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Torrey Rieser Mullen
North Carolina State University

Christy Kroustalis
North Carolina State University
Surface, Ward & Associates

Adam W. Meade
North Carolina State University

Eric A. Surface
Surface, Ward, & Associates



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Assessing Change in Perceived Organizational Support Due to Training

Torrey Rieser Mullen
North Carolina State University

Christy Kroustalis
North Carolina State University/Surface, Ward & Associates

Adam W. Meade
North Carolina State University

Eric A. Surface
Surface, Ward & Associates

This study examined how perceptions of organizational support for training were influenced by job-related foreign language training using a pretest–posttest design. Trainees included 194 participants in a large military organization. Results were indicative of gamma change, supporting the hypothesis that the training influenced perceptions of organizational support among the trainees.

In private industry, employee training and development is a multi-billion dollar enterprise, with organizations spending large sums of money on training programs each year. Research has revealed the importance of environmental factors, such as perceived utility of learned material, peer support, supervisor sanctions, and supervisor support, when predicting the transfer of training (Seyler, Holton, Bates, Burnett, & Carvalho, 1998). A study conducted by Baldwin, Magjuka, and Loher (1991) found that engaging employees in learning activities where follow-up from their managers was anticipated led to stronger transfer intentions. In their survey of informational technology (IT) workers, Egan and colleagues (2004) found that an organizational learning culture significantly predicted both job satisfaction and motivation to transfer learning.

Attitudinal learning or change can be an important outcome of training (Gagne, 1984; Kraiger, Ford, & Salas, 1993). Thus far, most training research has concentrated on the effects of organizational support on the transfer of training with little research examining training's effects on perceived organizational support. The current

research investigates the latter relationship by examining the change in perceived organizational support before and after the implementation of a military foreign language training program. If a trainee's perceived organization support (or other attitude) has undergone some change as a function of training, then we can infer learning has occurred (Kraiger et al., 1993).

Organizational Support and Commitment

In the private sector, the constantly changing workplace has negatively affected the traditional employment contract that offers an employee job security. With decreasing job security, worker commitment to the organization falters. When employees are afraid of losing their job, they do not exhibit behaviors indicative of organizational commitment (Tansky & Cohen, 2001). So, how does an organization, military or otherwise, gain employee commitment? Some researchers believe that providing employees with meaning and purpose, aiding employee development, providing training opportunities, and providing a supportive environment are keys to gaining commitment from

their workforce (Hall & Mirvis, 1996). Importantly, employee development not only results in organizational commitment, but it can also help increase an employee's effectiveness (Tansky & Cohen, 2001).

A paucity of research has focused on the relationship between employee development and employee commitment. Gutteridge, Leibowitz, and Shore (1993) found that organizational leaders perceived significant increases in employee retention, skills, morale, and empowerment because of organizational development efforts. Tansky and Cohen (2001) argued that employee development can be viewed as a type of social exchange because it offers opportunities and benefits to an employee, who may feel obligated to reciprocate by exhibiting attitudes and behaviors indicative of their commitment to the organization. These researchers found that satisfaction with employee development was positively related to organizational commitment and perceived organizational support, and perceived organizational support was positively related to organizational commitment. In addition, both satisfaction with employee development and perceived organizational support were found to significantly predict managers' organizational commitment.

Perceived organizational support concerns the extent to which an employee perceives that an organization values their contributions and cares about their well-being (Eisenberger, Huntington, Hutchison, & Sowa, 1986). It is influenced by the organization's treatment of its employees; thus, providing a means for interpreting the organization's motives. Organizations are increasingly using discretionary, intangible investments in employees, such as training, for their impact on employee performance, satisfaction and commitment (Johlke, Stamper, & Shoemaker, 2001; Wayne, Shore & Liden, 1997). Opportunities for employee development are likely to be interpreted as action indicating that the organization cares for its employees (Eisenberger et al., 1986; Johlke et al., 2001; Tansky & Cohen, 2001). A study conducted by Babakus and colleagues (1996) found that perceptions of an organization's support for training was associated with perceived organizational support. Similarly, a more recent study found that perceptions of the quality of an organization's task-related training were positively related to perceived organizational support among a sample of salespersons (Johlke et al., 2001).

Military service requires life-threatening duties, frequent relocation, and long, irregular hours. It is a testament to their organizational commitment that military personnel decide to remain in service

despite many hardships (Karrasch, 2003). Organizational commitment in the military has been linked to leader behavior, job knowledge, readiness to perform wartime duties, and decreased employee turnover (Allen, 2003; Gade, 2003; Gade, Tiggler & Schumm, 2004; Karrasch, 2003). For these reasons, understanding the factors that influence or aid in the development of commitment to the Armed Forces is critical (Gade, 2003; Karrasch, 2003). In non-military organizations, organizational commitment has also been linked to improved performance, greater organizational citizenship behaviors, and fewer work absences (Allen & Meyer, 1996). Therefore, it would be beneficial to investigate ways in which organizations, including the military, may influence perceptions of organizational support in order to create greater organizational commitment. This study investigates the effects of training on organizational support in order to fill the gaps in this research area.

Organizational Support and Transfer of Training

Many authors have hypothesized reasons for the success or failure of training in certain work environments, however, empirical evidence for the influence of environmental factors on the transfer of training is limited (Clarke, 2002). Recent research has now begun to realize the importance of these factors, and has found that the organizational context can serve to shape training motivation, expectations, and attitudes for transfer (Salas & Cannon-Bowers, 2001).

When investigating the transfer of training, research that includes social support variables has generally supported their positive influence. Variables such as trainees' beliefs about the opportunities to use and apply the training and the likelihood of feedback, praise, encouragement, and recognition from supervisors and peers have shown positive effects (Clarke, 2002; Holton, Bates & Ruona, 2000; Salas & Cannon-Bowers, 2001; Seyler et al., 1998; Tracey et al., 1995). Employees who perceive how important the training program is to their supervisor are more motivated to attend, learn, and transfer their new skills to the job (Baldwin & Ford, 1988).

The types of training opportunities offered by an organization are influenced by the organization's needs and its culture, which, in turn, can influence the effects of training on individual employees. Recent research indicates that trainees returning to a supportive work environment are more motivated and more likely to apply their new skills to the work setting (Egan, Yang, & Bartlett, 2004; Holton, Bates & Ruona, 2000; Seyler et al., 1998). Seyler and colleagues (1998) examined factors

affecting motivation to transfer computer-based training. Their investigation found that peer support, supervisory support, supervisory sanctions, and opportunity to use the training were related to trainees' motivation to transfer newly learned material. Tracey and associates (1995) demonstrated that a climate for transfer and a continuous learning culture had direct effects on post-training behaviors. These researchers concluded that organizational cues that support learning and innovation encourage the transfer of training to the job.

In sum, research has found that despite any learning in training, an unsupportive organizational climate will decrease employee commitment and chances for transfer of trained material (Mathieu, Tannenbaum & Salas, 1992). For these reasons, it is important to examine ways in which organizations may influence perceptions of organizational support among their employees. Providing employee training may be one way to influence such perceptions. If providing training opportunities can be shown to increase perceptions of organizational support, which in turn affect the likelihood of transfer, a symbiotic relationship between organizational climate and training can greatly benefit the organization.

Foreign Language Training

"In today's workplace, many companies, agencies, corporations, and other institutions are experiencing ever-increasing demands to hire personnel with language skills" (Swender, 2003, p. 524). Recent events have reinforced the importance of and need for work-related foreign language proficiency. The tragedy of 9-11, the subsequent global war on terrorism, the globalization of the economy, and the increasing number of Spanish speakers in the U.S. workforce demonstrate the need for work-related foreign language learning to ensure national security, homeland defense, economic success, and workplace safety (Surface, Dierdorff, & Donnelly, 2004).

In the private sector, the need for language proficiency and training has become more prevalent. For example, multinational corporations and organizations that employ many non-English speaking workers have found language training to be a necessity (Weber, 2004). Wyndham Hotels recently implemented a self-guiding, voluntary English language program to its Spanish-speaking employees with the goal of boosting morale, employee retention, customer service, and promotion potential. After just four weeks, employees improved their English language skills by 25-percent (Hammers, 2005). Worker mobility and its language implications have also increased due to expatriate assignments by multinational corporations. Both

within the U.S. and elsewhere, language skills can affect expatriate adjustment to the host country (Chao & Sun, 1997; Takeuchi, Yun, & Russell, 2002). Other salient examples of work situations where language skills are critical, such as call centers, abound.

In today's armed forces, many occupational specialties require the intensive use of foreign languages (Silva & White, 1993; Surface et al., 2004), and those soldiers currently in Iraq are facing a critical lack of indigenous language skills (Weber, 2004). The ability for soldiers to communicate effectively with locals saves lives. The military is working diligently to increase the number of soldiers and intelligence officers with critical language skills through foreign language training, but they estimate that there will be a shortage of such skills for a long time (Weber, 2004).

In response to this need, there have been several calls for increased attention and cooperation among interested parties to improve the current state of foreign language learning in American society (e.g., Rovira, 2003). At the National Language Conference in June 2004, representatives from several different areas of American society (i.e., government, industry, academia, and language associations) met to discuss the importance of foreign language. A white paper entitled "A Call to Action for National Foreign Language Capabilities" was produced (U.S. Department of Defense [DoD], 2005). In this paper, several recommendations are made in an attempt to address the shortage of foreign language capabilities in the U.S. This further highlights the importance of foreign language training for work organizations.

Research Objective

This study will examine the change in perceived organizational support due to participation in a military foreign language program. As indicated by Alliger and Katzman (1997), investigations into how training might affect variability in pretraining to posttraining scores have been scarce. These researchers further state that assessments of change in variability can reveal important benefits or drawbacks of training, and can serve, in addition to a change in group means, as an important goal in training. While this study seeks to investigate the change in organizational support before and after language training, it is necessary that the scale measuring perceived organizational support is perceived and used in the same way by the respondents at both times. In other words, it is important to determine measurement invariance as a precursor to comparing differences in observed scores between repeated measures.

Three types of change can lead to differences in observed scores over time (Golembiewski, Billingsley, & Yeager, 1976). Alpha change is a true change in an underlying construct and requires scale measurement non-invariance to interpret. Beta change is a respondent's recalibration of the response scale (i.e., the lengthening or shortening of intervals between scale points) from Time 1 to Time 2 despite maintaining a constant conceptualization of the construct. Beta change may occur due to experiences, such as participating in a training program, between the two periods, and results in a respondent choosing different item response categories at Time 1 and Time 2. Gamma change is a fundamental change in how a respondent understands and defines the construct over time, resulting in a change in meaning of the construct for respondents. Although most training focuses on Alpha change, Beta and Gamma change can be important outcomes of training interventions (Riordan et al., 2001). Thus, if a trainee's perception of the attitudinal outcome, such as organizational support, has undergone an Alpha, Beta or Gamma change as a result of the training, then one can infer that learning has occurred.

This study seeks to examine ways in which a military organization may influence perceptions of organizational support among its personnel. Providing job-related, foreign language training may be one way to influence such perceptions. Any changes that occur in the respondents' perception of organizational support after training would have an impact on organizational commitment and the transfer of training. In addition, negative changes on certain variables may serve to inform the organization of organizational or environmental factors that negatively affect perceived support, requiring the organization's attention to remedy (Alliger & Katzman, 1997). In the context of the norm of reciprocity, it was hypothesized that there would be a positive increase in perceptions of organizational support variables from the pre-training to post-training surveys.

Method

Participants and Procedure

This study included 194 participants taking part in foreign language training in a large military organization. All participants were in positions that required some level of language proficiency (i.e., language-coded positions). Most participants completed their language training in classrooms for the main purposes of sustainment or enhancement of their language skills (77.3%) and initial acquisition of language skills (14.9%). An overwhelming majority

of participants (88.7%) had completed previous military-provided language training in the language in which they were being trained for the present study. Additionally, most participants (60.3%) indicated that they had previously received other formal language training other than military-provided language training in the past. The majority of participants (47.9%) indicated that the highest level of education attained was some college education. Lastly, most participants in the study had only 1-4 years of military service before the language training occurred.

Language training took place over a variable number of weeks depending on the goal of the training, the language being trained, and the operations cycle of the specific unit. Classes were taught by expert language instructors fluent in the language being trained. The 194 participants took part in training for one of seven different languages. Prior to the start of the language training, participants completed a pre-training questionnaire used to assess organizational support. After language training was completed, participants again took the same organizational support questionnaire.

Measures

Organizational Support. Participants were asked to complete a pre- and post-training questionnaire designed to assess the amount of perceived organizational support for training prior to language training and after language training was complete. The measure consists of 13 items and was developed as part of an on-going military study on language training effectiveness. The items were based on a general organizational support construct and were developed utilizing focus group responses in which subjects described what they believed to encompass organizational support for training in their organization. Two of the items on the measure were negatively worded, and were subsequently reverse-coded for analysis.

Results

Correlations between the 13 items evaluated on the perceived organizational support measure for Time 1 and Time 2 can be found Tables 1 and 2, respectively. Inspection of both matrices reveals that two items are significantly correlated with many of the remaining items at Time 1, but not at Time 2. These two items are: #3 ("Personnel are often pulled out of language training for non-critical duties") and #11 ("Language training is not viewed as a primary skill in my unit"). A single-factor confirmatory factor analysis (CFA) was performed using LISREL 8.54. Examination of the fit criteria indicate an

adequate fit to the data at Time 1, χ^2 (191.04, 65), $p < .01$, RMSEA .096, SRMSR .058, NNI .952, TLI .942. However, fit was poor at Time 2, χ^2 (332.57, 65), $p < .01$, RMSEA .157, SRMSR .082, CFII .897, TLI .877.

Inspection of estimated factor loadings and associated T-values indicates that items 3 and 11 failed to load onto the factor at Time 2 (see Table 3), whereas all items loaded onto the factor at Time 1. Respecifying the CFA for Time 2 to exclude items 3 and 11 did not improve model fit.

Inspection of the means and standard deviations of the items at Time 1 and Time 2 (see Table 4) indicate that some items exhibited substantial changes in variability over time. Item 3 showed the largest change in its standard deviation, with an increase from 1.33 at Time 1 to 1.60 at Time 2.

Discussion

The need for language skills and training has become a necessity for many governmental, military and private sector organizations (Swender, 2003; Surface et al., 2004; U.S. Department of Defense [DoD], 2005; Weber, 2004). Thus far, most research in training has concentrated on factors leading to greater transfer of training, instead of investigating the attitudinal change resulting from training. Attitudinal learning or change can be an important outcome of training (Gagne, 1984; Kraiger et al., 1993). A paucity of research has examined training's effects on perceived organizational support despite the evidence that organizational support can influence important outcomes, such as organizational commitment and transfer of training (Egan, Yang, & Bartlett, 2004; Holton, Bates & Ruona, 2000; Seyler et al., 1998; Tansky & Cohen, 2001). These outcomes, in turn, lead to more distal outcomes, including fewer intentions to leave the military, and greater leadership behaviors (Allen, 2003; Karrasch, 2003). The current research investigated the link between training and organizational support by examining the change in perceived organizational support taken from surveys conducted before and after military foreign language training.

Results of the confirmatory factor analyses clearly indicated that the factor structure of the perceived organizational support measure changed between the Time 1 measure at the beginning of training and the Time 2 measure at the conclusion of training. Such a change in factor structure is indicative of gamma change, and prohibits the direct comparison of observed means (Vandenberg & Self, 1993). This gamma change indicates that a change in meaning of the perceived organizational support

scale occurred with the respondents; thus, training did influence perceptions of organizational support among the trainees. This change in perceived organizational support, in turn, is likely to have an impact on the respondents' other attitudes and outcomes, such as organizational commitment and the transfer of training.

According to Alliger and Katzman (1997), assessments of change in variability can reveal important benefits or drawbacks of training, and can serve as an important goal in training. Negative changes on certain variables may help identify organizational or environmental factors that negatively affect perceived support. Inspection of the estimated factor loadings and associated T-values indicated that items 3 and 11 failed to load onto the factor at Time 2. In addition, items 3 and 11 did not significantly correlate with most of the remaining items at Time 2 as they did in Time 1. When examining the standard deviations for the scale items, it is clear that some items, especially item 3 exhibited a large change in variability. Item 3 showed an increase in its standard deviation at Time 2, which may have contributed to poor model fit in the Time 2 CFA.

The increased variability in Item 3 at Time 2 indicates that soldiers' perceptions in how often trainees were pulled out of language training for non-critical duties became increasingly dissimilar once the training was complete. Since the training is conducted at various units (locations) within this organization, the variability may be explained by differential experiences in terms of being pulled out of training for non-critical duties. This indicates that this military organization should examine how likely it is for a trainee to be pulled out of a foreign language training class, as the respondents' perceptions of this occurrence may be affecting their conceptualization of organizational support.

Despite being unable to compare observed score differences in pre-training and post-training perceived organizational support, this study did reveal that the event of training soldiers in foreign language changed the way they conceptualized organizational support. This change could impact their training transfer and their commitment to the military. In addition, this research indicates that respondents' perceptions of certain negative variables became more dissimilar after training.

Future research should further investigate the effect of training on important variables, including perceived organizational support. It would be particularly interesting for researchers to measure the more distal affects on organizational commitment, turnover, and leadership behaviors. Finally, we encourage researchers to further

investigate gamma change and changes in variability in organizational contexts. Such changes are typically shunned, and considered by some to be unwanted. However, other researchers have begun to realize that such changes may be considered important training goals (Alliger & Katzman, 1997).

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Author Contact Info:

Torrey Rieser Mullen

Department of Psychology
North Carolina State University
Campus Box 7650
Raleigh, NC 27695-7650
Phone: 919-515-2251
Fax: 919-515-1716
E-mail: trmullen@nc.rr.com

Christy Kroustalis

Department of Psychology
North Carolina State University
Campus Box 7650
Raleigh, NC 27695-7650
Phone: 919-515-2251
Fax: 919-515-1716
E-mail: cmkroust@ncsu.edu

Adam W. Meade

Department of Psychology
North Carolina State University
Campus Box 7650
Raleigh, NC 27695-7650
Phone: 919-513-4857
Fax: 919-515-1716
E-mail: awmeade@ncsu.edu

Eric A. Surface

Surface, Ward, & Associates
116 N. West Street, Suite 230
Raleigh, NC 27603
Phone: 919-342-3146
E-mail: esurface@bellsouth.net

Table 1

Correlations between Variables at Time 1.

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13
1	--												
2	.67*	--											
3	.22*	.41*	--										
4	.42*	.46*	.26*	--									
5	.51*	.55*	.47*	.55*	--								
6	.46*	.55*	.46*	.41*	.73*	--							
7	.53*	.50*	.33*	.39*	.58*	.70*	--						
8	.50*	.55*	.40*	.56*	.67*	.66*	.67*	--					
9	.46*	.47*	.29*	.46*	.49*	.49*	.47*	.66*	--				
10	.38*	.39*	.30*	.46*	.53*	.50*	.50*	.54*	.41*	--			
11	.33*	.31*	.22*	.23*	.34*	.26*	.27*	.31*	.14	.34*	--		
12	.18*	.21*	.25*	.26*	.29*	.34*	.37*	.25*	.16*	.56*	.12	--	
13	.30*	.40*	.33*	.42*	.49*	.52*	.48*	.55*	.48*	.44*	.32*	.23*	--

Note. * $p < .05$

Table 2.

Correlations between Variables at Time 2.

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13
1	--												
2	.75*	--											
3	.18*	.10	--										
4	.43*	.45*	-.07	--									
5	.50*	.55*	.07	.54*	--								
6	.61*	.62*	.01	.49*	.77*	--							
7	.76*	.60*	.05	.43*	.54*	.66*	--						
8	.54*	.68*	.05	.55*	.61*	.59*	.53*	--					
9	.47*	.57*	-.04	.45*	.47*	.46*	.41*	.69*	--				
10	.40*	.43*	.00	.41*	.47*	.48*	.47*	.38*	.34*	--			
11	.16*	.07	.39*	-.02	.07	.07	.21*	.08	-.08	.04	--		
12	.50*	.42*	-.03	.40*	.36*	.45*	.59*	.37*	.27*	.57*	.19*	--	
13	.40*	.48*	.00	.45*	.47*	.52*	.36*	.64*	.60*	.26*	-.07	.31*	--

Note. * $p < .05$

Table 3.

Factor Loadings of Organizational Support for Training Measure at Time 1 and Time 2.

Item	Time 1	Time 2
1. My chain of command cares about my language proficiency.	0.63	0.77
2. My chain of command will make the sacrifices necessary to ensure that I sustain my language proficiency.	0.70	0.81
3. Personnel are often pulled out of language training for non-critical duties.	-0.51	-0.08
4. My chain of command encourages personnel to use language during non-language training.	0.61	0.66
5. My chain of command ensures that necessary language learning materials are available.	0.81	0.75
6. My chain of command ensures that quality language instruction is available.	0.80	0.80
7. My chain of command speaks about the importance of language proficiency for deployments.	0.76	0.76
8. My chain of command finds ways to increase time for language training.	0.84	0.79
9. My chain of command provides recognition and rewards for good performance in language training.	0.64	0.66
10. Other personnel in my unit take language training seriously.	0.67	0.60
11. Language training is not viewed as a primary skill in my unit.	-0.39	-0.15
12. Personnel in my unit who have been deployed emphasize the importance of language training.	0.43	0.58
13. My unit has an effective Command Language Program (CLP).	0.63	0.62

Note: Completely standardized factor loadings are reported.

Table 4.

Means and Standard Deviations of Items at Time 1 and Time 2.

Variable	Time 1		Time 2	
	Mean	Std. Dev.	Mean	Std. Dev.
1	5.30	1.30	5.38	1.21
2	4.79	1.27	4.83	1.31
3	4.73	1.33	4.40	1.60
4	4.32	1.11	4.53	1.21
5	5.00	1.27	4.96	1.25
6	5.23	1.22	5.01	1.28
7	5.28	1.17	5.22	1.18
8	4.73	1.35	4.60	1.21
9	4.13	1.24	4.32	1.21
10	5.00	1.17	5.29	1.09
11	4.33	1.44	4.26	1.49
12	5.20	1.35	5.35	1.23
13	4.20	1.35	4.38	1.34

Note. Organizational Support Scale: 1 = *Strongly Disagree* to 7 = *Strongly Agree*

ABOUT SWA CONSULTING INC.

SWA Consulting Inc. (formerly Surface, Ward, and Associates) provides analytics and evidence-based solutions for clients using the principles and methods of industrial/organizational (I/O) psychology. Since 1997, SWA has advised and assisted corporate, non-profit and governmental clients on:

- Training and development
- Performance measurement and management
- Organizational effectiveness
- Test development and validation
- Program/training evaluation
- Work/job analysis
- Needs assessment
- Selection system design
- Study and analysis related to human capital issues
- Metric development and data collection
- Advanced data analysis

One specific practice area is analytics, research, and consulting on foreign language and culture in work contexts. In this area, SWA has conducted numerous projects, including language assessment validation and psychometric research; evaluations of language training, training tools, and job aids; language and culture focused needs assessments and job analysis; and advanced analysis of language research data.

Based in Raleigh, NC, and led by Drs. Eric A. Surface and Stephen J. Ward, SWA now employs close to twenty I/O professionals at the masters and PhD levels. SWA professionals are committed to providing clients the best data and analysis with which to make solid data-driven decisions. Taking a scientist-practitioner perspective, SWA professionals conduct model-based, evidence-driven research and consulting to provide the best answers and solutions to enhance our clients' mission and business objectives. SWA has competencies in measurement, data collection, analytics, data modeling, systematic reviews, validation, and evaluation.

For more information about SWA, our projects, and our capabilities, please visit our website (www.swa-consulting.com) or contact Dr. Eric A. Surface (esurface@swa-consulting.com) or Dr. Stephen J. Ward (sward@swa-consulting.com).