		
3. II	2.57	0.69	0.29**	0.70***	-	
4. Open	5.60	1.50	0.36***	0.24**	0.15	-

Note. *p<0.05, ** p<0.01, *** p<0.001, TT = the transfer of training, GI = goal intention, II = implementation intention, Open = openness to experience.

Table 10 shows a positive correlation for every pair of variables measured at T1. No variables were too highly correlated (r>0.09). Similar to the baseline data, most correlation values reflected a small to medium effect. GI and II had the strongest correlation (r=0.7) and the strongest empirical support (p<0.001). The next strongest correlation was the relationship between Open and TT (r=0.36, p<0.001).

Table 11

Mean, Standard deviation, and Pearson Correlation Coefficients of Study Variables at T2

Measures	*M*	*SD*	1	2	3	4	5
1. TT	2.95	0.39	-				
2. GI	2.70	0.94	0.35*	-			
3. II	2.67	0.77	0.23	0.64***	-		
4. Open	6.35	1.32	0.46***	0.35*	0.20	-	
5. Resc	30.29	4.92	0.58***	0.26	0.29*	0.42*	-

Note. * $p<0.05$, ** $p<0.01$, *** $p<0.001$, TT = the transfer of training, GI = goal intention, II = implementation intention, Open = openness to experience, Resc = resilience.

Table 11 shows a positive correlation for every pair of variables measured at T2. No variables were too highly correlated ($r>0.09$). Similar to the baseline data, most correlation values reflected a small to medium effect. GI and II had the strongest correlation ($r=0.64$) and the strongest empirical support ($p<0.001$). The second and third strongest correlations were the relationship between Resc and TT ($r=0.58$, $p<0.001$) and the relationship between Open and TT ($r=0.46$, $p<0.001$).

Student's T-Test

This study employed paired, two-tailed t-test analysis to examine whether there was a mean difference across the three time points. The Cronbach's alpha value was set at 0.01. The analyses were completed using *Analysis ToolPak*, an add-in data analysis tool for Microsoft Excel version 2003.

Table 12 shows the t-test results for the treatment group. Overall, the means of most variables were not statistically different across the three time points with the exception of two variables. A t-test for the mean scores of II between time 1 (*M* =2.55, *SD* =0.65) and 2 (*M* =2.81, *SD* =0.70) suggested a *p*-value of 0.007 and *t*(21)=-2.95. The empirical data were inconsistent with the hypothesis that the mean difference between the two time points would be zero. The other variable was the difference in the mean for Open between baseline and time 1 (Mean difference =0.77, *SD* =1.26, *t*(50)= 4.34). The result suggested a *p*-value of 0.00007 and *t*(50)= 4.34 indicating that the difference between the two means was not simply due to chance. In other words, the empirical data was also not consistent with the hypothesis ($\mu_{time\ 0} = \mu_{time\ 1}$).

Table 12

Paired Student's T-Test Results Across Two and Three Time Points (Treatment Group), Cronbach's Alpha (α=0.01)

			Paired differences								
						99% Confidence Interval					
Variable		N	*M*	*SD*	*SE*	Lower	Upper	*t*	*df*	*p*-value	*d*
TT											
	T0 vs. T1	51	0.01	0.34	0.05	-0.12	0.14	0.21	50	0.84	0.03
	T1 vs. T2	22	-0.05	0.29	0.06	-0.23	0.13	-0.79	21	0.44	0.17
	T0 vs. T2	22	0.03	0.41	0.09	-0.22	0.28	0.30	21	0.77	0.06
GI											
	T0 vs. T1	51	0.17	0.76	0.11	-0.12	0.45	1.57	50	0.12	0.22
	T1 vs. T2	22	-0.13	0.76	0.16	-0.59	0.34	-0.77	21	0.45	0.16

	T0 vs. T2	22	0.07	0.90	0.19	-0.47	0.61	0.36	21	0.73	0.08
II											
	T0 vs. T1	51	0.19	0.57	0.08	-0.03	0.40	2.36	50	0.02	0.33
	T1 vs. T2	22	-0.26	0.41	0.09	-0.51	-0.01	-2.95	21	0.007	0.63
	T0 vs. T2	22	-0.01	0.55	0.12	-0.34	0.32	-0.07	21	0.95	0.01
Open											
	T0 vs. T1	51	0.77	1.26	0.18	0.29	1.24	4.34	50	~.00	0.61
	T1 vs. T2	22	-0.19	1.28	0.28	-0.96	0.58	-0.70	21	0.49	0.15
	T0 vs. T2	22	0.2	1.30	0.28	-0.59	0.99	0.72	21	0.48	0.15
Resc											
	T0 vs. T2	21	-0.36	5.12	1.09	-3.46	2.73	0.33	21	0.74	0.07

Note. TT = the transfer of training, GI = goal intention, II = implementation intention, Open = openness to experience, Resc = resilience.

Table 13 shows the t-test results for the control group. TT, II, and Open had at least one pair of means providing evidence against the null hypothesis (i.e., no difference between the two means compared). Specifically, the pairs were (a) TT between baseline and T2 (Mean difference =-0.17, *SD* =0.31, *p*-value= 0.006, *t*(28)=-2.97), (b) GI between baseline and T1 (Mean difference =0.28, *SD* =0.96, *p*-value= 0.0009, *t*(76)=3.46), (c) II between baseline and T1 (Mean difference =0.31, *SD* =0.63, *p*-value= 0.00004, *t*(75)=4.35), and baseline and T2 (Mean difference =0.35, *SD* =0.65, *p*-value= 0.006, *t*(28)=2.96), and finally (d) Open between baseline and T1 (Mean difference =0.75, *SD* =1.06, *p*-value= 0.00000002, *t*(76)=6.25). The sharp decrease of the control group's II

and GI scores from T0 to T1, together with the confirmed null hypotheses for differences in the treatment's II and GI scores suggested the effectiveness of volitional manipulation.

Table 13

Paired Student's T-Test Results Across Two and Three Time Points (Control Group), Cronbach's Alpha (α=0.01)

			Paired differences								
						99% Confidence Interval					
Variable		*N*	*M*	*SD*	*SE*	Lower	Upper	*t*	*df*	*p*-value	*d*
TT											
	T0 vs. T1	77	-0.02	0.39	0.04	-0.14	0.09	-0.53	76	0.60	0.06
	T1 vs. T2	29	-0.15	0.36	0.07	-0.33	0.03	-2.24	28	0.03	0.42
	T0 vs. T2	29	-0.17	0.31	0.06	-0.33	-0.01	-2.97	28	0.006	0.55
GI											
	T0 vs. T1	77	0.34	0.86	0.10	0.08	0.60	3.46	76	~.00	0.39
	T1 vs. T2	29	-0.09	0.81	0.15	-0.51	0.32	-0.63	28	0.54	0.12
	T0 vs. T2	29	0.28	0.96	0.18	-0.21	0.78	1.59	28	0.12	0.30
II											
	T0 vs. T1	77	0.31	0.63	0.07	-0.35	0.20	4.35	75	~.00	0.50
	T1 vs. T2	29	-0.08	0.55	0.10	-0.35	0.20	-0.74	28	0.46	0.14
	T0 vs. T2	29	0.35	0.65	0.12	0.02	0.69	2.96	28	0.006	0.55
Open											
	T0 vs. T1	77	0.75	1.06	0.12	0.43	1.07	6.25	76	~.00	0.71
	T1 vs. T2	29	-0.27	0.60	0.11	-0.57	0.04	-2.43	28	0.02	0.45

	T0 vs. T2	29	-0.03	0.86	0.16	-0.47	0.40	-0.22	28	0.83	0.04
Resc											
	T0 vs. T2	28	-0.25	4.78	0.90	-2.75	2.25	0.28	27	0.78	0.05

Note. TT = the transfer of training, GI = goal intention, II = implementation intention, Open = openness to experience, Resc = resilience.

To examine the change over time within each condition, I conducted another set of t-tests with only students who completed the surveys at all time points ($N_{Treatment\ group}$ = 22; $N_{Control\ group}$ = 29). See the results in Table 14, particularly where *p*-value was smaller than 0.01. Table 14 indicated no significant mean differences in within person TT scores between the two groups for all pairs of time interval, except for those of the control group (T0 vs. T2; $t(28) = -2.24$, $p = 0.006$). Unexpectedly, there was no within person differences in GI mean scores for all pairs of time interval. This was true for both groups. Lastly, the increase of the treatment group's mean II score over the last 8 weeks (T1 vs. T2) was inconsistent with the hypothesis that the mean II scores did not differ. The decrease in the control group's mean II scores at 6 weeks and 14 weeks interval were also significant.

Table 14

Within Person Change over Time, N=22(Treatment)/29(Control), Cronbach's Alpha (α=0.01)

		Paired differences								
	Condition				*99% CI*		*t*	*df*	*p*-value	*d*
Variable		*M*	*SD*	*SE*	Lower	Upper				
TT										
	T0 vs. T1	Treatment	0.08	0.37	0.09	-0.15	0.30	0.97	21	0.35	0.20

	Control	0.02	0.36	0.07	-0.21	0.16	-0.34	28	0.74	0.06
T1 vs. T2	Treatment	-0.05	0.29	0.06	-0.23	0.13	-0.79	21	0.44	0.17
	Control	-0.15	0.36	0.07	-0.33	0.03	-2.24	28	0.03	0.42
T0 vs. T2	Treatment	-0.03	0.41	0.09	-0.22	0.28	0.30	21	0.77	0.06
	Control	0.17	0.31	0.06	-0.33	-0.01	-2.97	28	0.006	0.55
GI										
T0 vs. T1	Treatment	0.19	0.85	0.18	-0.32	0.71	1.10	21	0.30	0.23
	Control	0.38	1.06	0.20	-0.16	0.92	1.93	28	0.06	0.36
T1 vs. T2	Treatment	-0.13	0.76	0.16	-0.59	0.34	-0.77	21	0.45	0.16
	Control	-0.09	0.81	0.15	-0.51	0.32	-0.63	28	0.54	0.12
T0 vs. T2	Treatment	0.07	0.90	0.19	-0.47	0.61	0.36	21	0.73	0.08
	Control	-0.28	0.96	0.18	-0.21	0.78	1.59	28	0.12	0.30
II										
T0 vs. T1	Treatment	0.25	0.59	0.13	-0.10	0.61	2.01	21	0.06	0.43
	Control	0.43	0.58	0.11	0.13	0.73	4.0	28	~.00	0.74
T1 vs. T2	Treatment	-0.26	0.41	0.09	-0.51	-0.01	-2.95	21	0.007	0.63
	Control	-0.08	0.55	0.10	-0.35	0.20	-0.74	28	0.46	0.14
T0 vs. T2	Treatment	0.01	0.55	0.12	-0.34	0.32	-0.07	21	0.95	0.01
	Control	-0.35	0.65	0.12	0.02	0.69	2.96	28	0.006	0.55

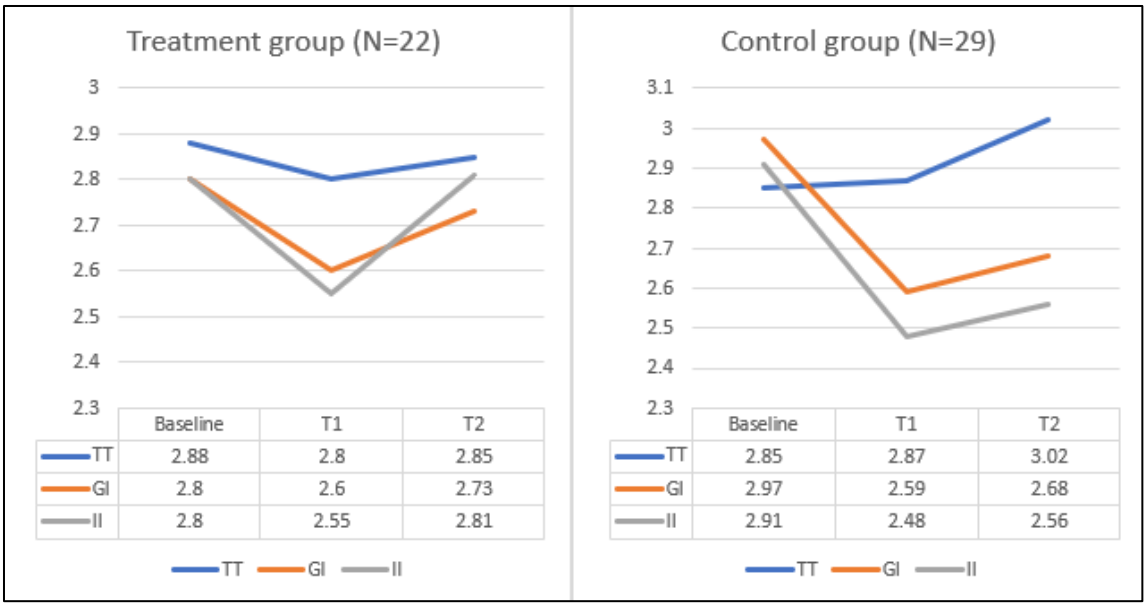
Note. T0= Baseline, T1= the first follow-up, T2= the second follow-up, TT = the transfer of training, GI = goal intention, II = implementation intention.

Figure 10 illustrates the within-person change of TT, GI, and II over time in a simple line graph. It provides evidence confirming a significant difference (p<0.01) in

mean TT score (Control group, T0 vs. T2, *t*(28)= -2.97), mean II score (Control group, T0 vs. T1, *t*(28)= 4.0 & T0 vs. T2, *t*(28)= 2.96; Treatment group, T1 vs. T2, *t*(21)= -2.95). In terms of the changes in the mean scores, all variables over 14 weeks reflected a U shape in most cases. The only unexpected trend was the continuous increase in the TT mean scores of the control group over 14 weeks. GI and II mean scores at T1 for both conditions were lower than those at baseline (T0). TT, GI, and II for the treatment group dropped by 0.08-0.25 at T1 (week 6) and rebounded two months later (T2: week 14) to almost the same score they had at baseline. The rebound trend also showed evidence for the control group's GI and II scores. However, scores of both variables increased from T1 to T2 by +0.09 and +0.08 whereas those of the treatment group increased by +0.13 and +0.26 points. It is also worth noting that GI and II for the control group plunged from baseline to T1 by 0.38 and 0.43, respectively. In addition, TT mean score behaved differently for the control group: the scores increased continuously from baseline to T2, especially between week 6 and 14.

Figure 10

A Side-By-Side Comparison of the Within Person Mean Scores Change over Time (Treatment vs. Control Condition)

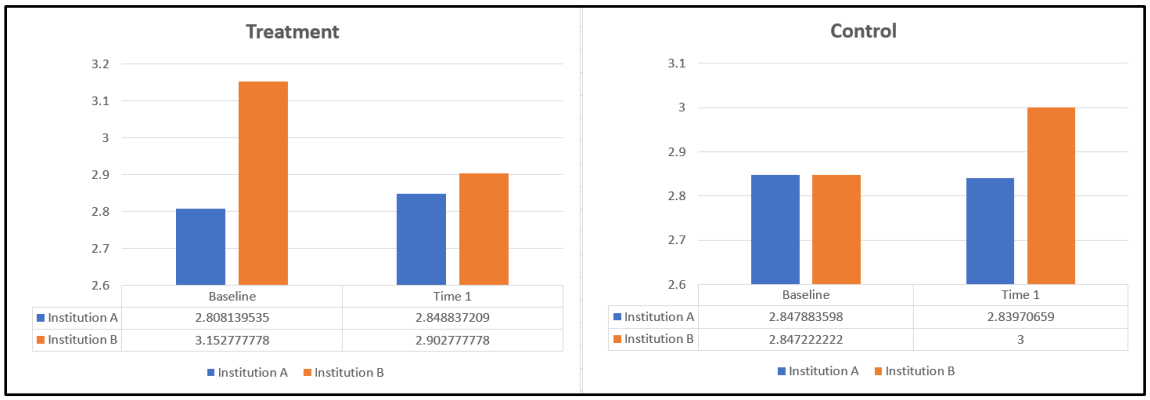


Note. TT = the transfer of training, GI = goal intention, II = implementation intention. Sample size is 22 students for the treatment group and 29 students for the control group.

The change in the TT mean score from baseline to T1 in Figure 11 showed a different trajectory between the two institutions. Students who received the volition intervention from institution A transferred the intercultural skills somewhat more frequently over the first six weeks (Mean T0≈2.80, Mean T1≈2.85). Students from the same institution who did not receive the intervention had a relatively low transfer of training score (Mean≈2.84) at T1 than to the score at baseline (Mean≈2.85). The transfer of training scores for institution B were the opposite (see Figure 11 below).

Figure 11

A Side-By-Side Comparison of the Transfer of Training Score Change from Baseline to T1 (Treatment vs. Control Condition)

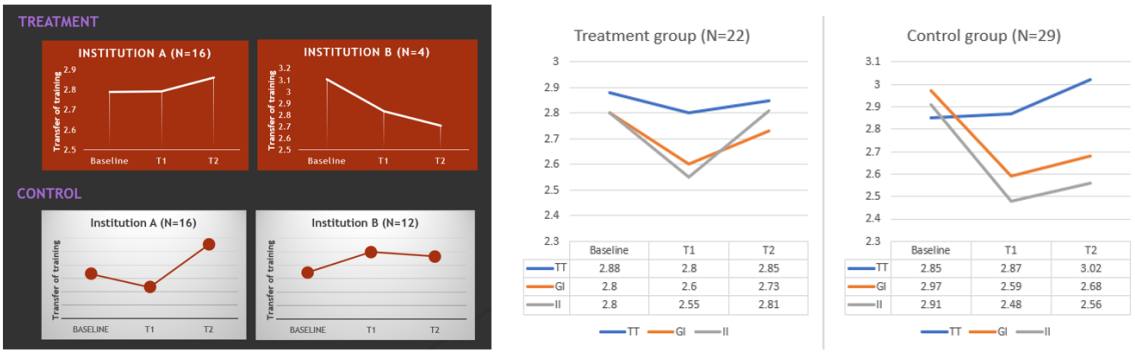


Note. Institution A has 43 students in the treatment group and 63 students in the control group. Institution B has 6 students in the treatment group and 12 students in the control group.

Figure 12 compares the two plots illustrating the within-person change of mean TT scores with and without institutional differences. Plot B is the same as Figure 10. It shows a trajectory of mean TT scores over time for everyone who participated in the surveys at all three time points. However, Plot A shows the differences in trajectories for institutions A and B. The treatment group from institution A showed continuous growth in the mean scores (Mean score≈ 2.789, 2.79, 2.86 respectively) while the control group from the same institution had a slight dip at time 1 before the mean score rose again at time 2 (Mean score≈ 2.83, 2.73, 3.05 respectively). Students in the treatment group from institution B, on the other hand, had a downward trajectory of the mean TT scores (Mean score≈ 3.10, 2.83, 2.71 respectively). The control group from institution B had a peak in the mean TT score at T1 and then a slight drop at T1 (Mean score≈ 2.85, 3.0, 2.97 respectively).

Figure 12

A Side-By-Side Comparison of Two Plots Illustrating the Within-Person Change of the Mean Transfer of Training (TT) Scores with and without Institutional Differences



A. B.

Note. The four plots on the left (A) show the institutional impact on the transfer of training trajectory over 14 weeks. The two plots on the right (B) show the trajectory of change in the mean transfer of training scores with and without institutional differences.

The impact of institional differences is also evident in the trajectory of change in the mean GI and II scores. Treatment students from both institutions reported having less motivation to transfer training at T1. Institutional differences revealed a change in mean GI scores from T1 to T2. That is, the mean GI score was stable across the last 8 weeks for students fron institution A, while those of the treatment students from institution B rose from T1 to T2. The mean II scores for treatment group students were also different between the two institutions. The mean II scores for students from institution B grew continuously over 14 weeks, with a trajectory from baseline to T1 being slightly sharper. In contrast, scores of students from instititution A dropped at T1 and bounced back at T2. Students in the control group showed a similar trajectory of mean GI and II scores for

both institutions although the slope from baseline to T1 was steeper for the mean GI scores (institution A) and the mean II scores (institution B).

Table 15

Mean Transfer of Training (TT), Goal Intention (GI), and Implementation Intention (II) Score Given Institutional Difference

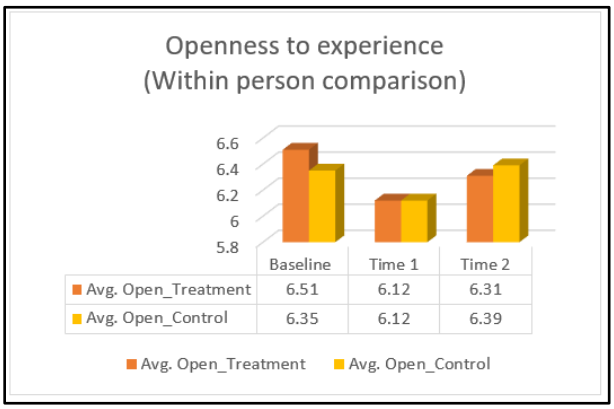
	Institution A			Institution B		
	Baseline	Time 1	Time 2	Baseline	Time 1	Time 2
TT						
Treatment	2.789	2.79	2.86	3.10	2.83	2.71
Control	2.83	2.73	3.05	2.85	3	2.97
GI						
Treatment	2.75	2.69	2.69	2.63	2.38	2.75
Control	2.81	2.53	2.63	3.08	2.88	2.90
II						
Treatment	2.84	2.55	2.85	2.39	2.71	2.79
Control	2.88	2.57	2.60	2.96	2.51	2.60

Note. TT= transfer of training, GI= goal intention, II= implementation intention. Institution A has 16 students in both conditions. Institution B has 4 students in the treatment group and 12 students in the control group.

Furthermore, the treatment group started out with 0.16 points higher in the Open mean score than the control group. Both baseline scores, however, dropped to 6.12 points and then went up with the control group's score being 0.08 higher than the treatment group (see Figure 13).

Figure 13

The Change over Time in Openness to Experience (Open) Mean Score (Treatment vs. Control Condition)



Note. Avg. Open = average openness to experience (Open) score for each condition. Sample size is 22 students for the treatment group and 29 students for the control group.

In addition to the within-person examination, I conducted two sample t-tests for unequal variance. The purpose of this test was to examine whether the differences between the treatment sample and the control sample at each time point were by chance. The results in Table 16 indicate no evidence for a significant mean difference between the two groups.

Finally, t-tests for the independent sample were used for a randomization check. The objective of this type of t-test is to examine whether there is bias in the randomization process such that the difference between the mean score at baseline for the control and treatment groups is inconsistent with the null hypothesis ($\mu_{control} = \mu_{treatment}$). As shown in Table 16, no bias was found for all variables at baseline.

Table 16 indicated that differences in mean TT, GI, and II scores between the two condition at each time point were simply due to chance (*p*-value of 0.12-0.87), despite differences shown in Figure 10.

Table 16

Two-Sample T-Test between the Treatment and Control Groups, N=22, Cronbach's Alpha (α=0.01)

		Paired differences								
					99% CI		*t*	*df*	*p*-value	*d*
Variable		*M*	*SD*	*SE*	Lower	Upper				
TT										
	T0	-0.02	-0.03	0.09	-0.26	0.23	-0.17	42	0.87	0.05
	T1	-0.08	-0.06	0.13	-0.42	0.26	-0.64	42	0.54	0.19
	T2	-0.01	0.04	0.11	-0.31	0.28	-0.10	42	0.91	0.03
GI										
	T0	-0.30	0.01	0.19	-0.05	0.04	-1.57	42	0.12	0.48
	T1	0.08	-0.21	0.26	-0.7	0.04	0.30	42	0.76	0.09
	T2	0.09	-0.52	0.30	-0.82	0.04	0.30	42	0.77	0.09
II										
	T0	-0.05	0.16	0.18	-0.49	0.04	-0.26	42	0.80	0.08
	T1	0.11	-0.03	0.20	-0.54	0.04	0.53	42	0.60	0.16
	T2	0.29	-0.15	0.24	-0.63	0.04	1.22	42	0.23	0.37

Note. TT = the transfer of training, GI = goal intention, II = implementation intention.

Table 17 presented t-test results of a randomization check. Based on the empirical evidence, both groups of students had a similar TT, GI, II, Open, Resc, TTSE, and Val scores at baseline (*p*-value of 0.10-0.78). Therefore, the objectivity of the randomization process was confirmed.

Table 17

Randomization Check Results, Cronbach's Alpha (α=0.01)

		Paired differences							
					99% Confidence Interval				
Variable	N	*M*	*Variance*	*SE*	Lower	Upper	*t*	df	*p*-value
TT	82	0.02	0.05	0.05	0.09	0.13	162	155.9	0.69
GI	82	-0.05	0.16	0.10	-0.26	0.15	0.53	156.59	0.60
II	82	0.08	0.17	0.10	-0.28	0.12	0.81	155.42	0.42
Open	82	0.16	0.09	0.21	0.26	0.58	0.75	161.91	0.46
Resc	82	0.22	-1.39	0.77	-1.79	2.23	0.28	161.87	0.78
TTSE	82	0.16	0.25	0.10	2.61	0.10	1.64	148.10	0.10
Val	81	-0.04	0.18	0.10	0.30	0.23	0.36	153.20	0.72

Note. TT = the transfer of training, GI = goal intention, II = implementation intention, Open = openness to experience, Resc = resilience, TTSE = training transfer self-efficacy, and Val = perceived content validity.

Regression

This study set out to examine the role of volition in the post-training period where trainees were expected to apply training skills (adjustment and resilience building strategies) in a study abroad environment. Regression is an appropriate type of analysis for this purpose because it allows researchers to observe the relationship between two or more variables in a flexible manner (e.g., linear and non-linear model). Direct and indirect relationships of volition with other variables is the focus of this section (See the hypothesis model in Figure 1). All regression analyses were completed using RStudio software's linear model (*lm*) function.

Checking Regression Assumptions

Regression analysis has four assumption: linearity, normality, homogeneity of variance, and independence (e.g., Cohen et al., 2003; Montgomery et al., 2012). Prior to each analysis, I checked the linearity assumption using plots of the relationships between the two variables reflected in Hypotheses 1, 2, 4, and 5. The plots compared a regression line made with a linear regression method (lm) and another line made with a locally weight least squares regression method (loess). If the line from the loess method lined up with the lm-method line, they passed the first linearity assumption check. I then fit a linear regression with the lm function and created a residual plot. The result of lm line that was close to or in alignment with y=0 intercept line confirmed that linear assumption was tenable. I observed the distance between the dots for each value on the x-axis to determine if there was homogeneity of variance. To pass this assumption, there must be (approximately) an equal distance between each dot, on average, across the values on the x-axis. Next, I examined the normality assumption using a density plot. A normal or

relatively normal distribution of residuals was expected. The plot must also fall within a 95% confidence interval envelope. The independence assumption was checked using correlation analysis. The maximum correlation coefficient among the study variables was 0.6. All ordinal scale variables met the regression assumptions.

Hypothesis Testing

Seven hypotheses were tested for each data wave. The purpose of the multiple testing approach was to capture any change over time (if applicable) in the results for each hypothesis. I structure each hypothesis testing report below to include the hypothesis, sample size for analysis per time point, and results in chronological order (T0, T1, T2). A list-wise deletion approach was employed to address cases with missing values. Power analysis was also completed to determine if there was sufficient power to explain the hypothesized relationships at each data wave (N=193 (T0), N=127 (T1), N=51 (T2). Given the four predictors, a medium effect size (d = 0.5; Cohen, 1988), and a Cronbach's alpha of 0.01, RStudio produced the following power for T0, T1, and T2: 0.99, 0.99, 0.55, respectively. Based on the results, I decided to rerun the power analysis on the T2 sample size and found a power of 0.78 given a medium effect, Cronbach's alpha of 0.05, and four predictors.

Hypothesis 1 states that there is a positive relationship between students in the treatment condition and their level of GI. The result at baseline (β =-0.06, $F(1, 191)=0.45$, $p > 0.05$) suggested a negative relationship. A positive relationship between the two variables was found at week 6 (β =0.05, $F(1, 25)=0.13$, $p > 0.05$) and week 14 (β =0.05, $F(1, 49)=0.03$, $p > 0.05$), although the evidence was not enough to support Hypothesis 1. There was no statistical difference in GI scores between the treatment and

control groups even when controlling for differences in II and Val (see Table 18). Together they explain 51% of the variance in GI scores at baseline, which is statistically reliable ($F(3,189)= 65.98$, $p < 0.001$). After controlling for Val and II, the model explains 50% ($F(3, 122)= 41.07$, $p < 0.001$) and 44% ($F(3, 47)= 12.14$, $p < 0.001$) of the variation in GI scores at T1 and T2, respectively. Finally, Table 18 also indicates that II was the only control variable that remained significant through the end of the study (week 14).

Table 18

Coefficient-Level Estimates for a Model Fit to Estimate Variation in Goal Intention (Hypothesis 1)

	B	β	SE	*t*	*p*	95%CI
T0 (N =193, R^2 = 0.51)						
Treatment	0.02	0.01	0.07	0.29	0.77	[-0.11, 0.15]
Val	0.37	0.45	0.06	6.33	<.001	[0.26, 0.49]
II	0.47	0.37	0.06	7.75	<.001	[0.35, 0.59]
Constant	0.50		0.17	2.86	<.01	[0.16, 0.84]
T1 (N =127, R^2 =0.50)						
Treatment	0.08	0.05	0.10	0.77	0.44	[-0.12, 0.28]
Val	0.09	0.08	0.08	1.16	0.25	[-0.07, 0.25]
II	0.75	0.67	0.08	9.41	<.001	[0.59, 0.91]
Constant	0.35		0.23	1.52	0.13	[-0.11, 0.81]
T2 (N =51, R^2 =0.44)						
Treatment	-0.15	-0.08	0.21	-0.70	0.49	[-0.57, 0.27]
Val	0.16	0.13	0.15	1.07	0.29	[-0.14, 0.46]
II	0.75	0.61	0.15	5.15	<.001	[0.46, 1.04]
Constant	0.34		0.75	1.07	0.45	[-0.57, 1.26]

Note. T0 = Baseline, T1= Follow-up 1 (week 6), T2= Follow-up 2 (week 14), Val= perceived content validity, II= implementation intention.

Hypothesis 2 states that GI is positively associated with TT. Evidence from all time points (baseline (R^2 =0.11, F(1, 191) =23.31, β =0.18, p < 0.001), T1 (R^2 =0.07, F(1, 125) =8.83, β =0.12, p < 0.01), and T2 (R^2 =0.12, F(1, 49) =6.71, β =0.14, p < 0.05)) supported Hypothesis 2. After controlling for differences in the Resc score and gender, there was still a coefficient level effect of GI on TT at baseline and T1. The beta coefficients for both times were β =0.10, p < 0.05. However, the beta coefficient at T2 was β =0.09, p > 0.05 (p= 0.06). Additionally, up to 43% of the variance with the transfer of training scores are explained by these three predictors. The evidence is as follows: baseline (R^2= 0.35, F(3, 189) =33.85, p< 0.001), T1 (R^2= 0.21, F(3, 122)=10.59, p< 0.001), T2 (R^2= 0.43, F(3, 47)=11.65, p< 0.001). Additionally, Resc was the only control variable with a coefficient level effect on the transfer of training at all time points (see Table 19).

Table 19

Coefficient-Level Estimates for a Model Fit to Estimate Variation in the Transfer of Training (Hypothesis 2)

	B	β	SE	*t*	*p*	95%CI
T0 (N =193, R^2 =0.35)						
GI	0.07	0.13	0.04	2.08	<.05	[0.003, 0.14]
Resc (Baseline)	0.03	0.49	0.00	7.84	<.001	[0.03, 0.04]
Female	0.16	0.20	0.05	3.42	<.001	[0.07, 0.25]
Constant	1.49		0.14	10.69	<.001	[1.22, 1.77]
T1 (N =127, R^2 =0.21)						
GI	0.10	0.21	0.04	2.61	<.05	[0.02, 0.17]
Resc (Baseline)	0.03	0.35	0.01	4.36	<.001	[0.01, 0.04]
Female	0.11	0.13	0.07	1.60	0.11	[-0.03, 0.25]
Constant	1.75		0.20	8.65	<.001	[1.35, 2.15]
T2 (N =51, R^2 =0.23)						
GI	0.09	0.22	0.05	1.91	0.06	[-0.004, 0.19]
Resc (T2)	0.04	0.53	0.01	4.61	<.001	[0.02, 0.06]
Female	0.20	0.21	0.10	1.91	0.06	[-0.01, 0.41]
Constant	1.28		0.29	4.46	<.001	[0.70, 1.86]

Note. T0 = Baseline, T1= Follow-up 1 (week 6), T2= Follow-up 2 (week 14), GI= goal intention, Resc= resilience.

Hypothesis 3 states that GI mediates the relationship between the treatment group and TT. Since the data failed to support Hypothesis 1, the analysis lacked a basis for a mediation relationship. Therefore, Hypothesis 3 was not supported.

Hypothesis 4 states that there is a positive relationship between the treatment group and II. Similar to Hypothesis 1, a negative relationship between the two was found at baseline (β =-0.09, $F(1, 191)$ =0.93, p=0.34) and T1 (β =-0.05, $F(1, 125)$ =0.14, p=0.71). In other words, the control group had a slightly higher II score than the

treatment group. However, the relationship became positive 14 weeks later (β =0.26, $F(1, 49) = 1.38$, $p = 0.25$). Since p-values across the three time points were higher than 0.05, I concluded that Hypothesis 4 was not supported. The experimental condition together with the two control variables (GI and Val) explain between 43%-53% of the variance in II scores. The model level output is as follows: baseline ($R^2 = 0.43$, $F(3, 189) = 47.53$, $p < 0.001$)), T1 ($R^2 = 0.53$, $F(3, 122) = 46.4$, $p < 0.001$)), T2 ($R^2 = 0.46$, $F(3, 47) = 13.29$, $p < 0.001$)). Furthermore, the GI score was found to predict variation in II scores at the coefficient level at all time points while Val only predicted variation in II scores at the coefficient level up to T1 (week 6). See Table 20.

Table 20

Coefficient-Level Estimates for a Model Fit to Estimate Variation in Implementation Intention (Hypothesis 4)

	B	β	SE	*t*	*p*	95%CI
T0 (N =193, R^2 =0.43)						
Treatment	-0.04	-0.03	0.07	-0.52	0.60	[-0.17, 0.10]
GI	0.51	0.53	0.07	7.75	<.001	[0.38, 0.64]
Val	0.17	0.18	0.07	2.61	<.01	[0.04, 0.30]
Constant	0.93		0.17	5.39	<.001	[0.59, 1.27]
T1 (N =127, R^2 =0.53)						
Treatment	-0.05	-0.04	0.09	0.62	0.54	[-0.23, 0.12]
GI	0.56	0.63	0.06	9.41	<.001	[0.44, 0.68]
Val	0.20	0.20	0.07	3.03	<.01	[0.07, 0.34]
Constant	0.63		0.19	3.26	<.01	[0.25, 1.01]
T2 (N =51, R^2 =0.46)						
Treatment	0.23	0.15	0.17	1.40	0.17	[-0.10, 0.56]
GI	0.48	0.59	0.09	5.15	<.001	[0.29, 0.67]
Val	0.16	0.15	0.12	1.34	0.18	[-0.08, 0.40]
Constant	0.85		0.34	2.47	0.02	[0.16, 1.54]

Note. T0 = Baseline, T1= Follow-up 1 (week 6), T2= Follow-up 2 (week 14), GI= goal intention, Val= perceived content validity.

Hypothesis 5 states that II is positively associated with TT. Evidence from baseline (R^2 =0.08, F(1, 191) =17.17, β =0.17, p < 0.001) and T1 (R^2 =0.07, F(1, 125) =11.39, β =0.15, p < 0.001) supported Hypothesis 5. The result from T2 indicated a negative relationship with TT, but it could be due to chance (R^2 =0.05, F(1, 49) =2.69, β =0.12, p > 0.05). After accounting for the variance in GI and TTSE, the model explains

between 11%-27% of the variance in the transfer of training scores (see details of the result in Table 21).

Table 21

Coefficient-Level Estimates for a Model Fit to Estimate Variation in the Transfer of Training (Hypothesis 5)

	B	β	SE	*t*	*p*	95%CI
T0 (N =193, R^2 =0.21)						
II	0.06	0.10	0.05	1.25	0.21	[-0.04, 0.16]
GI	0.14	0.25	0.05	2.99	<.01	[0.05, 0.23]
TTSE	0.17	0.31	0.04	4.76	<.001	[0.10, 0.24]
Constant	1.76		0.16	11.10	<.001	[1.44, 2.07]
T1 (N =127, R^2 =0.11)						
II	0.11	0.21	0.06	1.79	0.08	[-0.01, 0.24]
GI	0.06	0.12	0.06	1.00	0.32	[-0.05, 0.16]
TTSE	0.08	0.15	0.05	1.82	0.07	[-0.007, 0.17]
Constant	2.18		0.19	11.29	<.001	[1.80, 2.56]
T2 (N =51, R^2 =0.27)						
II	-0.03	-0.06	0.08	-0.38	0.71	[-0.20, 0.14]
GI	0.10	0.24	0.07	1.41	0.16	[-0.04, 0.24]
TTSE	0.31	0.41	0.10	3.06	<.01	[0.10, 0.51]
Constant	1.83		0.30	6.13	<.001	[1.23, 2.43]

Note. T0 = Baseline, T1= Follow-up 1 (week 6), T2= Follow-up 2 (week 14), GI= goal intention, II= implementation intention, TTSE= training transfer self-efficacy.

Hypothesis 6 states that II mediates the relationship between the treatment group and TT. Since the data failed to support Hypothesis 4, the analysis lacked a basis for a mediation relationship. Therefore, Hypothesis 6 was not supported.

Hypothesis 7 states that II moderates the relationship between GI and TT. To test the hypothesis, I conducted a hierarchical multiple regression analysis. The first step was

to examine the main effect, which is the relationship that GI and II had on TT. Support for this relationship was found at baseline (R^2 =0.12, F(2, 190)= 12.79, p < 0.001), T1 (R^2 =0.09, F(2, 124)= 6.07, p < 0.01), and T2 (R^2 =0.12, F(2, 48)= 3.29, p =0.045). I then added an interaction term between GI and II to the previous main effect model fit. The result of the interaction model supported this hypothesis given that there was an increase in the total variance explained. The interaction model result at the model level was as follows: baseline (R^2 =0.14, F(3, 189)= 10.32, p < 0.001), T1 (R^2 =0.12, F(3, 123)=5.37, p < 0.01), T2(R^2 =0.20, F(3, 47)= 3.93, p < 0.05). Therefore, Hypothesis 7 was confirmed. As the mean GI score increased, the mean TT score rose. The relationship was strengthened as II score increased as well. For results of a comparison between the main effect model and the interaction model at each time point, see Tables 22-24.

Table 22

Unstandardized Coefficients and Confidence Intervals for the Regression Models Fit to Predict Variation in the Transfer of Training (Hypothesis 7, Baseline Data)

	Dependent variable	
	Transfer of Training	
	Model 1 (Main effect)	Model 2 (Interaction)
GI	0.137*** [0.04, 0.23]	
II	0.075 [-0.03, 0.17]	
Mean Centered GI		0.155** [0.06, 0.25]
Mean Centered II		0.091 [-0.01, 0.19]
Mean Centered GI x Mean Centered II		0.066* [0.006, 0.12]
Constant	2.264*** [2.02, 2.51]	2.849*** [2.80, 2.90]
Observations	193	193
R^2	0.12	0.14
Adjusted R^2	0.11	0.13
Residual Std. Error	0.34	0.33
F Statistic	12.80*** (df =2; 190)	10.32*** (df =3; 189)

Note. GI = Goal intention, II = Implementation Intention, * p<0.05, ** p<0.01, *** p<0.001. Numbers in parentheses are a 95 percent confidence interval.

Table 23

Unstandardized Coefficients and Confidence Intervals for the Regression Models Fit to Predict Variation in the Transfer of Training (Hypothesis 7, Data at T1)

	Dependent variable	
	Transfer of Training	
	Model 1 (Main effect)	Model 2 (Interaction)
GI	0.049 [-0.06, 0.16]	
II	0.112 [-0.01, 0.24]	
Mean Centered GI		0.078 [-0.04, 0.19]
Mean Centered II		0.143* [0.02, 0.27]
Mean Centered GI x Mean Centered II		0.072 [-0.002, 0.15]
Constant	2.452*** [2.21, 2.70]	2.839*** [2.77, 2.90]
Observations	127	127
R^2	0.09	0.12
Adjusted R^2	0.07	0.09
Residual Std. Error	0.35	0.34
F Statistic	6.07*** (df =2, 124)	5.37*** (df =3, 123)

Note. GI = Goal intention, II = Implementation Intention, * $p<0.05$, ** $p<0.01$, *** $p<0.001$. Numbers in parentheses are a 95 percent confidence interval.

Table 24

Unstandardized Coefficients and Confidence Intervals for the Regression Models Fit to Predict Variation in the Transfer of Training (Hypothesis 7, Data at T2)

	Dependent variable	
	Transfer of Training	
	Model 1 (Main effect)	Model 2 (Interaction)
GI	0.142 [-0.005, 0.29]	
II	0.004 [-0.18, 0.18]	
Mean Centered GI		0.204* [0.05, 0.36]
Mean Centered II		0.0004 [-0.17, 0.17]
Mean Centered GI x Mean Centered II		0.127* [0.009, 0.25]
Constant	2.554*** [2.16, 2.95]	2.889*** [2.77, 3.00]
Observations	51	51
R^2	0.12	0.20
Adjusted R^2	0.08	0.15
Residual Std. Error	0.37	0.36
F Statistic	3.29* (df =2, 48)	3.93* (df =3, 47)

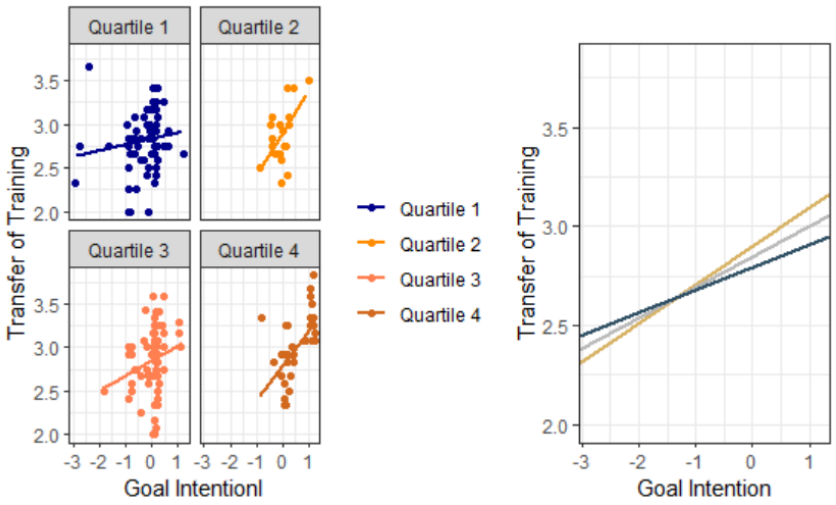
Note. GI = Goal intention, II = Implementation Intention, * p<0.05, ** p<0.01, *** p<0.001. Numbers in parentheses are a 95 percent confidence interval.

Figure 14 below provides evidence supporting the hypothesis 7. The cluster of plots on the left of the figure shows the variation in the relationship between GI and TT

with variations in the mean II score. Simple slopes on the left demonstrate how an increased value of II score strengthens the relationship between GI and TT. The unstandardized simple slope for students one SD below the mean of the II score was 0.11 (the dark green line). The unstandardized simple slope for students with a mean level of the II score was 0.15 (the grey line), and the unstandardized simple slope for employees one SD above the mean of the II score was 0.20 (the gold line).

Figure 14

The Moderating Effect of Implementation Intention on the Relationship between Goal Intention and the Transfer of Training



Note. The plot on the left illustrates changes in goal intention and the transfer of training at a given quartile of the implementation intention score whereas the plot on the right shows the relationship between the two variables when the implementation intention score is low (-1SD; dark green), average (grey), and high (+1SD; gold).

Summary of Hypotheses Testing

Hypothesis 1: Students in the treatment group will have higher goal intention scores than those in the control group.

NOT SUPPORTED

Hypothesis 2: Goal intention is positively associated with the transfer of training.

SUPPORTED

Hypothesis 3: Goal intention mediates a positive relationship between the treatment condition and the transfer of training.

NOT SUPPORTED

Hypothesis 4: Students in the treatment group will have higher implementation intention scores than those in the control group.

NOT SUPPORTED

Hypothesis 5: Implementation intention is positively associated with the transfer of training.

SUPPORTED

Hypothesis 6: Implementation intention mediates a positive relationship between the treatment condition and the transfer of training.

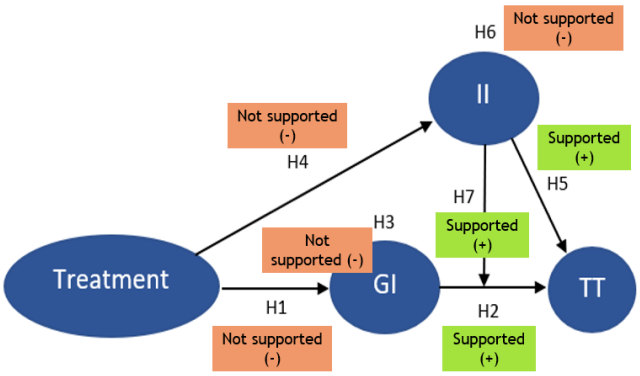
NOT SUPPORTED

Hypothesis 7: Implementation intention moderates a positive relationship between the goal intention and the transfer of training.

SUPPORTED

Figure 15

A Visual Summary of Hypothesis Testing Regression Results



Note. H represents hypothesis, II = implementation intention, GI = goal intention, TT = the transfer of training, and + = positive relationship.

Chapter Summary

This chapter presented the statistical results in response to the research questions and hypotheses in the study. It begins with a summary of the descriptive statistics, correlations, and results of t-tests. The paired t-test results also illustrated a change in the mean scores over a period of time within the same individuals. Overall, mean scores of the key variables (the transfer of training, goal intention, implementation intention, and openness to experience) unfolded in a similar pattern: a downward trend during the 6-week interval followed by an upward trend during the 8-week interval. The only exception was the control condition's TT mean scores which constantly increased over the 14 weeks. Two highlights of the t-test results are: (a) a difference in mean II scores from baseline to T1 between the two conditions, and (b) a difference in mean II scores from baseline and T2 between the two conditions. The CFA results were reported. Factor loading for all variables indicated a fair to good fit, demonstrating the internal validity of

the instruments used in this study. The testing of seven hypotheses revealed empirical evidence to support five of the hypotheses. The differences in II and GI mean scores between the two conditions were likely to be the result of sampling errors. I discuss the inferential meaning of these and other highlighted results in the following chapter.

CHAPTER 5: DISCUSSION

This dissertation experimentally examined the role of volition on the use of adjustment and resilience skills during students' study abroad experience over 14 weeks. After randomization, MCII was assigned to the treatment group in addition to online adjustment and resilience skills. The purpose of this experimental design study was to compare the following variables between the treatment and control conditions: (a) volition to transfer training measured by II scores, (b) motivation to transfer training which was measured by GI scores, and (c) the extent to which training skills were applied to students' experience studying abroad. The empirical evidence supported the statistical differences between the two conditions in the relationships between volition and the other two variables due to the impact of the volitional intervention.

The discussion in this chapter are based on the central interest of this study (i.e., volition) and the interaction with the hypothesized variables under two separate conditions. Discussion topics include the nature of the student sample, demographic variables which may play a role in the differences in the results between the two conditions, key t-test results, hypothesis testing results, and the psychological mechanism behind the training skill application as informed by the findings. I also discuss the contributions and limitations of this study in the last half of this chapter.

Nature of the Sample

At the beginning of this study, I randomly assigned students into conditions and invited them to participate in the study, which entailed an online module and three surveys over 14 weeks. Students who accepted the invitation knew the study was meant to be pre-departure preparation and that the content would be within the scope of

intercultural skills. Some of them participated in the online module along with the Global Identity course they were already taking. It may be safe to conclude that students in the sample appreciated the benefits of intercultural skills and were at least moderately motivated to develop intercultural skills. Because of this contextual factor, the study presented an opportunity to observe interactions that volition had with the level of GI and TT in the subjects who were already motivated to use the skills but at the same time may have been susceptible to low training skills adherence due to habit intrusion.

Demographic Variables

As a result of the recruitment process, more students in the control group ended up participating in the study. This could be because it was somewhat faster for the control group to complete requirements at baseline. The volition intervention module which is integrated into the online learning requires an additional 5-10 minutes of attention from the treatment group. The amount of time needed for students in each condition may have impacted the participation rate.

There are many interesting differences of demographics between the samples of the two conditions. It is important to note these differences as they may explain some of the findings in this study. For example, the number of students (control group) who enrolled in the Global Identity course was at least 1.5 times higher than the number of students in the treatment group. Since the Global Identity course constantly reinforced the intercultural skills throughout the semester, it is possible that it would have strengthened students' volition level, goal intention level, and frequency of the training skills used, especially in the treatment sample. Language of instruction is another important variable. Most of the sample chose English as the preferred language, while 46 students chose a

local language. In terms of adaptation, these students had to work harder than the other student because they had to transfer language skills as well as the training skills. It is expected that these students will display a higher rate of II/volition, GI, and TT during T1 and T2 than students who took classes in English. The other variable worth examining is the length of previous experience abroad. The extent to which people spends time abroad should correspond with their appreciation and motivation to use intercultural skills. It is possible that students who had lived/studied abroad for at least a year reported higher transfer of training than others in the sample.

Correlation Results

Overall, a correlation matrix for the variables measured at each time point show no sign of multicollinearity. The highest correlation coefficient is 0.7. Most of the coefficients indicated a positive relationship between variables.

There are a few unexpected results found in the study. TTSE showed a weak positive relationship with GI (0.04) and II (0.07). Such relationship was surprising because it is not consistent with previous research on motivation to transfer. Researchers (e.g., Chiaburu & Marinova, 2005; Lim & Chan, 2003) have posited that a perceived confidence in one's own ability to transfer training skills plays a role in the transfer of training. Another surprising result was the weak but negative relationship between TTSE and Val. However, these results are not alarming since the *p*-values associated with all coefficients indicated the results could be by chance.

Resc had a moderate and positive relationship with TT. This result should be further explored because it could explain differences in TT scores between the two conditions.

GI and II were strongly and positively correlated with one another across the three time points (r =0.64, 0.7, 0.64), as expected. This relationship was also evident in the plot showing the paired t-test results for students who participated in all three surveys (See Figure 10).

T-Test Results

The t-test results revealed at least nine intriguing points of discussion. The first point is the shape of the changes in the scores of the key variables from baseline to T2. A U-shaped graph was observed when plotting changes in TT, II, and Open. Such a shape is typically expected in a study that measures an intercultural adjustment trajectory. Cross-cultural researchers (Ward et al., 1998; Savicki et al., 2008) have referred to the alternate feelings of ups and downs of a cross-cultural transition represented by a U-curve of intercultural adjustment (Lysgaard, 1995). The curve represents four phases of an intercultural transition including the honeymoon stage, crisis stage, adjustment stage, and biculturalism stage. It is interesting to observe that changes in the scores of the key variables across time corresponded to phases of cross-cultural transitioning, even though they did not measure adjustment directly. However, I would suggest that the trajectories could be the small U-curves inside the larger U-curve. The small U-curves could represent one's successful coping with challenging situations along the intercultural adjustment path. The large U-curve could capture the larger picture of intercultural adjustment. I would expect the U-shape trend to occur repeatedly over the length of an overseas experience with each of the low points varying by the intensity of challenges one faces abroad. This expectation is because I believe that people tend to let their guard down once they feel comfortable with a change (e.g., are themselves and do not think too

much about intercultural adjustment strategies all the time). As a result, these people are more likely to behave based on their habitual thoughts and actions, which in many cases, are not what is taught in the training. However, they will be more aware of the use of intercultural skills again when they face a setback. Since a habit can overrule one's intention to actively remind him/herself of cultural transitioning, the U-shaped plot also highlights the second intriguing issue: once triggered, the volition level does not remain constant over time. The same interpretation of the U-shaped plot also applies to the scores for TT, GI, and Open. If this interpretation holds true, the implication of the result is the need for constant reinforcement to stabilize II/volition, TT, GI, and Open levels.

The third point is the empirical support for the efficacy of the volitional intervention. Paired t-tests of II/volition scores between baseline and T2 indicated that the differences between the two scores for the control group was not by chance ($p = 0.006$). In other words, the II score at T2 went up, but it was still much lower than the score at baseline. The opposite result was shown for the treatment group ($p = 0.95$), suggesting that there was a rebound effect of the score at T2 to almost the same level as it was at baseline. Although further investigation is needed, the high rebound seems to fit the volition description by Gollwitzer (1999) and Oettingen and Gollwitzer (2010). That is, volition helps a person recover from a setback and regain focus on goal-directed actions. Another indicator of the effectiveness of the volitional intervention was the higher implementation intention scores at T1 and T2 for the treatment group compared to those of the control group. A drop in scores for II and GI at T1 for the treatment group was also much shallower than that of the control group. This indicates that the changes varied for

the volitional intervention control for the II and GI levels to an insignificant difference range.

Next, there were a few unexpected results in the TT and Resc scores. Resc rose over the 14 weeks in the control group instead of the treatment group. Similarly, the control group showed a continual positive trend of transfer of training over the three time points while the treatment group showed a U-shaped trend. Further exploration of the demographics of the control group may explain the reasons behind these results.

The fifth intriguing result was the existence of volition in both experimental groups. Figure 10 suggests that students in both conditions had some level of volition to exercise training skills at the beginning of the study abroad journey. However, their volition level depleted over time. Only those who received the volitional intervention at baseline were able to resume their previous volition level to the strength they had at the beginning after 14 weeks. In this case, it seems that the volitional intervention served as a volition booster rather than a trigger.

A key contextual factor in this study is institutional differences. For the effect of the institution, the trajectory of change in the mean TT, GI, and II scores are different than the trajectory of the mean scores when considering everyone who completed all of the surveys in the same condition. Figures 10 and 12 showed a different trajectory of mean TT, GI, and II scores over 14 weeks between the two primary participating institutions. The change in the students' mean TT, GI, II scores over time from institution A was more consistent with volition and MCII literature. This could be due to the larger sample size of students in institution A, the diverse majors of students in the sample, factors that could influence students' volition, motivation, and transfer of training within

a large public university (e.g., size of the study abroad program, program types, social connectedness of students from the same institution who study abroad at the same location, the on- and off-site resources for study abroad students, and pre-existing interest in intercultural skills development prior to departure). Future research should investigate institutional differences at both the student and institutional levels in relation to the effect of volitional intervention (MCII).

Fourteen weeks may be too short to observe the impact of MCII volitional intervention on the transfer of training. The similarities of the two mean TT trajectories of students in both conditions from institution A could be explained by the ego depletion literature. Every time individuals try to control habitual behavior, strive for goals, and cope with stress, they draw on volitional resources to support self-regulation. When volition is somewhat depleted, it may lead to lower motivation and people may stop taking the necessary actions to pursue their goals—the state of ego depletion. Volitional intervention provides crucial support for long-term motivation and volition regardless of the number of setbacks they are exposed to while abroad. I would expect that students in the treatment group would have higher psychological endurance (motivation and volition) to persist in incorporating the training skills despite discouraging events (e.g., culture shock, embarrassment, failed transfer of training) and that students in the control group would lose motivation and volition to the point where they shy away from using intercultural skills after repeated exposure to setbacks. In this study, students were still early in phase two (crisis) of intercultural adjustment when the T2 survey was administered. If the data collection continued to week 32 (month 8), it is highly likely that the control group's mean TT scores would have dropped significantly from week 14

to week 32. Future research may consider replicating the study with an extended data collection period and investigate the point at which individuals tend to give up using intercultural skills and intercultural adjustment.

Another intriguing point is the difference in the mean openness to experience scores from baseline to time 1. Openness to experience is normally considered a relatively stable trait across time. Thus, the mean openness to experience scores at the various time points should be only slightly different (i.e., a paired t-test produces an empirical result that is consistent with the null hypothesis). Nonetheless, the t-test results from Tables 12 and 13 indicate that there was a significant decrease in openness to experience mean scores over the first six weeks abroad for both conditions. The *p*-values were very small (≈0.00). The results suggest that support for students' development of openness to experience is essential during the first six weeks. In addition, the results indicate an opportunity for quantitative and qualitative researchers to examine openness to experience in future research in the context of intercultural adjustment and the transfer of intercultural skills.

Furthermore, there is no concern about the control group's higher mean TT scores at weeks 6 and 14 than those of the treatment group. As shown in Table 16, two sample t-tests of the mean TT scores between the two conditions at the two data waves indicated that the differences may be due to sampling error. The same trend applied to differences in the mean GI and II scores between the two conditions. These results suggest that students who participated in this study, regardless of their assigned condition, had a similar trajectory of change in TT, GI, and II mean scores over 14 weeks. The results are reasonable given that students in the sample shared a similar motive to participate in the

study. They were at least moderately motivated to learn intercultural skills and make the most of their study abroad experience. Thus, it was not surprising to see such a trend. It is also important to point out that a similar trajectory of change in mean TT, GI, and II scores does not imply inefficiency of the volition intervention. The results of the two-sample t-test only indicate whether the difference in scores from each sample is concerning or not. The direction and trend of the two similar trajectories depend on many contextual factors (e.g., study abroad location, local language proficiency, the extent to which individuals are immersed in the local culture, emotional maturity). By this logic, the lack of empirical support for the differences in mean TT, GI, and II score does not undermine the importance and effectiveness of the volition intervention on students' acculturation. The efficacy of the MCII volitional intervention should be determined by the paired t-test results illustrated in Table 12-14 because the results came from a within-person comparison.

Hypothesis Testing Results

This study examined seven hypotheses to explain the role of volition in the transfer of training process. Hypothesis 1 states that the treatment group has higher GI scores than the control group. The results described in Chapter 4 indicated no support for this hypothesis, although there was some evidence of positive coefficient-level values. The results may imply that the volition intervention does not significantly affect trainees' desire to transfer training when trainees are already at least moderately motivated to learn and transfer training. The trainees' level of motivation is implied by their voluntary participation in this study.

Hypothesis 2 states that GI is predictive of TT. As expected, a positive. relationship between the two variables was found. In traditional HRD literature, goal intention is equivalent to motivation to transfer training. The support for this hypothesis is consistent with the results in the extant research. However, the amount of variance in goal intention explaining the transfer of training is surprisingly small (7-12%). Considering that students in the sample were moderately interested in intercultural learning and using the training skills, it is possible that other reasons may explain the larger variance in their transfer behavior. The reasons could also be external (e.g., perceived content validity, instructor's perceived credibility, perceived organizational support, supportive environment for the transfer of training).

Hypothesis 3 states that GI mediates the relationship between the treatment group and TT. This hypothesis was not supported because Hypothesis 1—a prerequisite for Hypothesis 3 to be true—was also not supported.

Hypothesis 4 states that there is a positive relationship between the treatment group with II. The results indicated that the treatment group did not have higher volition scores than the control group. This was true for all three time points. Thus, this hypothesis was not supported. Similar to Hypothesis 1, the results may imply that volition intervention does not significantly affect trainees' volition to transfer training when the trainees are already at least moderately motivated to learn and transfer training. The trainees' level of motivation is implied by their voluntary participation in this study.

Hypothesis 5 states that II is predictive of TT. Based on the results discussed in Chapter 3, this hypothesis was supported. This finding confirmed Seiberling and Kauffeld's (2017) suggestion that volition plays a role in the transfer of training process.

This confirmation of the hypothesis also suggests a complex psychological process discussed in the transfer of training literature. II explains a small variance (5-8 %) of TT scores. Like the suggestion in Hypothesis 2, future researchers may consider adding external factors to determine if they explain larger variances in the transfer in training.

Hypothesis 6 states that II mediates the relationship between the treatment group and TT. This hypothesis was not supported because there was no direct or positive relationship between the treatment group and TT (see Hypothesis 4).

Hypothesis 7 states that II moderates the positive relationship between the GI and TT This hypothesis was supported. Examination of the interaction plot (Figure 14) showed an enhancing effect that as GI and II increased, the frequency of using the training skills increased. The evidence supporting this hypothesis confirmed the goal-shielding effect of volition (Gollwitzer, 1999; Kuhl, 1985; Oettingen & Gollwitzer, 2010). This finding suggests that volition is important for trainees at all levels of goal intention.

Contributions

This research contributes to theoretical and practical advancements of HRD knowledge in a number of ways. In this section, I discuss the theoretical and practical contributions from this study. Limitations are also noted with direction for future research.

Theoretical Contributions

The literature review and findings of this study provide several theoretical contributions to the expansion of HRD knowledge. I discuss six key contributions below.

The Study offers a Longitudinal Perspective on Trainees' use of Training Skills. This study expands the breadth and depth of the transfer of training literature. It provides rare insights about a training transfer trajectory across 14 weeks in response to prior calls for a longitudinal study to examine a psychological mechanism underlying the transfer of training (e.g., Gegenfurtner et al., 2009; Massenberg et al., 2017). More importantly, the longitudinal study design in this study revealed within-person changes in scores, which emphasizes the process perspective of the transfer of training. That is, data at each time point do not explain the whole process of training transfer. Rather, it is a snapshot of the variables being measured at one point in time.

The Study is at the Frontier of Training Research. This study presents a full introduction to volition to transfer training as a construct in the HRD literature. Although the concept of volition in training transfer literature is not new, volition to transfer training has never been fully explained in HRD with supporting theories and empirical data like the current study. In particular, the findings related to volition contribute to the advancement of the training transfer literature. First, support for Hypotheses 5 and 7 empirically confirms the existence of volition in the transfer of training process and reveals the relationships between volition and the other examined variables in this study. As a result, the study suggests more avenues for future research (e.g., volition, goal intention, habit intrusion, and other psychological factors). Differences in a within-person volitional change between baseline and T1 data should also prompt future research to examine at least two topics: (1) an optimal time interval and post-training activities to best support the transfer of training and (2) trainees' psychological experiences during the first six weeks of applying training at work.

The Study Creates Synergistic Knowledge Between HRD and Psychology Literature. The third theoretical contribution pertains to the bridge between HRD and psychology literature. The study introduced a distinction between (a) the motivation state and motivation process, and (b) the motivation state (goal intention) and volition state (implementation intention). The distinction in these terms in this study is meant to encourage HRD scholars and practitioners to use the terms mindfully. Additionally, the concepts of habits and the theory of human action were introduced to explain failed training transfer attempts. Trainees are less likely to transfer training when they have a lower level of implementation intention (see evidence support for Hypothesis 5 and Figure 10). The lower transfer of training score at T1 suggests that trainees were more susceptible to habit intrusion than they were at T2, which, in turn, may have inhibited their ability to convert their goal-directed intention (i.e., the transfer of training skills) into action.

The Study Empirically Confirms the Efficacy of Volitional Intervention. Volitional intervention is another key contribution of this study. The study noted the weaknesses of current training transfer interventions (goal setting (GS) and relapse prevention (RP)), and then introduced MCII/WOOP as a solution. Beyond a theoretical critique of the current interventions, the study tested volitional intervention for its ability to promote adherence to training skills and provided empirical support for its efficacy.

This research broadens HRD's understanding of conditions in which the volitional intervention was proven to be effective in promoting adherence to training skills. For example, soft skills training in an online program are transferrable at least among motivated trainees and is compatible with the volitional intervention. These

contextualized factors not only expand the volition literature on the conditions under which the intervention was tested but also contributes to the body of knowledge related to an online training design for training transfer.

The Study Emphasizes the Importance of Post-Training Follow-Up. Another theoretical contribution is the call for HRD researchers and practitioners to pay more attention to post-training follow-up. The fluctuation of goal intention and implementation intention across the three measurements highlighted an important lesson. A refresher course is needed to go beyond the use of job aids to help maintain trainees' II and GI levels. Post-training follow-up is also recommended to promote trainees' familiarity with, and internalization of training skills until the skills become second nature.

The Study Reviewed Research on Intercultural Adjustment and Resilience Strategies. Lastly, this study expands a boundary of HRD understanding of resilience skill-building strategies. The online training synthesizes four strategies students can use to build their adjustment and resilience skills while abroad. Each of these strategies are informed by the resilience literature and proven by many studies to help with intercultural adjustment. Unfortunately, the efficacy of this training on outcomes of this study (e.g., the transfer of training, resilience) was unclear. This was due the lack of a comparison group of students who studied abroad during 2019-2020 academic year but did not take the training.

Practical Contributions

This study was designed with practical contributions in mind. Below I outline four contributions from which HRD practitioners could benefit.

The Study Emphasized the Importance of Post-Training Follow-Up. In addition to a holistic approach to reduce habit intrusion, post-training follow-up is essential to sustain the volition level of trainees. The study revealed that volition levels and other variables fluctuated over time. A critical period of change is between baseline and the first follow-up. There are three takeaways from this finding. First, the first six weeks after training is the best time to promote the transfer of training. Reinforcement of the training skills used during this period determines trainees' future use of training skills, especially when they do not receive the volitional intervention. Second, the number of follow-up contacts matters. In this study, two follow-up emails were sent to students in the treatment group in the first six weeks. The follow-up emails reminded students of the training content and training transfer examples. Additionally, both groups were given a job aid reminding them of the training content at the beginning of the T1 survey. As a result, the treatment group was able to perform better than the control group in terms of volition and goal intention. Finally, it is important to have a follow-up meeting as a platform to promote trainees' exchange of training transfer experiences. The purpose of the follow-up meeting is to promote knowledge exchange among trainees after they have been experimenting with the training skills at work. The meeting should be held within the first six weeks after training to reinforce immediate use of the training skills. When trainees and stakeholders (e.g., trainers, supervisors, organizational leaders) meet in a follow-up meeting, trainees should be given an opportunity to share valuable information about their training transfer experiences (e.g., how they transfer the skills, how the training skills work and do not work in the real world, what resources they think are needed to enable the transfer of training). At the same time, the meeting offers

stakeholders an opportunity to be mentally involved in the training transfer process. The goal of each follow-up meeting is for both parties to better understand each other so they can set the next realistic and achievable sub-goals together.

The Study Offers Strategies to Reduce Habit Intrusion. A return on organizations' training investment has long been a concern for most organizations. Although the low training transfer rate has been widely discussed among practitioners, habit intrusion has rarely been discussed as a cause of the problem. The findings of this research raise awareness for practitioners of how intrusive a habit is to trainees' ability to follow through on a goal-directed action regardless of their pre-existing motivation level. Habit intrusion can interfere with the transfer of training for any content (e.g., hard vs. soft skills, cognitive vs. psychomotor skills) since all behaviors involve some ingrained habits. To reduce the impact of habit intrusion during training, practitioners may consider several practice and feedback sessions as recommended in Hodell's (2015) repackaged model of Gagne's nine events of instruction. For example, sufficient practice time, amount of practice, and performance feedback should interrupt trainees' default performance while strengthening a new performance habit. Organizations should also consider creating a transfer-conducive work environment. For example, an organization may place job aids at each workstation. Another example would be to place ready-to-use tools near a workstation. These techniques, if employed alongside MCII/WOOP, should maximize volitional control over goal intention and habit intrusion. The more trainees understand their bad work habits and what factors inhibit their desired performance, the more likely the intervention will have the maximum impact.

The Study Empirically Proves a Promising Value of Volition Intervention. This study promotes HRD's recognition of MCII/WOOP for its ability to regulate motivation to transfer training (goal intention) and control the impact of habit intrusion on training transfer frequency. The intervention was shown to promote adherence to the transfer of training, which is a form of behavioral change. These findings send a powerful message to HRD practitioners because it means that WOOP can be generalized to other behavioral change efforts in HRD contexts. For example, organizations may use WOOP to promote the institutionalization of organizational change initiatives (e.g., adherence to the organization's core values, knowledge sharing culture, standardized work processes). Additionally, HRD practitioners may consider using an online format. Online delivery of the intervention was a practical and economical solution to supplement training during the coronavirus pandemic and can be applied to any situation where in-person training is not available or applicable. The volitional intervention should also be used with other techniques to reduce habit intrusion.

The Study Offers Prototypical Training Content for a Similar Group of Students. The online intercultural adjustment and resilience skills training could be used as a prototype for future pre-departure, cross-cultural training. Strategies for building resilience skills discussed in the training were research-informed and applicable to other groups who are preparing to work and study in a different culture. This online training has some flexibility for anyone who would like to review intercultural adjustment and resilience skills prior to going abroad. An online web-based design allows trainees to take and retake the training based on their schedule. Trainees can also access the training any time they need to review the training content while abroad. In this study, students

reported that this training served as a good reminder of things they should look out for and do for quick adjustment. The content of this training is also suitable for business expatriates and, potentially, for their spouses. Like study abroad students, expatriates are need to accomplish a goal at a given time. They are expected to demonstrate resiliency from acculturative stress as quickly as they can to continue with the assigned mission. In addition, they are expected to be resistant to challenges during the assignment (e.g., language barriers, differences in organizational culture, workload). That is, they must be able to deal with overwhelming stress and reenergize their efforts to complete the assignment as best as they can. For these reasons, organizations may consider offering adjustment and resilience skills training with a volitional intervention in an expatriate preparation program.

The Study Offers Practical Insights for an Expatriate Training Program. Intercultural adjustment is an experiential learning process where continuous support for acculturation and learning from both home and host organizations (e.g., Harvey, 1997; Marquadt et al., 2000; Yu, 2016) plays a crucial role in expatriates' successful cultural integration. Despite expatriates' pre-existing volition to adjust and accomplish an international assignment at pre-departure, the fast pace of intercultural transitioning and multiple acculturative challenges at different phases of transitioning could deplete expatriates' volition to thrive in a cross-cultural environment over time. If volition decreases to a certain point, it will be detrimental to the expatriates' mental health (i.e., psychological distress) and lead to problems in other aspects of their life. The home organization should consider partnering with the host organization to provide long-term instrumental and socioemotional support for expatriates. Along with the support, the

home organization should provide expatriates with a volitional intervention, preferably MCII/WOOP. The volitional intervention will help encourage them to initiate transfer of intercultural training and boost their motivation and volition to bounce back after they encounter challenges.

Limitations

This study is not without limitations. A few limitations pertain to the sample size, generalizability to workplace training, online delivery of the intervention, and the internal validity of the measure for the transfer of training.

The sample of this study came from a limited pool of candidates of approximately 1,100 students who studied abroad through institution A during the 2019-2020 academic year. The number of possible candidates was even smaller given the training topic: intercultural skills learning. The institutions' history of offering an extra intercultural skills course indicated a low number of enrolled students (e.g., 100-150 students per semester) for the past three years. The students were typically either honor students or those who had a moderate to high interest in developing intercultural skills in addition to their daily study abroad experience. Despite the limited pool of candidates, the final sample of 195 students was not a concern in this study. Power analysis for paired t-test and regression analyses suggested a power of at least 0.8 for T1 data. Additionally, I decided to use Cronbach's alpha level of 0.01 as a criterion for the power analysis to decrease the probability of incorrectly rejecting a true null hypothesis (Type I error). This sample size nonetheless limited the opportunity for in-depth analysis of the nested structure of the data. In other words, an examination of the program and/or institutional impact on students' outcomes was not possible.

The narrow context of international education in this study limits the extent to which the findings of this study can be generalized. The first closest group to generalize the findings is an undergraduate, study abroad student population, which is the most representative group in the study sample. The second closest group would be business expatriates because of their need to quickly adjust to a new culture in their intercultural transition. Although one could argue that an adjustment for study abroad students and expatriates is not exactly the same, they both are very similar in terms of the transfer of training. They are normally required to work/study in a new cultural environment almost immediately and both need to a quick turnaround from acculturative stress. Given this rationale, it is imperative that they use intercultural training skills as early and frequently as possible to cope with cross-cultural adjustment.

Although asynchronous communication is the most convenient approach for a multi-site study, possible miscommunication and a lack of just-in-time clarification of the message can compromise the overall quality of the communication. From my experience conducting this study, this lesson is especially true when the content of the message is relatively new and requires detailed clarification. For example, I received a few negative responses about a recommendation to disregard internal obstacles in the planning portion of WOOP— "If ..(an obstacle).., then I will ignore that thought." The recommended structure of the if-then plan has been supported by many studies (e.g., Elliott & Armitage, 2006; Wieber et al., 2014; Webb & Sheeran, 2003) due the superior effectiveness over a name-your-own-solution approach. The word *ignore* in the then portion is open to WOOP users' interpretations. Some students in the treatment group refused to use the recommended WOOP format because they thought they had to ignore and suppress the

inner obstacle entirely. However, I interpreted it from a more moderate approach. Instead of suppressing the inner obstacle, I expected that students in the treatment group recognized that the obstacle needed to be addressed. This miscommunication occurred even when I sent a follow-up email after members in the treatment group submitted their WOOP statements. I addressed this issue by adding a longer explanation to the intervention learning portion and the WOOP reminder (two weeks after training).

Lastly, there needs to be further refinement of the transfer to training scale. Four items in the scale received a very poor factor-loading CFA result (see Table 3). Two of them were reverse coded items, which were included in the scale to reduce acquiescence bias (Mirowsky & Ross, 1991; Schriesheim & Hill, 1981). However, an increasing number of studies have criticized this technique stating that it creates confusion for respondents, it is a distortion of the factor structure in which the scale is intended to measure, and it has lower internal validity (e.g., Lindwall et al., 2012; Savalei & Falk, 2013). Zhang et al. (2013) examine these criticisms with a Need of Cognition Scale and found that the model fitness was better when the scale had no or all reverse coded items. Applying this logic, deleting reverse coded items may increase the goodness of fit of the transfer of training scale.

Direction for Future Research

The deeper understanding of volition revealed in this study opens new avenues for future transfer of training research. First, there is a need to understand the relationship between volition, goal intention, and the transfer of training in a work skills training context for domestic organizations. Employees from these organizations encounter work situations that require behavioral change on a daily basis whether or not they realize it.

They have to transfer any skill, sometimes a combination of skills related to their job, in order to perform efficiently. They are constantly dealing with habit intrusion, lapse and relapse of ineffective work behaviors, a maintenance of their volition to keep performing their best, attitudes towards training at the organizations, and immense work stress. Examining how employees at domestic organizations regulate volition and goal intention to transfer various types of skill training (e.g., technical skill training, soft skill training, law compliance training, change agent training) in various conditions would further HRD's understanding about sustainable talent development and organizational change. Thus, future research may consider replicating the design of this study in the following conditions: (a) training programs that requires a mandatory attendance, (b) hard and soft work skills training programs (e.g., team communication training), (c) law compliance training programs, (d) a mix group of voluntary and mandatory training program attendees, (e) variations in frequency of training follow-up meetings, (f) different interval of breaks in between each data wave, (g) employee orientation program, and (h) training of necessary work skills for highly stressful occupation (e.g., medical professionals). These conditions represent variables known to affect one's motivation and volition.

Examining habits is another area of research that deserves attention from HRD. Two aspects of habit research to be further examined are the habit strength of each work skill, and trainees' perceived awareness of habit intrusion. The findings of this research indicated some habit intrusion associated with the transfer of intercultural adjustment and resilience skills. Put simply, students in the sample demonstrated a strong association of (old) habits developed when they were in the U.S. despite their intention to transfer intercultural training skills. Based on this finding, it is reasonable to believe that there is

some level of ingrained habits associated with ineffective work performance. Future research can shed light on habit cues and the extent to which habit strength is associated with each work skill.

Further research on the transfer of training experience during the first six weeks after training is also encouraged. T-test results in this study showed a decrease in the transfer of training, goal intention, implementation intention (volition), and openness to experience at week 6 (T1) for both conditions. This decrease indicates that the first six weeks after training may be critical to trainees' long-term use of training skills. The next questions researchers may ask are: What factors contribute to a decrease in the key outcomes? How fast and can are habits interfere with goal-directed actions at each time point? What can an organization do to support high and consistent transfer of training? Future research may also consider examining the types of fear associated with the transfer of training, types of post-training work structure to support the transfer of training, psychological safety enhancement strategies, and a training refreshment format that can foster volition to transfer training.

Concluding Thoughts

Although the transfer of training concept is at a mature stage in terms of the body of knowledge in HRD, this study indicates that the literature can be expanded in many new directions. The insights about volition to transfer training and habit intrusion revealed in this study offer an alternative explanation to the typical low training transfer rate, which has been a long-standing problem in HRD research and practice for at least 30 years (Baldwin & Ford, 1988; Bell et al., 2017; Blume et al., 2010; Blume et al., 2019; Grossman & Salas, 2011; Massenberg et al., 2015). The study also provides a practical

approach for HRD to promote volition to transfer training and should prompt organizations to support trainees' volition with other strategies. More importantly, the findings emphasized an organization's serious effort to build a post-training work structure to reinforce the sustainable use of training skills and hold the trainees accountable. The transfer of training is a complex process in which volition plays an important role. To make the process more effective, every part of the process must move together and maintain its core function in support of all other functions.

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Appendix A
Questionnaire Items (English)

Construct	Items	
(a) Goal intention	1. I intend to use four adjustment and resilience strategies to aid challenges during my time abroad. 2. I intend to use what I learned from the adjustment and resilience strategies training to aid my cross-cultural transition. 3. I intend to apply the four adjustment and resilience strategies in my daily life abroad. 4. I intend to use the four adjustment and resilience strategies whenever I face challenges/stressful situations abroad.	
(b) Implementation Intention	1. I will discuss with my on-site advisor about situations I can apply the adjustment and resilience strategies I learned from the training. 2. I will discuss with my peers about situations I can apply the adjustment and resilience strategies I learned from the training. 3. I will spend time thinking about how to use the skills I have learned in my daily life abroad. 4. I will look for opportunities to use adjustment and resilience strategies in my daily life abroad. 5. I will practice using the adjustment and resilience strategies in my daily life abroad. 6. I will set specific goals for maintaining the adjustment and resilience strategies during my time abroad. 1. I will monitor my success at using the adjustment and resilience strategies during my time abroad.	
(c) Perceived content validity	1. Examples discussed in the training is similar to scenario I am experiencing. 2. I like training because I can easily relate to my situation abroad. 3. What is taught in training is comparable to what I need to do to successfully adjust to a new culture	
(d) Training Transfer/Resilience skills – Self-report	Manage your expectations	1. I expect challenges (e.g., homesickness, language barrier, culture shocks) during my time abroad, especially the first few weeks.

		2. **(Reverse coded*)** I expect to make many close local friends the first week I arrive. 3. I expect to feel more comfortable with a new culture as time progresses.
	Openness to new experiences	4. I navigate a new culture through trials and errors. 5. **(Reverse coded*)** I will be hard on myself every time I make mistakes. 6. I be open to find out local foods and activities I like.
	Build social support	7. I reach out to people for help and advice. 8. I spend time with local friends/families. 9. I keep in touch with my family and friends back home.
	Maintain positivity and self-confidence	10. I look at the bright side of things whenever I face challenges. 11. No matter what happens I always find a solution 12. I believe in my ability to deal with difficult times.
(e) The Connor-Davidson Resilience Scale (CD-RISC 10)	1. I am able to adapt to change. 2. I can deal with whatever comes. 3. I try to see humorous side of problems. 4. Coping with stress can strengthen me. 5. I tend to bounce back after illness or hardship. 6. I can achieve goals despite obstacles. 7. I can stay focused under pressure. 8. I am not easily discouraged by failure. 9. I think of self as strong person. 10. I can handle unpleasant feelings	
(f) Transfer self-efficacy	1. I am confident in my ability to use the adjustment and resilience strategies. 2. I have no doubt in my ability to apply adjustment and resilience strategies in my everyday life abroad. 3. I am confident I can overcome obstacles that prohibit the application of adjustment and resilience strategies in my everyday life abroad. 4. I have high confidence in using adjustment strategies in my daily life abroad even when facing difficulties or situations that become obstacles	

(g) Quantity of local contacts	Number of local contacts	Think of local friends you regularly spend time with. How many local friends do you have? o None o 1-3 o 4-6 o 7 and more
	Number of hours spent with local friends/family (per week)	Think of local friends/family you regularly spend time with. How many hours in a week do you typically spend with them? o None o Less than 3 hours o 4-6 hours o 7-10 o 10 or more
(f) Openness to experience (Big five personality)		1. I frequently feel highly creative 2. I am imaginative 3. I appreciate art 4. I find novel solutions 5. I am more original than others.

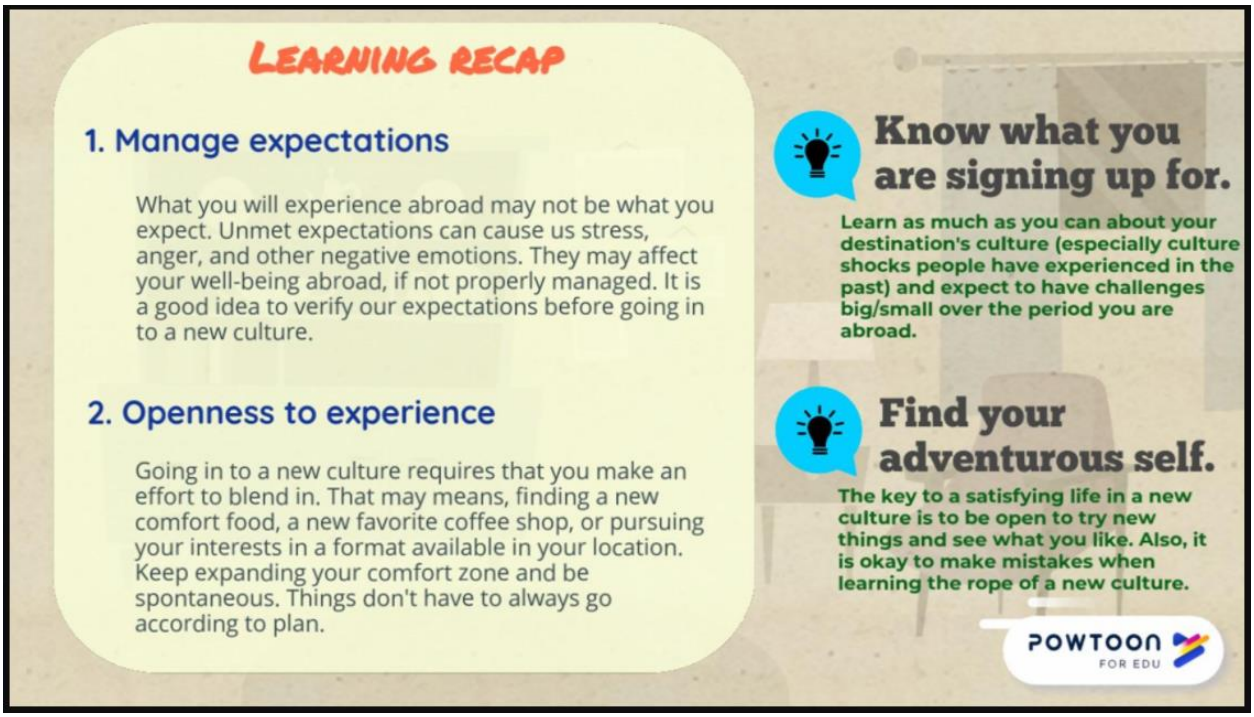
(h) Demographic Information

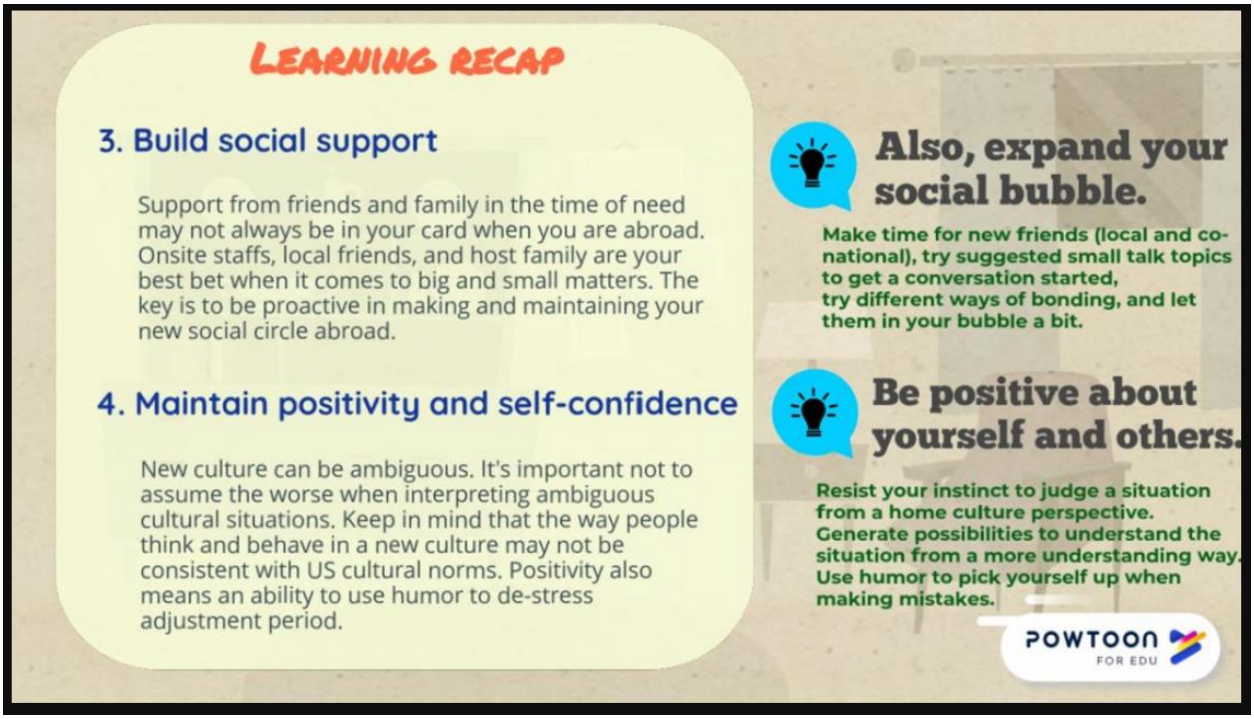
Dimensions	Items
Name	Please write your name and surname in the box below
Gender	What is your current gender identity? o Male o Female o Trans Man o Trans Woman o Genderqueer/Gender Non-Conforming o Prefer to self-describe ……. o Decline to state
Current degree	What type of degree are you currently pursuing? o Undergraduate o Graduate o Professional o Other (please specify ……..)
Age	Please choose your age range o ≤19 o 20-25

	○ 26-30 ○ 31-35 ○ 36-40 ○ 41-45 ○ ≥46
Type of housing	What is your current type of housing? ○ Homestay ○ Dormitory ○ Hotel ○ Apartment with American friends ○ Apartment with local friends.
Amount of time spent abroad	How much time have you lived (or studied) outside of your home country? ○ Less than one month ○ One semester (4 months) ○ One academic Year (9 months) ○ One year ○ More than a year
Experience living/studying abroad	Have you been living or studying abroad before? ○ Never ○ Yes, once ○ Yes, twice ○ Yes, more than 2 times
Race	Please indicate how you would like to identify yourself ○ African American/African/Black ○ American Indian/Alaskan Native ○ Asian/Native Hawaiian/Pacific Islanders ○ Chicano/Latino ○ Middle Eastern ○ Caucasian/White ○ Biracial ○ If none of these options applies to you, please specify ……. ○ Prefer not to answer
International student status	Are you studying at the current institution with a student (F-1 or J-1) visa? ○ Yes ○ No
Home country	Which country do you identify as your home country? (please specify) ○ …….
Internship status	Are you taking an internship course during your semester abroad?

	o Yes o No
Language of instruction	Is your course taught in English? o Yes o No o Others …….. (please specify)

Appendix B
Job Aids





Appendix C1
Consent Form

INFORMATION SHEET FOR RESEARCH
Intercultural Skills Builder research

You are invited to be a research study of a mechanism allowing trainees to apply training skills in their daily life. You were selected as a possible participant because you are registered for a study abroad program in the Fall 2019 term. We ask that you read this form and ask any questions you may have before agreeing to be in the study.

This study is being conducted by: Professor Kenneth Bartlett (Principal Investigator), Department of Organizational Leadership, Policy, and Development, University of Minnesota.

Procedures:

If you agree to be in this study, we would ask you to do the following things:
Take a 20-minute online Intercultural Skills Builder module, review 2-page module refresher, and complete surveys. There will be three waves of surveys throughout the four months that you will be abroad. The first survey will be paced throughout the Intercultural Skills Builder modules. It should take no more than 20 minutes to complete. You will receive the second and third survey on week 6 and 14 respectively. The last two surveys will contain about half the number of the first survey's questions, therefore should take 10-15 minutes to complete.

Compensation:

There will be a random drawing of gift certificates for participants who complete the follow-up surveys.

- Students are eligible to win a raffle of $50 Amazon gift card when they complete a training, a baseline survey, and the first follow-up survey.
- Students are eligible to win a raffle of $150 Amazon gift card when they complete a training, a baseline survey, the first follow-up survey, and the second follow-up survey.

Confidentiality:

The records of this study will be kept private. In any sort of report we might publish or share with the Learning Abroad Center, University of Minnesota, we will not include any information that will make it possible to identify a subject. Research records will be stored securely and only researchers will have access to the records.

Voluntary Nature of the Study:

Participation in this study is voluntary. Your decision whether or not to participate will not affect your current or future relations with the University of Minnesota or the Learning Abroad Center. If you decide to participate, you are free to not answer any question or withdraw at any time without affecting those relationships.

Contacts and Questions:

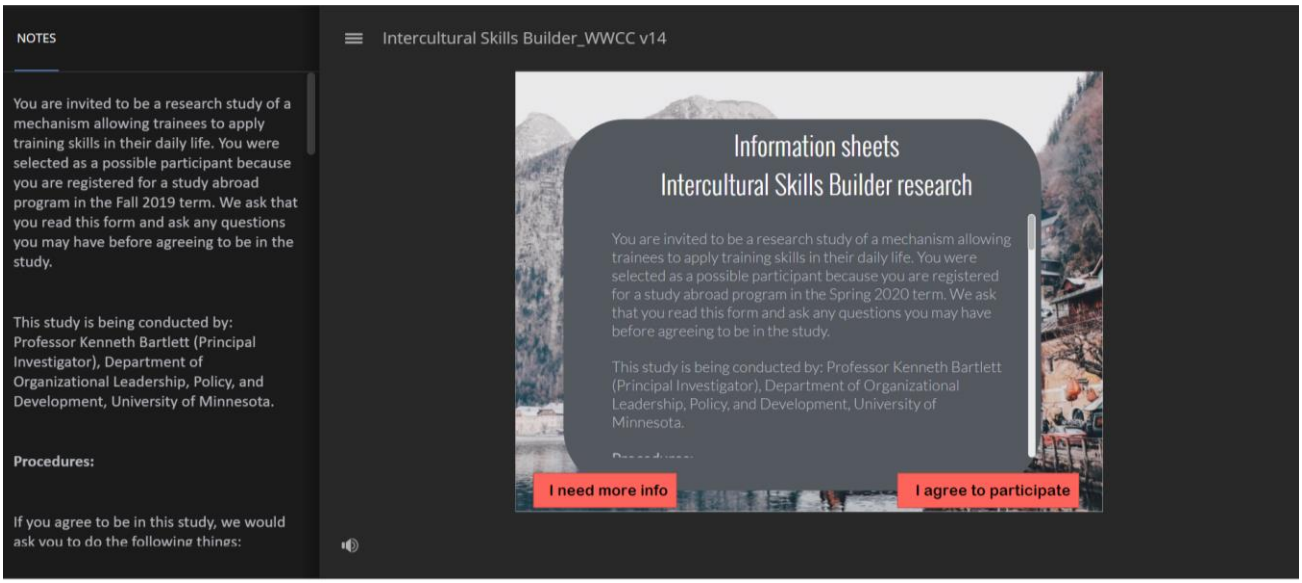
The researcher(s) conducting this study are: Professor Kenneth Bartlett (Principal investigator) and Pimsiri Aroonsri (student investigator). If you have questions, **you are encouraged** to contact them at 104 Burton hall (178 Pillsbury Drive SE, Minneapolis, MN 55455) OR via the following email address: bartlett@umn.edu and aroon004@umn.edu.

This research has been reviewed and approved by an IRB within the Human Research Protections Program (HRPP). To share feedback privately with the HRPP about your research experience, call the Research Participants' Advocate Line at 612-625-1650 or go to https://research.umn.edu/units/hrpp/research-participants/questions-concerns. You are encouraged to contact the HRPP if:

- Your questions, concerns, or complaints are not being answered by the research team.
- You cannot reach the research team.
- You want to talk to someone besides the research team.
- You have questions about your rights as a research participant.
- You want to get information or provide input about this research.

You will be given a copy of this information to keep for your records.

Appendix C2
Consent form (a screen capture of a consent page)



Appendix D

Recruitment message

Dear [Student's name],

I would like to personally invite you to participate in the Intercultural Skills Builder (ISB) program, **a FREE informal study abroad support & run by the University of Minnesota Learning Abroad Center.** It is a quick e-learning module designed to boost your confidence in a cultural transition prior to study abroad. **No grade, no homework!**

All we ask is that you complete a 20-min learning module and three well-paced surveys throughout [Fall/Spring] semester. If you are interested in the program, please follow the link provided below.

READY? >>> here's your link [study link] (please do not share the link with other students)

More info: [attached recruited video]
See also Frequently Asked Questions sheet [attached]

****Checkpoint 1 deadline is YOUR PROGRAM START DATE (Midnight, US. Central time).** There is no commitment to this program (you can withdraw whenever you see fit). I recommend checking it out first since you can take advantage of the program without having to commit to it.
If you don't want to participate, simply ignore the request (or request to be removed from a mailing list).

Best,
Pim, ISB program coordinator

Appendix E

Debriefing Script

Hi all! Thank you so much for your participation over the past 14 weeks. I hope that the Intercultural Skills Builder program is beneficial for your adjustment abroad. However, the objective of this research goes beyond that intended benefit. Your participation in this research will help us understand your willpower to use skills learn from the program in daily activities. Half of you have been randomly assigned to a WOOP module, designing to help you stick with your intention to use the training skills. According to a number of research, WOOP intervention has help individuals act on their intention to lose weight, exercise regularly, reduce smoking frequency, driving compliance, and many more. In the context of this study, WOOP is a tool to you integrate skills learned from the program in your daily life in a more systematic manner. It is expected that WOOP will increase your resilience to challenges in living a life in a new culture as well as your adjustment. If you didn't receive WOOP intervention during the program and wish to learn more about it, WOOP module and resources are available to you with no cost at the last page. Please click "next" to review the consent form and "yes, I agree to participate in this research" if you wish all responses to the survey to be used for research purposes. Thank you for your time!

Appendix F

An Official Announcement of Study Abroad Program Suspension

Message from the Associate Vice President and Dean of International Programs

March 15, 2020 — Message sent to all students abroad and their emergency contacts

Dear students,

We regret to inform you the University of Minnesota is requiring all students abroad to return immediately to the U.S. **You must make plans to return to the U.S. as soon as possible but no later than Friday, March 20.** This mandate is precipitated by border closings and global airline flight cancellations, which have been quickly changing over the past 48 hours. We anticipate these changes may make it significantly more difficult for U.S. citizens and/or University students to return to the U.S. in the near future. These actions are going into effect on the order of governments and healthcare systems worldwide in order to reduce the spread of COVID-19.

This message is also being sent to your emergency contacts. If you do not attend the University of Minnesota, your home institution will be informed of your mandated return to the U.S.

Rebook Your Flight

Students studying abroad through an education abroad office will be able to receive up to $500 for costs associated with changing your ticket. *Change* your return date on your existing ticket rather than buying a new ticket (unless buying a new ticket is the less expensive option). Travelers are experiencing flight cancellations, particularly Delta Airlines flights. If you can change your existing flight online to arrive through one of the following U.S. airports, do so **immediately**.

- Atlanta (ATL)
- Boston (BOS)
- Dallas-Fort Worth (DFW)
- Detroit (DTW)
- Honolulu (HNL)
- Newark (EWR)
- Miami (MIA)
- New York-JFK (JFK)
- Los Angeles (LAX)
- Chicago-O'Hare (ORD)
- San Francisco (SFO)
- Seattle (SEA)
- Washington-Dulles (IAD)

The Centers for Disease Control and Prevention (CDC) has ***not*** approved Minneapolis/St. Paul (MSP) airport for U.S. travelers. As a result, Delta suspended direct inbound travel from international locations to MSP. Delta and other airlines are actively working to re-book impacted travelers.

- If you are unable to book a flight by Friday, March 20, we will work to support you.
- We urge you to book travel immediately. Many flights are being canceled after you book them. Be patient and persistent. Keep rebooking, if needed. We encourage you to check regularly with your

airline to ensure your flight is proceeding as scheduled since the airline industry is changing rapidly.
- If you booked your ticket through Village Travel, contact their after-hours number for assistance at 800-823-1035.
- Expectations for self isolation and quarantine differ widely and are in flux. All students should check state and local guidelines at their intended destination for up-to-date information.

Housing Accommodations for U of M Students

All U of M students are expected to comply with Minnesota Department of Health (MDH) guidelines pertaining to returning to their communities, or guidelines issued by your local or state health department.

Travelers returning from CDC Level 3 countries:

You must follow "light quarantine" protocol upon your return. This requires a private bedroom for you. There are no restrictions on people who live in the same home or apartment.

- If you can return to your home or on-campus housing while fulfilling the "light quarantine" protocol, you should do so.
- University of Minnesota Twin Cities students who do not have housing options on or off campus upon return, complete this form to help the University identify housing options for you.
- Students from other University of Minnesota campuses should check with their campus education abroad office for more information.
- If you are experiencing COVID-19 symptoms, you will need to visit a health clinic as soon as possible to determine if you have the virus, and in which case you will need a higher level of isolation, including a single bedroom and single bathroom.

Travelers returning from CDC Level 2 countries:

- If you have existing housing arrangements, are able to return home, or can stay with family or friends, you should do so.
- University of Minnesota Twin Cities students who do not have housing options on or off campus upon return, complete this form to help the University identify housing options for you.
- Students from other University of Minnesota campuses should check with their campus education abroad office for more information.
- If you are experiencing COVID-19 symptoms, you will need to call a health clinic as soon as possible to determine next steps, including possible testing and if you will need to be isolated.

Academic Accommodations

You will receive additional information in regard to academics in the near future. Our priority today is arranging for the physical return of all study abroad students to the U.S. University of Minnesota students will begin receiving additional communication from the University, including from the Office of Undergraduate Education, regarding your return to the U.S.

We understand that some of you received similar communication last week and may already be back in the U.S., but we are striving to keep all students up to date with new information that may be relevant to them.

We will be in touch soon with additional information about possible refunds related to recoverable costs, if applicable. We are working hard to clarify information, but there are still many details to sort out as you prepare for an expedited return. Expect a follow-up message, but do not wait to take action toward a return to the U.S. Please know we are here for you to address your needs as they arise.

Sincerely,
Meredith McQuaid
Associate Vice President and Dean
International Programs

Appendix G

WOOP Guide (from woopmylife.org/en/practice)

Before your start with the WOOP exercise, please be aware that WOOP is different from other exercise: it involves thoughts and images rather than rational or effortful thinking. It involves going slow, creating time and space for thinking and imagining.

What is your Wish?

What is your most important wish or concern in your interpersonal life? Pick a wish that is challenging for you but that you can fulfill. Note your wish in 3-6 words.

What is the best Outcome?

What would be the best thing, the best outcome about fulfilling your wish? How would fulfilling your wish make you feel? Note your best outcome in 3-6 words.

Now take a moment and imagine the outcome. Imagine things fully.

Identify your obstacle

What is it within you that hold you back from fulfilling your wish?

What is your main inner obstacle? Note your inner obstacle in 3-6 words.

Make an if-then plan

What can you do to overcome your obstacle?

Name one action you can take or one thought you can think to overcome your obstacle.

Appendix H

Institutional Review Board Approved Letter

UNIVERSITY OF MINNESOTA

Twin Cities Campus

Human Research Protection Program
Office of the Vice President for Research

Room 350-2
McNamara Alumni Center
200 Oak Street S.E.
Minneapolis, MN 55455

612-626-5654
irb@umn.edu
https://research.umn.edu/units/irb

APPROVAL OF MODIFICATION

August 14, 2019

Kenneth Bartlett

612-624-4935
bartlett@umn.edu

Dear Kenneth Bartlett:

On 8/14/2019, the IRB reviewed the following submission:

Type of Review:	Modification
Title of Study:	Volition to Transfer Training: A randomized control study to promote study abroad students' use of adjustment and resilience skills learned during an online pre-departure training
Title of Submission	Modification #1 for Study The Psychological of the Transfer of Training mechanism
Investigator:	Kenneth Bartlett
IRB ID:	STUDY00006683
Submission ID	MOD00011775
Sponsored Funding:	None
Grant ID/Con Number:	None
Internal UMN Funding:	None
Fund Management Outside University:	None
IND, IDE, or HDE:	None
Documents Reviewed with this Submission:	• Protocol_v.5 Aug 6, 2019, Category: IRB Protocol; • Survey questions_v1, Category: Other; • Debriefing process, Category: Other; • Consent form_v.1, Category: Consent Form

The IRB determined that the criteria for approval continue to be met and that this study continues to involve no greater than minimal risk.

Modifications/updates included:

ADDED INFORMATION

- Section 24 Multi-site research

- Add Kalamazoo college throughout the protocol.

24.1 Study-Wide Number of Participants: Approximately 80 participants are expected in Fall 2019 and 150 participants in Spring 2020. These numbers are from University of Minnesota and Kalamazoo college combined.

24.2 Study-Wide Recruitment Methods: See section 12 above.

24.3 Study-Wide Recruitment Materials: See 12.4. A collaborator from Kalamazoo college will present the materials to the potential student participants.

24.4 Communication Among Sites:

- All sites have the most current version of the protocol, consent document, a letter of support, ARS training materials, and web access to the online ARS training modules.

- All sites agreed that no modification can be made before IRB approval.

- All required approvals (initial, continuing review, and modifications) have been obtained at each site (including by the site's IRB of record).

- All modifications have been communicated to sites, and approved (including approval by the site's IRB of record) before the modification is implemented.

- All engaged participating sites will safeguard data, including secure transmission of data, as required by local information security policies.

- All local site investigators conduct the study in accordance with applicable federal regulations and local laws.

- All non-compliance with the study protocol or applicable requirements will be reported in accordance with university or local policy.

- All other reportable events in accordance with university or local policy.

24.5 Communication to Sites: Email is the main method of communication between U of M and Kalamazoo college.

This study does not require continuing review. The revised Common Rule (2018 Rule) eliminated continuing review for most minimal risk research approved on or after January 21, 2019. However, the elimination of continuing review does not eliminate reporting requirements or submission of modifications for IRB review and approval. Information about 2018 Rule requirements and investigator responsibilities can be found in the Investigator Manual (HRP-103).

If consent forms or recruitment materials were approved, those are located under the Final column in the Documents tab in the ETHOS study workspace.

In conducting this study, you are required to follow the requirements listed in the Investigator Manual (HRP-103), which can be found by navigating to the HRPP Toolkit Library on the IRB website.

For grant certification purposes, you will need the approval and last day of approval dates listed above and the Assurance of Compliance number which is FWA00000312 (Fairview Health Systems Research FWA00000325, Gillette Children's Specialty Healthcare FWA00004003).

Sincerely,

Clinton Dietrich, MA, CIP
IRB Analyst

We value feedback from the research community and would like to hear about your experience. The link below will take you to a brief survey that will take a minute or two to complete. The questions are basic, but your responses will help us better understand what we are doing well and areas that may require improvement. Thank you in advance for completing the survey.

Even if you have provided feedback in the past, we want and welcome your evaluation.

https://umn.qualtrics.com/SE/?SID=SV_5BiYrqPNMJRQSBn