SELF-EFFICACY, PERCEIVED UTILITY AND SUPERVISOR SUPPORT'S RELATIONSHIP WITH MOTIVATION TO TRANSFER TRAINING

by

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A thesis submitted to the faculty of
The University of North Carolina at Charlotte
in partial fulfillment of the requirements
for the degree of Master of Arts in
Industrial/Organizational Psychology

Charlotte

2020

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ABSTRACT

Self-Efficacy, Perceived Utility and Supervisor Support's Relationship with Motivation to Transfer Training (Under the Direction of DR. ERIC HEGGESTAD)

Workplaces conduct training in their organizations with the goal that employees will generalize that training and transfer the learned skills to their jobs. However, training transfer remains a challenge for many organizations. Since the initial theorization of transfer climate in 1988, many studies have been conducted to support the hypothesis that there is more to training transfer than just the content. This study evaluates the relationship between the beliefs that trainees have about their own abilities to transfer as well as their beliefs about the value of the training with their actual motivation to transfer the skills to their job. It also evaluates whether or not an employee's perception of their supervisor can alter these relationships. Findings from this research suggest that individuals who are motivated to transfer training are more likely to transfer the knowledge they obtained through training. Those participants who believed themselves to be efficacious at transfer as well as those who perceived greater utility of transfer were also more likely to be motivated to transfer. While perceptions of supervisor support of training may still have a predictive impact on motivation to transfer as well as transfer itself, it was not found to influence the relationship between motivation to transfer and the related variables. These findings give insights to organizations about which employees will be more successful at transferring learned skills.

ACKNOWLEDGEMENTS

The work done on this research study was not completed by myself alone but with the support of other key individuals. First and foremost, thanks given to Dr. Eric Heggestaad. His shared interest in the topic led to the refinement of the hypotheses and design of this study. His attention to detail married with his skill for prioritizing key elements of a research project were invaluable to the completion of this effort. I would also like to thank the thesis committee for their availability to participate in this process and the advisement they provided. I would also like to thank the University of North Carolina at Charlotte's Department of Psychological Science for providing the funding necessary to conduct the research. Special thanks to my colleague Babak Keyvani, Senior Learning and Development Analyst with Charter Communications, for providing mentorship and guidance on utilizing the Python programming language which was crucial for the data analysis. Finally, I am thankful to my lovely wife, Adria Alexander, for her love and emotional support throughout this journey.

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INTRODUCTION

For many individuals in the workplace, training is viewed as a means to an end. There may be a particular skill required for a job which would be obtained via training. It may be that an employee will voluntarily sign up for organizational training to develop themselves as a professional. Certainly, there is also the obligatory training that many professions and organizations require, such as training on how to use a particular system or training around a particular policy (e.g., sexual harassment). Organizations are also interested in obtaining a positive outcome by training their employees. Organizations were so concerned that in 2017 they spent an average of $1,296 per employee on training and development, while allowing employees to spend an average of 34 hours in training (Ho, 2018). Meanwhile, many leaders report feeling disappointed when training fails to make an impact on their business (Beer, Finnstrom, & Schrader, 2016). Research has shown that training can be a net positive for employers in key metrics, like job satisfaction and employee turnover, which have been shown to have a positive impact on business outcomes (Koster, De Grip, & Fouarge, 2011; Harter, Schmidt, & Hayes, 2002). Is there a way to reinforce this investment that both employees and employers have made?

Training transfer is the generalization and application of learned skills to one's job (Baldwin & Ford, 1988). Although much has been written on the topic, gaps in the accumulated knowledge of transfer remain (Ford, Baldwin, & Prasad, 2018). Since transfer is done by the individual, many studies have sought to understand what it is about the individual that leads him or her to transfer. Studies have shown that there is a significant relationship between an individual's perception of their abilities and their

perceptions of the value in the training with whether or not they transfer the skills learned to their jobs (Chiaburu & Lindsay, 2008; Blume, Ford, Baldwin, & Huang, 2010). Baldwin and Ford (1988) theorized that there are three main elements associated with the success of training transfer: trainee characteristics, training design and transfer climate. They identified and described several trainee characteristics that would be associated with their capacity to transfer. One of the characteristics they focused on was motivation. What is lesser known are the factors that might influence the relationships associated with motivation to transfer training. For example, is it possible that an employee's supervisor, which is a part of the transfer climate, could augment the relationship between motivation to transfer and an employee's perception of their abilities or the value of the training? This study examines how training transfer is impacted by the motivation of trainees to transfer and how that motivation is related to a perceived utility of the training as well as the self-efficacy perceptions of the trainee. Lastly, I will look at the extent to which those relationships are moderated by the presence of a supportive supervisor. These relationships are depicted in the theorized model found in Figure 1.

Motivation to Transfer

Since Baldwin and Ford's seminal work on training transfer, motivation to transfer has received considerable attention in the literature (e.g. Axtell, Maitlis, & Yearta, 1997; Burke & Hutchins, 2007). Motivation to transfer has been described as the desire of the trainee to utilize the skills learned in a training program on the job (Noe, 1986). Since the act of transfer is completed by the trainee, it can only occur when that trainee has the desire to see that transfer actualized. For example, if a trainee attended a training and learned what was taught yet had no desire to utilize the training on their job,

then the training likely would not be transferred. Research has provided good support for the importance of motivation to transfer, showing that motivation to transfer is an antecedent to actual transfer (Gegenfurtner, Veerman, Festner, & Grubner, 2009; Axtell, Maitlis, & Yearta, 1997). For example, Axtell et al. (1997) found that when trainees attempted to transfer immediately after the training, the skills were more likely to transfer long term when the employees engaged in higher frequency of usage of the skills. The attempt to transfer promptly after a training event, was predicted by the trainee's reported motivation to transfer the training. As a replication of this known relationship, I propose the following hypothesis.

Hypothesis 1: Motivation to transfer will be positively related to transfer activity

Self-Efficacy

Self-efficacy is the belief in one's own ability to change, enhance or increase their performance in a particular area (Holton, Bates, & Ruona, 2000). The belief a trainee has in their ability to perform the trained task outside of the training context is likely to be a significant determinant of whether or not the trainee will transfer the newly acquired knowledge or skill to the job (Blume, Ford, Baldwin, & Huang, 2010; Massenberg, Schulte, & Kauffeld, 2017). Many adults are hesitant and possibly fearful to engage in activities in which they believe they will not succeed, while they seek out opportunities where they feel that they are capable of finding success (Bandura, 1977). As such, if a trainee doesn't feel confident in their ability to perform the skills, then they may avoid attempting to transfer them to their job. This confidence in learned skills would need to withstand the move from the classroom to the job for the training to transfer. If trainees

view themselves as unable to perform the learned skills or apply the learned knowledge on the job, then it is likely that the skill or knowledge will go unused.

Blume, Baldwin, Ford and Huang (2010) suggested that self-efficacy is key to an employees' ability to transfer training. This suggestion was based on meta-analytic findings showing a moderate positive relationship (r = .32) between self-efficacy, measured immediately post-training, and transfer of training. In addition to training transfer, research has also shown that self-efficacy is related to the motivation to transfer. For example, Massenberg et al. (2017) found that post training self-efficacy had a moderate correlation with the motivation to transfer training. Researchers have also found significant relationships between training self-efficacy and motivation to learn which, in turn, leads to motivation to transfer (Chiaburu & Lindsay, 2008). Taken together, these findings indicate that trainees who feel confident in their abilities to alter their performance are more motivated to learn and take what they have learned and generalize it to their jobs in an effort to change their performance. The research in this paper is concerned specifically with post-training self-efficacy, as training could either act as a confidence boost or a reality check for the trainees (Massenberg et al., 2017).

Hypothesis 2: Post training self-efficacy will be positively related to motivation to transfer

Perceived Utility of Training

A key factor that should be considered in terms of motivation to transfer is the perception, from the trainee's perspective, that the training will lead to some benefit, either in their current job or their future career prospects. This notion can be linked to the concept of instrumentality (i.e., a person's belief that their performance will lead to the

outcome they are expecting) from expectancy theory (Vroom, 1964) or to what Grossman and Salas (2011) refer to as the perceived utility of training (i.e., the trainee's view that the training will be useful to them). Research has established a relationship between the perceived utility of training and the motivation to transfer (Clark, Dobbins, & Ladd, 1993; Blume, Ford, Baldwin, & Huang, 2010; Smith, Jayasuriya, Caputi, & Hammer, 2008; Chiaburu & Lindsay, 2008). Researchers have even found that expectations from trainees who believed the training would enhance job performance after training was conducted, positively predicted motivation to transfer (Massenberg, Schulte, & Kauffeld, 2017). For these reasons, I assert that perceived utility of the training will be related to the motivation to transfer training.

Hypothesis 3: Perceived utility of training will be positively related to motivation to transfer

Perceived Supervisor Support for Training Transfer as a Moderator

As stated previously, employees will be motivated to transfer training when they believe that they have the ability to transfer (i.e., transfer self-efficacy). I expect that the strength of this relationship will increase to the extent that trainees feel increasingly supported by their supervisor. In their original call to study the transfer gap, Baldwin and Ford (1988) noted that supportive supervisors create a climate that encourages employees to transfer. Richman-Hirsch (2001) found that a supportive work environment, in which supervisors are a part, moderated the degree to which employees transferred, generalized and maintained skills learned in training. For many employees a supervisor is an essential component of their work environment and whether or not they view that environment as supportive.

Supervisors contribute to the employee's perception that they are applying the training correctly. Supervisors who have a track record of supporting an employee have signaled to that employee that they are invested in their success. Supervisors can send these signals by providing feedback, which gives an indication to the employee of their abilities. Conversely, supervisors who are unsupportive and are lacking in feedback provision, create an environment of ambiguity when it comes to the efficaciousness of an employee. This could leave an employee that believes themselves to be efficacious at transferring with lower levels of motivation to transfer due to an uncertainty of recognition or fear of failure for their transfer. Govaerts and Dochy (2014) note that one of the ways supervisor support is operationalized is through the tolerance of mistakes made while attempting to transfer. Employees may hesitate to transfer learned skills to their job if their manager has shown low tolerance for mistakes that could happen as they attempt to transfer the training. Employees facing any of these conditions may lack eagerness in motivation to transfer because of the lack of support they feel from their supervisor.

> *Hypothesis 4*: The relationship between post-training self-efficacy and motivation to transfer will be moderated by perceptions of a supportive supervisor, such that the relationship will be stronger as the level of supervisor support for transfer increases.

I also expect that a supportive supervisor will moderate the relationship between perceived utility and motivation to transfer (Nijman, Nijhof, Wognum, & Veldkamp, 2006; Govaerts & Dochy, 2014). For many employees, their view of the organization is seen through the lens of their supervisor. Organizations will often use supervisors as a

channel to convey information to their employees from human resources or executive leadership (Purcell & Hutchinson, 2007). Supportive supervisors will signal to an employee that training is an essential means of either improving job performance or enhancing career outcomes which would positively influence the relationship between career utility and motivation to transfer. A lack of a supportive supervisor may signal to employees that training would not impact their performance or career prospects, which could negatively influence the relationship between perceived utility and motivation to transfer. A supportive supervisor should create an environment in which they show interest in their employees and their employees ideas for improving business outcomes which, in this case, would present as improved job performance through training (Govaerts & Dochy, 2014). In contrast, supervisors not perceived as supportive may signal to employees that transfer activities would be fruitless for the organization, particularly if they have a history of disregarding employee ideas for improving business outcomes (Beer, Finnstrom, & Schrader, 2016).

> *Hypothesis 5*: The relationship between perceived utility of training and motivation to transfer will be moderated perceptions of a supportive supervisor, such that the relationship will be stronger as the level of supervisor support for transfer increases.

METHOD

Procedure

Individuals that had recently completed a job-related training event were invited to participate in a study that consisted of two separate surveys. The initial survey (Time 1) contained the items for all of the study measures: *Self-Efficacy, Perceived Utility of the Training, Motivation to Transfer, Perceived Supervisor Support* and *Transfer Activity*. To better describe the sample of participants, demographical information regarding their race, gender, education level, job tenure and work industry was also collected. Worker identification numbers were also collected so that responses to each survey could be linked. Lastly, participants were asked an open-ended question about the training that they received.

Individuals who completed the Time 1 survey were invited to complete a follow up survey 7 days after completing the initial survey. This follow up (Time 2) survey consisted only of the *Transfer Activity* items and the worker identification numbers. The Time 2 measure of *Transfer Activity* was the data used for the analysis.

Transfer Activity data was gathered in the Time 1 survey as a precautionary measure given concerns regarding the number of participants who may not have completed the Time 2 survey; however, these data were not used in the final analysis.

Sample

Participants for this study were sourced using Amazon's Mechanical Turk service in which individuals choose to participate in surveys for which they qualify. The search for participants was narrowed, using the application's qualification settings to screen for: United States residents and native English speakers that were listed as employed.

Discrimination was not given to the type of training that was received, only that it was related to improving the participant's job performance and was not categorized as training for compliance. I also chose to eliminate participants who reported completing onboarding training, as they would have little experience with their job or their supervisor. In order to reach statistical power requirements, as found using the power analysis tool G*Power, a sample of over 315 people was required.

A total of 374 unique individuals participated in the initial survey. Of those, two individuals were dropped for not providing a worker ID, 36 individuals were dropped because the training that they participated in did not meet the qualification of being job related. In the end, data from 336 responses to the initial questionnaire comprised the Time 1 data. These data collected at Time 1 were used in the testing of Hypotheses 2, 3, 4 and 5.

A total of 234 participants also completed the Time 2 survey. From Time 2, 19 respondents were dropped for failing to provide an identification number that could be linked to the first survey. This left 215 (64.0% of the participants from the first survey) individuals that completed both elements of the study. At the end of each survey, participants were given a payment code that they could use to verify their participation on Mechanical Turk. Each participant that provided an accurate payment code was paid $1.00 per survey completed.

Demographic information for this sample (i.e., the 215 participants that completed both surveys) is found in Table 1. The average tenure of the group was 9.26 years. The average number of days since completing the training (gathered at Time 1) was 6 days.

The leading type of training that was completed was related to IT or computer skills. A complete frequency table of the training categories can be found in Table 2.

Measures

Motivation to Transfer was measured using a six-item scale taken from Gegenfurtner, Veerman, Festner, and Grubner (2009). These items utilized a 5-point Likert-type scale which ranged from 1 (strongly disagree) to 5 (strongly agree). I selected the six items that I believed were most relevant for this study. I also modified the items in order to target motivation to transfer the participants' most recent training experience. Cronbach's alpha internal reliability was .85. Three participants each failed to respond to an item on this scale (a different item for each participant). The mean value for that particular item was substituted for the missing value.

Self-Efficacy for Transfer was measured using scales adapted from Noe and Wilk's (1993) scales. These 13 items utilized a 5-point Likert-type scale which ranged from 1 (strongly disagree) to 5 (strongly agree). In order to adapt these scales to my context phrasing was added that referenced the training that the participants had most recently received. For example, the item "I can generally do the work necessary to accomplish my goals in training courses or seminars." was changed to "I can generally do the work necessary to accomplish my goals of *transferring learned skills to my job*". This adaptation puts explicit emphasis on transferring the learned skills.

An exploratory factor analysis of the 13 items resulted in the identification of four Eigenvalues greater than one. A four-factor solution was extracted and rotated obliquely. The six items that loaded on the first factor were succinct and clearly related to the way

in which I was conceptually defining transfer self-efficacy (e.g., “I have the ability to take what I learned in training and use it on the job.”). The items that loaded on the remaining three factors were less relevant to my conceptualization of the construct (e.g., “If I were offered a job in a field which I didn't know much about, I think I could learn to do the job well”). Cronbach’s alpha of this final, 6-item scale was .77. There was one respondent that left an item blank in this scale. The missing response in this scale was replaced with the mean value across all respondents for that particular item.

Perceived Utility of the Training was measured with scales adapted from Noe and Wilk’s (1993) scales. These 14 items utilized a 5-point Likert-type scale which ranged from 1 (strongly disagree) to 5 (strongly agree). In order to adapt these scales to fit the context, phrasing was added that referenced the training that the participants had most recently received. For example, the item: “Participating in training programs will result in more opportunities to pursue different career paths” became “The training program I just participated in will result in more opportunities to pursue different career paths”. This scale was also analyzed with an exploratory factor analysis after the survey results were gathered. Three distinct factors with Eigenvalues greater than 1 were found within the set of 14 items. The first factor had salient loadings from nine items, the second factor had salient loadings from three items and a third factor had salient loadings from two items. The nine items that loaded onto the first factor were retained for final analysis because they most captured the intent of the study. Examples of those items include: “The training program I just participated in will help my personal development” and “The training program I just participated in will help me stay up to date on new processes, processes and procedures related to my job”. Items that loaded onto the

second factor were all related to how the training was valuable to increasing one's standing with colleagues or management. An example included "The training program I just participated in will help me get along better with my peers". While these items are important to consider for utility of training, it should be pointed out that not all training has this as its aim. Getting along better with peers or management may not be the goal of a training and that should not diminish that training's value in the eyes of the trainee. The two items that loaded onto the third factor were reverse-coded items such as "The training program I just participated in gave me a needed break from my job". Cronbach's alpha for the nine-item scale was .89. There were 4 items in this scale that experienced missing responses from a total of seven respondents. Missing responses in this scale were replaced with the mean value across all participants for that particular item. None of the respondents left more than one item blank for this measure.

Perceived Supervisor Support for Training Transfer was measured using a five-item scale which was compiled from multiple sources that were the most relevant to this study. Three items came from Govaerts and Dochy's (2014) article on the facets of supervisor support for training . One item came from Facteau, Dobbins, Russell, Ladd and Kudisch's (1995)article on motivation and training transfer. One item came from Chiaburu and Tekleab's (2005) article on training effectiveness. These items utilized a 5-point Likert-type scale, which ranged from 1 (strongly disagree) to 5 (strongly agree). In order to adapt these scales to this study, I added phrasing that captured an overall sense of support for training from a supervisor for transfer of training. For example, the item "During my participation in this training programme (sic), my supervisor indicated his confidence in my successful completion of this programme (sic)" became "During my

participation in training programs, my supervisor indicates their confidence in my successful transfer of learned skills". Since these items were coming from multiple sources, it was important to perform an exploratory factor analysis on these data to determine if there were multiple factors within the measure. All of the items loaded well onto a single factor and only one Eigenvalue greater than one was present. The Cronbach's alpha for this measure was .86. There were two items in this scale that experienced missing responses from a total of two respondents. Missing responses in this scale were replaced with the mean value across all participants for that particular item. None of the respondents left more than one item blank for this measure.

Transfer Activity was measured with a three-item scale created for this study. Participants responded to each item using a 4-point Likert type scale in which: *1 = never, 2 = seldom, 3 = often,* and *4 = most of the time*. The three survey items were as follows: "I have performed tasks at work differently because of the training I received", "I have utilized the skills learned from the training I received on the job." and "I seek opportunities to utilize skills that I have learned." Since this measure was generated specifically for this study, an exploratory factor analysis was conducted. All three items loaded well onto a single factor with only one Eigenvalue that was greater than 1. Cronbach's alpha for this measure (Time 2 survey) was .84. There were no missing responses from any participants on this scale.

RESULTS

Hypothesis Tests

For Hypothesis 1, the relationship between composite scores for *Motivation to Transfer* and *Transfer Activity* (Time 2) scale were analyzed using a bivariate correlation test. *Motivation to Transfer* was correlated with *Transfer Activity* (Time 2), $r(213) = .47$, $p < .0001$. For Hypotheses 2 and 3, composite scores for the *Self-Efficacy*, *Perceived Utility of Training* and *Motivation to Transfer* scales were also analyzed using bivariate correlation tests. *Self-Efficacy for Transfer* was correlated with *Motivation to Transfer* $r(334) = .41$, $p < .0001$. *Perceived Utility of Training* was also correlated with *Motivation to Transfer* $r(334) = .59$, $p < .0001$. Correlations between all of the study variables can be found in Table 3.

In order to test whether *Perceived Supervisor Support* moderated the relationship between *Self-Efficacy for Transfer*, and *Motivation to Transfer*, a multiple regression analysis was conducted. First, the composite scores for the *Self-Efficacy for Transfer* and *Perceived Supervisor Support of Training* were mean centered. Following that step, the mean-centered scores were multiplied together to obtain an interaction score. I then regressed *Motivation to Transfer* scores onto scores for *Self-Efficacy for Transfer*, *Perceived Supervisor Support of Training*, and the interaction variable. A statistically significant interaction term was not observed. Thus Hypothesis 4 was not supported. Results from that analysis can be found in Table 4.

To test whether *Perceived Supervisor Support of Training* moderated the relationship between *Perceived Utility of Training* and *Motivation to Transfer*, a second multiple regression analysis was conducted. First, the composite scores for the *Perceived*

Utility of Training and *Perceived Supervisor Support of Training* were mean centered. Following that step, the mean-centered scores were multiplied together to obtain an interaction score. I then regressed scores for the *Motivation to Transfer* variable onto the scores for *Perceived Utility of Training*, *Perceived Supervisor Support of Training* and the interaction variable. The coefficient for the interaction variable was not statistically significant. Thus Hypothesis 5 was not supported. Results from that analysis can be found in Table 5.

Exploratory Analysis

Exploratory analyses were performed on the data in order to determine which variables had the greatest predictive value on *Transfer Activity* (Time 2). Using the final 215 participant sample, I regressed scores from *Transfer Activity* gathered at Time 2 on *Motivation to Transfer, Self-Efficacy for Transfer, Perceived Utility of Training* and *Perceived Supervisor Support of Training* gathered at Time 1. *Motivation to Transfer* was the only variable that was statistically significantly related to *Transfer Activity (F*(4, 210) = 14.95, $p < .001$), explaining 21% of the variance in *Transfer Activity*. Full results for this analysis can be found in Table 6. Knowing that *Motivation to Transfer* was accounting for so much of the variance in this model, a separate analysis was conducted in which only the measures for *Self-Efficacy for Transfer*, *Perceived Utility of Training* and *Perceived Supervisor Support of Training* were regressed onto *Transfer Activity* at Time 2. *Self-Efficacy for Transfer* ($\beta = .18$, $p < .05$) and *Perceived Utility of Training* ($\beta = .21$, $p < .01$) were each statistically significant predictors in this model. Those two variables accounted for 13% of the variance in *Transfer Activity* at Time 2. The results of this analysis can be found in Table 7.

It is important to note that I did not have the sample size required by G*Power to provide an appropriately powered test of moderation. Participant attrition at Time 2 was something that was anticipated, therefore the scale items for *Transfer Activity* were included in the first survey. The results of the tests of Hypotheses 4 and 5 were found when the predictor variables, gathered at time one were tested using the *Transfer Activity* data gathered at time two. By gathering data on *Transfer Activity* at time one as well, it was possible to use 336 responses as a complete sample to test for moderation. It was analyzed in the same way as the final sample that included the responses from time 2, and the same null hypotheses were found as well.

DISCUSSION

Hypothesis 1 dealt with the relationship between motivation and training transfer activities. Similar to what other researchers have found, I also found that motivation to transfer correlated to activities associated with training transfer (Axtell, Maitlis, & Yearta, 1997 Gegenfurtner, Veerman, Festner, & Grubner, 2009). This finding suggests that individuals who are motivated to transfer the skills are likely to transfer the training to their job. Given that the mean number of days since training had ended was six and another week had passed by the time that the second survey, gathering data on transfer activity, was administered suggests that this transfer may even hold up over a brief amount of time.

Motivation to Transfer was moderately, positively correlated with both *Self-Efficacy to Transfer* (Hypothesis 2) and *Perceived Utility of Training* (Hypothesis 3). These findings further support the notion that when trainees believe themselves to be capable and believe that the training is of some value to the work that they do, motivation to transfer is more likely. This should encourage instructional designers to develop and facilitators to deliver training in a way that promotes these two constructs in the training that they design. For instance, provide opportunities for trainees to successfully practice a given skill so that self-efficacy to transfer may be heightened. Also, promoting the utility of the skills to the audience so that they can see the value of transferring these skills could help lead to increased motivation to transfer. Since *Motivation to Transfer* was correlated with *Transfer Activity* (taken at time 2) it could be used a proxy *Transfer Activity* in situations where *Transfer Activity* could not be gathered. This should give designers and facilitators more real-time feedback on whether their delivered training

would transfer if participants are surveyed immediately after training. Correlations for all of the variables can be found in Table 3 of the Appendix.

Neither Hypothesis 4 nor Hypothesis 5 were supported in this study. The lack of support for these hypotheses suggest that an employee's perceptions of their supervisor's support for their transfer does not influence the relationship between self-efficacy and motivation (Hypothesis 4) or perceived utility of training and motivation (Hypothesis 5). This may be good news for the organization with less than supportive supervisors. If the training participants believe themselves to be effective and the training to be of use to them, the relationship between these beliefs and their motivation to transfer may not be impacted by a supervisor that shows little support for their development. However, *Perceived Supervisor Support* was positively correlated with *Motivation to Transfer*. That could indicate that if motivation to transfer training is important to an organization, supportive supervisors should be as well. I would also note that the participants in this study reported high levels of *Supervisor Support for Training* (M = 3.86, SD = .89). Without a large number of participants with a wider variance in their feelings about their supervisor's support for training, providing support for moderation could be difficult. Potentially, participants that experience less support from their supervisor would experience lower levels of self-efficacy or would not see transfer as useful. It is possible that in a sample with more participants reporting lower levels *Perceived Supervisor Support of Transfer* that these hypotheses would have been supported.

The exploratory analysis revealed that *Motivation to Transfer* is very important when it comes to determining training transfer, even above the other variables that were included in the model. Knowing that *Perceived Utility of Training*, *Self-Efficacy for*

Transfer and *Perceived Supervisor Support of Transfer* are all correlated with *Motivation to Transfer* is beneficial knowledge for anyone that is seeking to increase *Motivation to Transfer* levels in trainees. This is important to note as organizations spend so much time, effort and resources on training with the hopes that employees will use the training on the job. It is possible that those resources will be lost without the motivation to transfer the learned skills. Of course, motivation did not explain all of the variance and it is true that other factors also lead to training transfer. Perhaps in a situation where employees are trained on a new process being implemented in the workplace, they would still transfer the training regardless of their motivation levels after training if only because they found that completing their work depended on it.

Limitations

There were limitations with this study and they should be made plain so that future research and practitioners can seek to go beyond what this study has shown. First, the participants selected for this study were chosen for their convenience more than their suitability. Participants proved that they took training only by their own attestation. Blume et al, (2010) noted in their extensive meta-analysis that this type of data often inflates the relationship between predictors of training transfer and transfer itself. Ideally there would be a separate record or transcript to prove that training was completed by the individual, when the training was completed and which training was completed. Future studies should seek to partner with an organization that keeps records in a Learning Management System (LMS) that contains these records. Likewise, the transfer would be measured by someone other than the trainee, such as a supervisor or peer. If there were an

objective measure that could be taken prior to and post training that has shown to increase or decrease with training transfer, that would be an ideal option.

The issue of a convenience sample is also the reason why many of the measures were collected in the first survey, which made this initial survey very lengthy even if it allowed me the best chance to get as much information from as many people as possible. This method of data collection could have contributed to common method variance, which may have inflated the results on the variables of *Perceived Utility of Training*, *Self-Efficacy for Transfer*, *Perceived Supervisor Support of Transfer* and *Motivation to Transfer*. This sample also allowed for up to 10 days post training to take the survey. It is quite possible that results would have differed if the survey were taken immediately after the training was complete. Allowing for time between when the training was completed and when the survey was taken may have allowed for a change in sentiment regarding self-efficacy to transfer or perceived utility of the training. There were also no pre-qualifications for the type of training received other than it's relation to the individual's job.

This broad approach could have had an impact on the results. It may be possible that these results would be amplified or diminished based on the type of training that is received. For instance, do individuals that complete training in a hard skill, such as software development or welding, report more *Perceived Utility of Transfer* than someone taking a soft skill course like interpersonal communication? There was also no indication about whether or not the training was mandatory or voluntary. It is possible that individuals that sought training on their own may be more motivated than those that were compelled by their manager.

The measures for this study should also be considered. While items in the scales for *Motivation to Transfer, Perceived Supervisor Support of Transfer* and *Transfer Activity* were found to load well onto a single factor, *Perceived Utility of Transfer* and *Self-Efficacy for Transfer* did not. The desire to utilize a validated measure like the ones from Noe and Wilk (1993) led to a bulky scale with items that were unnecessary. Pilot testing may have solved for this but this approach but that would have come a greater cost to time and resources which were not available.

Implications for Practice

Future studies should continue to evaluate these constructs in order to build the literature that supports the theory of the training transfer climate. Learning and development professionals that have access to Learning Management System data should utilize the benefits of having records on participant training data so that they can pursue quality data more effectively. Knowing that these factors are related to transfer, researchers should survey what other factors increase *Self-Efficacy for Transfer* and *Perceived Utility of Training*. Facilitators as well as instructional designers should take note to design and deliver training in a way that seeks to increase motivation, self-efficacy and perceived utility of training in their audience. For instance, are organizations measuring motivation to transfer post-training or are the post-training surveys only capturing whether or not employees enjoyed the training or whether they thought they had a dynamic facilitator? Capturing this data around motivation could be key to following up with training participants that reported high levels of motivation post-training to see where they are with transferring the learned skills. Learning and development professionals could use this data to engage those with high levels of

motivation to transfer and low levels of transfer activity to discover what impediments are preventing transfer.

REFERENCES

Axtell, C. M., Maitlis, S., & Yearta, S. K. (1997). Predicting Immediate and Longer-Term Transfer of Training. *Personnel Review, 26*(3), 201-222.

Baldwin, T. T., & Ford, K. J. (1988). Transfer of Training: A Review and Directions for Future Research. *Personnel Psychology, 41*(1), 63-105.

Bandura, A. (1977). Self-efficacy: Toward a Unifying Theory of Behavioral Change. *Psychological Review, 84*(2), 191-215.

Beer, M., Finnstrom, M., & Schrader, D. (2016, October). Why Leadership Training Fails - and What to Do About It. *Harvard Business Review*, pp. 50-57.

Blume, B. D., Ford, J. K., Baldwin, T. T., & Huang, J. L. (2010). Transfer of Training a Meta-Analytic Review. *Journal of Management, 36*(4), 1065-1105.

Brinkerhoff, R. O., & Montesino, M. U. (1995). Partnerships for Training Transfer: Lessons from a Corporate Study. *Human Resource Development Quarterly, 6*(3), 236-274.

Brown, T. C., McCracken, M., & Hillier, T.-L. (2013, September). Using evidence-based practices to enhance transfer of training: assessing the effectiveness of goal setting and behavioural observation scales. *Human Resource Development International., 16*(4), pp. 374-389.

Burke, L. A., & Hutchins, H. M. (2007). Training Transfer: An Integrative Literature Review. *Human Resources Development Review, 6*(3), 263-296.

Chiaburu, D. S., & Lindsay, D. R. (2008). Can Do or Will Do? The importance of Self-Efficacy and Instrumentality for training transfer. *Human Resource Development International, 11*(2), 199-206.

Chiaburu, D. S., & Tekleab, A. G. (2005). Individual and contextual influences on multiple dimensions of training effectiveness. *Journal of European Industrial Training , 29*(8), 604-626.

Clark, C. S., Dobbins, G. H., & Ladd, R. T. (1993). Exploratory Field Study of Training Motivation: Influence of Involvement, Credibility and Transfer Climate. *Group & Organization Management, 18*(3), 292-307.

Cromwell, S. E., & Kolb, J. A. (2004). An Examination of Work-Environment Support Factors Affecting Transfer of Supervisory Skills Training to the Workplace. *Human Resource Development Quarterly, 15*(4), 449-471.

Facteau, J. D., Dobbins, G. H., Russell, J. E., Ladd, R. T., & Kudisch, J. D. (1995). The influence of general perceptions of the training environment on pretraining motivation and perceived training transfer. *Journal of Management, 21*(1), 1-25.

Ford, J. K., Baldwin, T. T., & Prasad, J. (2018). Transfer of Trainng: The Known and the Unknown. *Annual Review of Organizational Psychology and Organizational Behavior*, 201-225.

Gegenfurtner, A., Veerman, K., Festner, D., & Grubner, H. (2009). Motivation to Transfer Training: An Integrative Literature Review. *Human Resources Development Review, 8*(3), 403-423.

Gilpin-Jackson, Y., & Bushe, G. R. (2007). Leadership development training transfer: A case study of post-training determinants. *Journal of Management Development, 26*(10), pp. 980-1004.

Govaerts, N., & Dochy, F. (2014). Disentangling the Role of the Supervisor in Transfer of Training. *Educational Research Review*, 77-93.

Grohmann, A., Beller, J., & Kauffeld, S. (2014). Exploring the Critical Role of Motivation to Transfer in the Training Transfer Process. *International Journal of Training and Development*, 84-103.

Grossman, R., & Salas, E. (2011). The Transfer of Training: What Really Matters. *International Journal of Training and Development, 15*(2), 103-120.

Harter, J. K., Schmidt, F. L., & Hayes, T. L. (2002). Business-Unit-Level Relationship Between Employee Satisfaction, Employee Engagement, and Business Outcomes: A Meta-Analysis. *Journal of Applied Psychology,* 268-279.

Ho, M. (2018). Corporate Learning Keeps Holding Strong. *Talent Development*, pp. 38-43.

Holton, E. F., Bates, R. A., & Ruona, W. E. (2000). Development of a Generalized Learning Transfer System Inventory. *Human Resource Development Quarterly, 11*(4), 333-360.

Koster, F., De Grip, A., & Fouarge, D. (2011). Does perceived support in employee development affect personnel. *International Journal of Human Resource Management, 22*(11), 2403-2418.

Lim, D. H., & Johnson, S. D. (2002). Trainee Perceptions of Factors That Influence Learning Transfer. *International Journal of Training and Development, 6*(1), 36-48.

Massenberg, A.-C., Schulte, E.-M., & Kauffeld, S. (2017). Never Too Early: Learning Transfer System Factors Affecting Motivation to Transfer Before and After Training Programs. *Human Resource Development Quarterly, 28*(1), 55-85.

Nijman, D.-J. J., Nijhof, W. J., Wognum, A. (., & Veldkamp, B. P. (2006). Exploring Differential Effects of Supervisor Support on Transfer of Training. *Journal of European Industrial Training*, 529-549.

Noe, R. A. (1986). Trainees' Attributes and Attitudes: Neglected Influences on Training Effectiveness. *The Academy of Management, 11*(4), 736-749.

Noe, R. A., & Wilk, S. L. (1993). Investigation of the factors that influence employees' participation in development activities. *Journal of Applied Psychology, 78*(2), 291-302.

Paulsen, H. F., & Kauffeld, S. (2017). Linking Positive Affect and Motivation to Transfer Within Training: A Multilevel Study. *International Journal of Training and Development, 21*(1), pp. 35-52.

Purcell, J., & Hutchinson, S. (2007). Front-line managers as agents in the HRMperformance causal chain: theory, analysis and evidence. *Human Resources Management Journal, 17*(1), 3-20.

Rhodes, L., Eisenberger, R., & Armeli, S. (2001). Affective Commitment to the Organization: The Contribution of Perceived Organizational Support. *Journal of Applied Psychology, 86*(5), 825.

Richman-Hirsch, W. L. (2001). Post-Training Interventions to Enhance Transfer: The Moderative Effects of Work Environments. *Human Resource Development Quarterly, 12*(2), 105-120.

Smith, R., Jayasuriya, R., Caputi, P., & Hammer, D. (2008). Exploring the Role of Goal Theory in Understanding Training Motivation. *International Journal of Training and Development, 12*(1), 54-72.

Vroom, V. (1964). *Work and Motivation.* New York: Wiley.

APPENDIX

Tables

TABLE 1
Demographic information of the final sample

Category	*Type*	*n*	*% of Total*
Gender	Male	120	55.8%
	Female	94	43.7%
	Didn't Respond	1	.5%
Race/Ethnicity	White	186	86.5%
	Black or African-American	19	8.8%
	Asian	6	3%
	Other	3	1.3%
	Didn't Respond	1	.5%
Education	High School Graduates	9	4.1%
	Some College	35	16.2%
	2-Year Degree	30	13.9%
	Bachelor's Degree	102	47.4%
	Master's Degree	36	16.7%
	Doctorate	3	1.3%

TABLE 2
Frequency of participants by training category

Training Category	Number of Participants	% of Total
Computer/Software	53	24.6%
Specialized Professional or Trade	28	13.0%
Leadership/Management	23	11.0%
Safety	22	10.2%
Healthcare	15	7.0%
Customer Services	12	5.5%
Process Improvement	12	5.5%
Financial Services	9	4.1%
Sales	7	3.2%
Soft Skills	6	3.0%
Education	6	3.0%
Material Handling/Logistics	5	2.3%
Product Knowledge	5	2.3%
Culinary/Food Service	4	2.0%
Business	2	1.0%
Transportation	2	1.0%
Human Resources	2	1.0%
Language	2	1.0%

TABLE 3
Means, standard deviations, correlations, and reliability estimates for study variables

	Mean	*Standard Deviation*	*1.*	*2.*	*3.*	*4.*	*5.*
1. Transfer Activity at Time 2	2.86	0.66	.84				
2. Motivation to Transfer	4.27	0.74	.47**	.85			
3. Self-Efficacy for Transfer	4.53	0.45	.25**	.41**	.78		
4. Perceived Utility of Training	3.52	0.94	.29**	.59**	.17**	.88	
5. Perceived Supervisor Support of Transfer	3.88	0.88	.24**	.40**	.33**	.43**	.86

Note. *n*=215 for variables in column number *1*; *n*=336 for columns *2, 3, 4* and *5*
Note. The scale for items in the measure of *Training Transfer Activity* was 1 to 4.
* indicates $p < .05$. ** indicates $p < .01$.
Cronbach's alpha is found along the diagonal

TABLE 4
Regression results of Hypothesis 4 using Motivation to Transfer as the criterion

Predictor	b	b 95% CI [LL, UL]	beta	beta 95% CI [LL, UL]	sr2	sr2 95% CI [LL, UL]	r	Fit
(Intercept)	4.30**	[4.23, 4.37]						
Self-Efficacy for Transfer (Mean Centered)	0.50**	[0.32, 0.67]	0.31	[0.20, 0.42]	.07	[.02, .12]	.41**	
Perceived Supervisor Support (Mean Centered)	0.24**	[0.16, 0.32]	0.29	[0.19, 0.39]	.08	[.03, .13]	.40**	
Interaction Variable	-0.02	[-0.16, 0.13]	-0.01	[-0.12, 0.09]	.00	[-.00, .00]	-.17**	
								R2 = .247**

Note. n=215

A significant *b*-weight indicates the beta-weight and semi-partial correlation are also significant. *b* represents unstandardized regression weights. *beta* indicates the standardized regression weights. sr^2 represents the semi-partial correlation squared. *r* represents the zero-order correlation. *LL* and *UL* indicate the lower and upper limits of a confidence interval, respectively.
* indicates $p < .05$. ** indicates $p < .01$.

TABLE 5
Regression results of Hypothesis 5 using Motivation to Transfer as the criterion

Predictor	*b*	*b* 95% CI [LL, UL]	*beta*	*beta* 95% CI [LL, UL]	sr^2	sr^2 95% CI [LL, UL]	*r*	Fit
(Intercept)	4.31**	[4.24, 4.37]						
Perceived Utility of Training (Mean-Centered)	0.40**	[0.32, 0.47]	0.51	[0.42, 0.61]	.22	[.13, .31]	.59**	
Perceived Supervisor Support of Training (Mean-Centered)	0.14**	[0.06, 0.22]	0.17	[0.07, 0.27]	.02	[-.00, .05]	.40**	
Interaction Variable	-0.01	[-0.09, 0.05]	-0.01	[-0.12, 0.10]	.00	[-.00, .00]	-.14*	
								R^2 = .374**

Note. n=336

A significant *b*-weight indicates the beta-weight and semi-partial correlation are also significant. *b* represents unstandardized regression weights. *beta* indicates the standardized regression weights. sr^2 represents the semi-partial correlation squared. *r* represents the zero-order correlation. *LL* and *UL* indicate the lower and upper limits of a confidence interval, respectively.
* indicates $p < .05$. ** indicates $p < .01$.

TABLE 6

Regression of Transfer of Training on All Four Predictor Variables

Predictor	*b*	*b* 95% CI [LL, UL]	*Beta*	*beta* 95% CI [LL, UL]	sr^2	sr^2 95% CI [LL, UL]	*r*	Fit
(Intercept)	0.93*	[0.13, 1.72]						
Motivation to Transfer	0.40**	[0.24, 0.55]	0.44	[0.27, 0.61]	.09	[.03, .16]	.47**	
Self-Efficacy for Transfer	0.03	[-0.17, 0.23]	0.02	[-0.12, 0.16]	.00	[-.00, .00]	.25**	
Perceived Utility of Training	-0.00	[-0.12, 0.11]	-0.00	[-0.16, 0.15]	.00	[-.00, .00]	.29**	
Perceived Supervisor Support of Training	0.03	[-0.07, 0.14]	0.04	[-0.10, 0.18]	.00	[-.01, .01]	.24**	
								R^2 = .222**

Note. n=215

b represents unstandardized regression weights. *beta* indicates the standardized regression weights. sr^2 represents the semi-partial correlation squared. *r* represents the zero-order correlation. *LL* and *UL* indicate the lower and upper limits of a confidence interval, respectively.

* indicates $p < .05$. ** indicates $p < .01$.

TABLE 7

Regression of Transfer Activity on Self-Efficacy for Transfer, Perceived Utility of Training and Perceived Supervisor Support.

Predictor	*b*	*b* 95% CI [LL, UL]	*beta*	*beta* 95% CI [LL, UL]	sr^2	sr^2 95% CI [LL, UL]	*r*	Fit
(Intercept)	0.91*	[0.07, 1.75]						
Self-Efficacy for Transfer	0.25*	[0.06, 0.45]	0.18	[0.04, 0.31]	.03	[-.01, .07]	.25**	
Perceived Utility of Training	0.16**	[0.05, 0.26]	0.21	[0.07, 0.35]	.04	[-.01, .08]	.29**	
Perceived Supervisor Support of Training	0.07	[-0.04, 0.18]	0.09	[-0.06, 0.23]	.01	[-.01, .02]	.24**	
								R^2 = .127**

Note. n=215

A significant *b*-weight indicates the beta-weight and semi-partial correlation are also significant. *b* represents unstandardized regression weights. *beta* indicates the standardized regression weights. sr^2 represents the semi-partial correlation squared. *r* represents the zero-order correlation. *LL* and *UL* indicate the lower and upper limits of a confidence interval, respectively.
* indicates $p < .05$. ** indicates $p < .01$

Figures

FIGURE 1

Proposed Theoretical Model