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Taking Initiative in the Public Sector: Measuring the Impact of Leadership Development Training

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Abstract

Training in the United States is expensive for organizations in both the public and private sectors. Therefore, two questions arise: is the transfer of training to the workplace occurring, and does time make a difference after completing training? One key component of leadership training is taking initiative. This study seeks to determine if completion of a leadership development program impacts participants' personal initiative. Two leadership development programs were included in this study, both requiring over 180 hours of training. In both programs, a 360 assessment was given at the beginning of the training. The 360 is a proprietary assessment from a major research university and measures 23 public sector competencies. Three questions on the assessment measure personal initiative. As a follow-up, participants were given these three personal initiative questions after completing the programs. Researchers included participants who completed the leadership development program from one to five years prior. As a result of one-way ANOVA analysis, no statistically significant difference was found on personal initiative for participants after completing a leadership program. Results may be attributed to participants having a high level of initiative, or initiative may not be specifically taught in the leadership development programs. The research is important as informs how training is transferred to the workplace.

Keywords: training, leadership development, initiative, assessment

1. Introduction

Training in the United States is a consistent need yet an expensive endeavor for all organizations. Bohne stated that United States organizations spent $98 billion on training and development in 2024. Freifield found that the average annual budget of training spent by small, medium, and larger governments/military was over $11 million in 2023 Training and development in the work setting create benefits for individuals, teams, organizations, and society (Aguinis & Kraiger, 2009). However, Baldwin and Ford (1988) found that only 10% of all training experiences are transferred from training to the work setting. Considering how much time, effort, and money are spent on training (Salas et al., 2012), a better understanding of how transfer of training may take place can have practical implications for public and private sector organizations of all sizes.

2. Literature Review

2.1 Training and Transfer of Training

Training is defined as the acquisition of skills, concepts, or attitudes that results in better performance in the workplace setting (Goldstein, 1980). Grossman and Salas (2011) suggest that training is focused on gaining permanent cognitive and behavioral improvements; they further state that general workplace training includes what employees need to know, what they need to do, and what they need to feel to be successful in their work. Organizations support or require their employees to participate in training activities for the delivery of skills, abilities, and knowledge to achieve the objectives of the organization. However, these objectives can only be achieved when employees transfer what they learn in training to the workplace (Bhatti et al, 2013).

Transfer of training is therefore one of the most crucial dimensions in training effectiveness; it is this transfer of knowledge, skills, and abilities which aids employees and organizations to improve their performance (Bhatti et al., 2013). The positive transfer of training (Baldwin, Ford, & Blume, 2009) is the extent to which the learning that results from a training experience transfers to the job and leads to substantial changes in workplace performance. For transfer to occur, learning should be generalized to the work context and maintained over a length of time.

One theoretical framework for understanding how training may result in transfer and application of learning is Kolb's experiential learning theory (2015). Kolb theorizes that the content learned in academic or theoretical settings is transferred into the real-world context, emphasizing the importance of learning through experience. His experiential learning framework is often conceptualized as four recurring and sequential components: the learner encounters a new experience (concrete experience); reviews and reflects on the experience and their understanding of it (reflective observation); forms generalizations or new concepts (abstract conceptualization); and applies their new understanding or concept to a real-world situation or experience (active experimentation).

In applying this framework to training and transfer, Kolb's theory suggests the importance of the learner as an active participant in the process, seeking direct experience as well as

opportunities to reflect and to apply knowledge. Studies of transfer of training have found support for some aspects of this theory. Grossman and Salas (2011) reported that trainee characteristics, training design, and work environment inputs are crucial for learning and retention. Baldwin and Ford (1988) found that training was impacted by three factors: trainee characteristics (cognitive ability, self-efficacy, motivation, and perceived utility of the training), training design (behavioral modeling, error management, and realistic training environment), and work environment (transfer climate, support, opportunity to perform, and follow-up).

Baldwin and Ford (1988) further described the transfer process as being comprised of training input factors, training outcomes, and conditions of transfer. Training inputs influence the conditions of transfer based on their impact on training outputs (Grossman & Salas, 2011). The conditions of transfer include the generalization of material learned in training to the job context and maintenance of the learned material over a period of time on the job. Training outcomes are the amount of original learning that happens during the training program and the ability to retain that material after the program is completed.

Although Blume and colleagues (2010) found no specific factor guaranteed to leverage transfer of training, they offered several ways to increase the likelihood of transfer: taking a proactive approach to the selection of participants for the intervention or training program; increasing the level of participants' motivation; and increasing supervisor and peer support after training has concluded. Nafukho et al. (2017) investigated the transfer of training to the workplace for those enrolled in a continuing professional educational training program, finding that training efficiency and relevance were crucial to the participants' transfer of learning.

Implicit in Kolb's cyclical framework is the importance of the element of time in impacting new learning. Transfer of training has been researched extensively, but little research examines how the length of time after participating in a training program influences this transfer. Salas et al. (2012), for example, suggested that new skills should be used as soon as possible after training is completed. Likewise, several studies that researched transfer of training call for further research based on time intervals (Aguinis & Kraiger, 2009; Black & Earnest, 2009; Cheng & Ho, 1999; Gautam & Basnet, 2020; Soderhjelm et al., 2020).

One common area of focus for training programs, and a potential candidate for investigating the impacts of time on transfer, is leadership development. Leadership development is inherently longitudinal and should thus be viewed over time (Day et al., 2014). Additionally, leadership training has been shown to have measurable impact on employee performance. In their meta-analysis, Reyes and colleagues (2019) found that leadership development programs at higher education institutions resulted in a higher measurable level of learning and transfer. Likewise, Ladyshewky and Flavell (2011) examined the behavior of program coordinators at the university level following completion of a 20-week leadership development program, finding lasting transfer of training for participants.

2.2 Initiative

One key leadership skill is the concept of "initiative," in which an employee "takes corrective action before a problem arises, rather than reacting after a problem has already occurred; takes action without being told to do so; [and] goes above and beyond the call of duty to resolve problems" (GOV360® Multi-rater Feedback Instrument Technical Manual, p. 7). Initiative allows individuals to create efficient and effective systems in organizations (Frohman, 1997). As a change management and leadership competency, initiative has been investigated in diverse organizational settings and populations, such as federal-level public sector leaders (Getha-Taylor, 2008); telecommunication, finance and higher education (Crawford & Nahmias, 2010); healthcare (Pablo et al, 2007); and in international contexts in Holland, Germany, Africa, and Spain (Balluerka et al, 2014; Fay & Frese, 2001). The ability and willingness of employees to take initiative at work is an important practical and theoretical question (Den Hartog & Belschak, 2007), making it an appropriate focus of study for transfer of training. However, Mensmann and Frese (2019) found that post-training personal initiative decreased over time showing that maintaining high levels of initiative after training is not necessarily common. Therefore, this study examines the following research question: To what extent does the length of time following completion of a public sector leadership development training program influence transfer of training in regard to personal initiative? The hypothesis is that personal initiative will decrease over time after participating in a leadership development training program.

3. Methods

The current study investigated the influence of time on the transfer of leadership training for multiple cohorts of participants in university-led local and state government training programs. Participants were drawn from two established training programs created and offered by a government-training institute housed at a large public university in the southeastern United States. Because the context of training is an important consideration, we describe each program in the following section.

3.1 Management Development Program (MDP)

The Management Development Program is a 20-day, cohort-based management and leadership course designed to develop the personal and group leadership skills of middle-level local government managers. The three major components of the MDP course are self-awareness, collaboration, and process improvement. The self-awareness component uses several assessment instruments, including the GOV360® Multi-rater Feedback Instrument. The collaboration component integrates the knowledge obtained from the self-awareness component into other competency areas including leadership of groups, conflict management, and change management. The process improvement component incorporates information from the other two components and focuses on competencies including influence, measuring unit performance, and public speaking. The MDP course is delivered over an eight-month period meeting two or three days per month. The average cohort size is 24.

3.2 Certified Public Manager Program® (CPM)

The Certified Public Manager® program was designed to improve the quality and efficiency of government agencies by developing the effectiveness and efficiency of upper-level managers and government leaders. The CPM program consists of 300 hours of study covering seven competency areas: personal and organizational integrity, managing work, leading people, developing self, systemic integration, public service focus, and change leadership. The program is a 10-month program that is held three days per month and has approximately 24 participants in each cohort. Program participants also completed the GOV360® Multi-rater Feedback Instrument and other assessments.

3.3 Sample

Prospective participants in this research study were those who had completed either program (MDP or CPM) since 2016. A total of 803 prospective participants (369 CPM, 434 MDP) were invited to take part in the study, which was approved by the university's Human Subjects Review office. The completers of these programs are middle-level to upper-level government managers and supervisors from the same state in the southeastern United States.

3.4 Procedure

A Qualtrics survey, including demographic questions and three questions relating to personal initiative, was developed by the researchers for this study and emailed to prospective participants. Recipients had approximately two weeks to return the survey. Two follow-up email reminders were sent to the survey recipients. The consent letter described the research study and provided assurances that personal information would be kept confidential. Demographic questions included age, gender, education level and length of time in position (Bhatti et al, 2013; Black & Earnest, 2009; Cheng & Ho, 1998; Getha-Taylor, 2008; Mensmann & Frese, 2019; Soderhjelm et al., 2020; Velada et al., 2007). The three personal initiative questions were taken from the GOV360® Multi-rater Feedback Instrument and used to assess post-participation initiative. Participants' responses to these same questions, provided as part of the entire GOV360® assessment during their initial program participation, were obtained from program files and used as the pre-participation scores.

1. The following three multiple choice questions were used to gauge participants' personal initiative: Take actions to prevent problems, rather than waiting until problems occur?
2. Go the "extra mile" to make sure a job is done right?
3. Go above and beyond what is expected or asked in order to resolve problems**?**

The GOV360® is a multi-rater feedback instrument with 74 multiple-choice and four open-ended questions used to evaluate 23 core competencies relevant to performance in managerial and leadership roles in state and local government settings. (GOV360®: Technical Manual; Carl Vinson Institute of Government). For the current study, only the three self-reported multiple-choice questions listed were used to measure initiative. Participants select a response on a scale of one through five or choose the response "Don't Know/Unable to Rate," as shown below:

1	2	3	4	5	N/A
Not at All	To a Little Extent	To Some Extent	To a Great Extent	To a Very Great Extent	Don't Know/ Unable to Rate

A total of 269 participants responded. Surveys were deleted from the data set if the surveys were incomplete, if participants had taken part in both training programs (because that created different lengths of time since training), or if no response data from the original administration of the instrument was available. The total revised number of survey responses was 229, representing a usable data response rate of 28.5%. Table 1 outlines when participants were enrolled in the course.

Table 1. Number of Participants in Study by Year

Year	**Number**	**Percentage**
2020	**65**	**28**
2019	**41**	**18**
2018	**54**	**23**
2017	**48**	**21**
2016	**21**	**9**

The outcome variable for this study was respondents' personal initiative scores, represented as the mean score for the three items, taken at two different points in time (during initial training and after returning to their place of employment). To assess possible changes across time, analysis of variance (ANOVA) was used to investigate any overall pre- to post-training differences, using "time since training" as the independent variable, with an alpha of .05. The researchers examined if there were any differences on personal initiative in scores while in the program and after the program.

4. Findings

Overall, there was no significant statistical difference between personal initiative scores taken on the GOV360® Multi-rater Feedback Instrument while in the leadership development programs and after completing the leadership development programs. Table 2 demonstrates the T-Test for all subjects in the study.

Table 2. T-Test Paired Two Samples for Means

		Initiative Pre	*Initiative Post*
Mean		4.501703057	4.518195051
Variance		0.263431736	0.207878989
Observations		229	229
Pearson Correlation			0.330452162
Hypothesized Difference	Mean		0
Df			228
t Stat			0.443507179
P(T<=t) one-tail			0.328909748
t Critical one-tail			1.651564228
P(T<=t) two-tail			0.657819496
t Critical two-tail			1.970423195

Next, the researchers created a variable representing time since training (number of years), based on the difference between date of training program participation and the current year. Table 3 represents those who had completed the course within a year; Table 4, two years, Table 5, three years, Table 6, four year, and Table 7, five years.

Table 3. T-Test Paired Two Sample for Means [1-Year]

One Year	*Initiative Pre*	*Initiative Post*
Mean	4.446769	4.497435897
Variance	0.304275	0.222649573
Observations	65	65
Pearson Correlation	0.379864	
Hypothesized Mean Difference	0	
Df	64	
t Stat	-0.71197	
P(T<=t) one-tail	0.239536	
t Critical one-tail	1.669013	
P(T<=t) two-tail	0.479071	
t Critical two-tail	1.99773	
Two Years	*Initiative Pre*	*Initiative Post*
Mean	4.610244	4.642276
Variance	0.188687	0.163279
Observations	41	41
Pearson Correlation	0.228873	
Hypothesized Mean Difference	0	
Df	40	
t Stat	-0.39355	
P(T<=t) one-tail	0.348001	
t Critical one-tail	1.683851	
P(T<=t) two-tail	0.696002	
t Critical two-tail	2.021075	
Three Years	*Initiative Pre*	*Initiative Post*
Mean	4.490926	4.537037
Variance	0.221095	0.148498
Observations	54	54
Pearson Correlation	0.398103	
Hypothesized Mean Difference	0	
Df	53	
t Stat	-0.71384	
P(T<=t) one-tail	0.23923	
t Critical one-tail	1.674116	
P(T<=t) two-tail	0.478459	
t Critical two-tail	2.005746	
Four Years	*Initiative Pre*	*Initiative Post*
Mean	4.5275	4.493056
Variance	0.340509	0.231629
Observations	48	48
Pearson Correlation	0.215601	
Hypothesized Mean Difference	0	
Df	47	
t Stat	0.355331	
P(T<=t) one-tail	0.361966	
t Critical one-tail	1.677927	
P(T<=t) two-tail	0.723931	
t Critical two-tail	2.011741	
Five Years	*Initiative Pre*	*Initiative Post*
Mean	4.428571	4.349206
Variance	0.224483	0.327513
Observations	21	21
Pearson Correlation	0.402697	
Hypothesized Mean Difference	0	
Df	20	
t Stat	0.629675	
P(T<=t) one-tail	0.268018	
t Critical one-tail	1.724718	
P(T<=t) two-tail	0.536035	
t Critical two-tail	2.085963	

Table 4. T-Test Paired Two Sample for Means [4-Year]

	Initiative Pre	*Initiative Post*
Mean	4.5275	4.493056
Variance	0.340509	0.231629
Observations	48	48
Pearson Correlation	0.215601	
Hypothesized Mean Difference	0	
Df	47	
t Stat	0.355331	
P(T<=t) one-tail	0.361966	
t Critical one-tail	1.677927	
P(T<=t) two-tail	0.723931	
t Critical two-tail	2.011741	

Table 5. T-Test Paired Two Sample for Means [5-Year]

	Initiative Pre	*Initiative Post*
Mean	4.428571	4.349206
Variance	0.224483	0.327513
Observations	21	21
Pearson Correlation	0.402697	
Hypothesized Mean Difference	0	
Df	20	
t Stat	0.629675	
P(T<=t) one-tail	0.268018	
t Critical one-tail	1.724718	
P(T<=t) two-tail	0.536035	
t Critical two-tail	2.085963	

An ANOVA was run to test significant differences in initiative change between each of the year intervals. It yielded the following results:

F = 0.35178, num df = 4, denom df = 224, p-value = 0.8426

The p-value is above the alpha, so there is not a significant difference in initiative due to time since attending the program. Table 8 examines the mean change by years passed since completing in the program. While there is no statistically significant difference, it is apparent that the changes were positive the first three years following completion of the program.

Table 6. Mean Change by Group

Group	**Mean**
All	0.0165
1-Year	0.0507
2-Year	0.0320
3-Year	0.0461
4-Year	-0.0344
5-Year	-0.0794

While there was no significant difference, 28 of the 229 participants scored a difference of one point or more from their in-program and post-program GOV360® Multi-rater Feedback Instrument scores. Fourteen of the 28 scored one or more points lower on their post-program score than they did on their in-program score. The other 14 participants scored one or more points higher on their post-program score than they did on their in-program score.

5. Discussion/Recommendations/Conclusions

Prior research found that personal initiative after training decreased over time. Our study does not support their findings. The fact that the study found no statistically significant change in the participants' in-program and post-program initiative scores may be attributed to several factors. First, it is possible that time has an impact but that it is only apparently with a longer timeframe; this study's time interval of one to five years may not be long enough to show changes in the participants' initiative. For transfer of training to be apparent, the characteristic of interest must be included in the training that can be subsequently applied in the workplace. While both the MDP and CPM programs include a focus on personal initiative, it is possible that these programs do not focus on this characteristic as thoroughly as they should. The absence of a statistically significant change in the participants' in-program and post-program initiative scores may also be attributed to the training design input factor referenced by Baldwin and Ford's (1988) transfer of training framework or the active experimentation principle referenced in Kolb's Learning Theory (2015). Kolb believes that experimentation is vital to transfer training to the workplace. In this case, there is not enough experimentation regarding personal initiative content in the leadership development programs. Although MDP and CPM participants are expected to apply their learning in their organizations, perhaps the initiative competency is not explained by instructors to the participants in the same manner as it is defined in the GOV360® Multi-rater Feedback Instrument. This issue could create a misalignment between training design and active experimentation resulting in a lack of change in personal initiative.

The level of one's personal initiative and motivation are intrinsic to each individual. If the individual self-selected to attend the MDP and CPM leadership programs, then they may already have a higher level of personal initiative. Therefore, there may not be a significant change in their in-program and post-program personal initiative score results. Elangovan and Karakowsky (1999) have suggested that an organizational culture that fosters employee development and growth, continuous improvement, and employee initiative should have a positive impact on transfer of training. Therefore, if participants' personal initiative increases after participating in a leadership development training program but they go back to a work environment that does not endorse or foster employee development, the participants level of personal initiative may be negatively impacted.

This study's first limitation is that the participants self-reported their scores on the GOV360® Multi-rater Feedback Instrument. With self-reporting, participants may view themselves through a different lens than others may see them. Another limitation for this study is that it only applies to local and state government entities in one southeastern U.S. state and therefore cannot be generalized to other states. A third limitation in this study is that some program participants who could not be contacted for this study because they had moved and email addresses were not updated created a smaller sample size.

This study creates a foundation for future research in several areas. Researchers did not find a statistically significant change in the participants' level of personal initiative over a one- to five-year period. Perhaps one's level of personal initiative changes over a longer period of

time. Therefore, additional research could include a longitudinal study of the same cohort of participants in a leadership development program. The MDP and CPM leadership programs are designed to enhance participants' level of knowledge and competencies. Initiative is only one of the 23 competencies included in the GOV360® Multi-rater Feedback Instrument. Future transfer of training research could include all 23 competencies, which may inform the design and delivery of training programs. The study only included participants from the MDP and CPM leadership programs which are designed for middle- to upper-level managers and leaders. Future transfer of training research could include training programs for frontline supervisors and frontline employees. Such research could identify the level to which transfer of training is taking place in all training programs and could assist organizations align their anticipated training outcomes for all employees. It would be interesting for future research to examine public sector leaders in other states and at the federal level to get a comparison for the CPM or MDP programs. The personal initiative data collected in this study was based solely on participants' self-reporting. This research could be expanded to include data based on feedback from participants' supervisors, peers, and direct reports. The supervisor, peer, and direct report ratings could then be compared to the participants' self-reporting ratings.

As stated, there is a lack of research on how time influences the transfer of training. Moreover, some studies on transfer of training have called for further research based on time intervals (Soderhjelm et al., 2020; Black & Earnest, 2009; Aguinis & Kraiger, 2009; Cheng & Ho, 1999). Therefore, this study is important for several reasons. First, it contributes to an area of research where a need has been identified. Second, it focuses on state and local public sector leaders, populations who have not been studied extensively in this area. Third, it provides additional information to organizations that make monetary investments in training for their employees. Fourth, the study can influence and direct the way instructors design curriculum and teaching methods in leadership programs by understanding what learning is being transferred to the workplace and how that can be increased.

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Authors contributions

Dr. Campbell and Mr. Robinson were responsible for study design, revising, and data collection. All authors read and approved of the final manuscript.

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Competing interests

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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Obtained.

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The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

Data sharing statement

No additional data are available.

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