



**UNIVERSITY OF  
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# **Factors that contribute to the successful learning transfer of leaders**

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## **Abstract**

This study explores the transfer of learning from leadership development programs to better understand the factors contributing to learning transfer of leaders.

A mixed method parallel mixed design was used in the study, in which the independent quantitative and qualitative components of survey research and focus groups were conducted separately and in a parallel manner. Five hundred and sixty leaders across novice, intermediate and expert levels of a state government in Australia completed an on-line survey, where they described a formal, non-formal or informal learning experience undertaken within the last two years. The leaders nominated 735 work colleagues to participate in a multi-rater survey. Learning transfer was measured using the Leadership Skills Strataplex (Mumford, Campion & Morgeson, 2007). Factors correlated to learning transfer were measured using the Learning Transfer System Inventory (LTSI) (Holton, Bates & Ruona, 2000). Seven focus groups were run to add perspective and depth to the quantitative analysis.

This study reports a number of significant findings. First, using multiple regression analysis, while three of the 16 LTSI factors were correlated to the learning transfer of novice leaders and two of the factors were correlated to the learning transfer of intermediate leaders, none of the factors were correlated to the learning transfer of expert leaders. Second, using ANOVA, in examining the variation of learning transfer across levels of leaders, the study found that learning transfer of leaders did not vary on the basis of level of leader. Third, using ANOVA, the study found significant variation of learning transfer of leaders across different methods of learning. Fourth, using multiple regression analysis, none of the 16 LTSI factors was correlated with learning transfer of leaders when formal or informal learning methods were used, but four of the 16 LTSI factors were correlated with learning transfer of leaders when non-formal learning methods were used. Fifth, in examining learning transfer systems across four departments, using MANOVA, the analysis indicated there was a non-significant effect of the departments variable on the combined 16 dependent variables of the LTSI, suggesting the learning transfer systems for leaders across four departments did not differ. Finally, the qualitative analysis revealed a number of important constructs potentially related to learning transfer of leaders including propensity for self-development, self-reflection, intrinsic motivation, job-autonomy, and informal learning structures such as the provision of job assignments, performance feedback and social networks or communities of practice.

This study recommends moving beyond traditional factor-based approaches to learning transfer, as the study has shown that identifying factors correlating with learning transfer of leaders requires an identification and analysis of a complexity of interrelated constructs that sit outside the traditional approach in identifying factors influencing learning transfer. The findings support the proposition by Burke and Saks (2009), who suggested that most factors related to learning transfer are of minor importance or irrelevant in affecting significant change in transfer, leaving only a few factors capable of tackling the problem. Rather than focussing research attention on adding more factors to the nomological net, focus could be applied to examining in depth the complex interrelatedness among the small number of factors found to be correlated to learning transfer of leaders. It is essential that the in depth examination takes into consideration contextual factors such as level of leaders and methods of learning.

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## **Glossary**

### **Career Success**

The accumulated positive work and psychological outcomes resulting from one's work experiences (Seibert & Kraimer, 2001).

### **Cognitive Ability**

A very general mental capability that, among other things, involves the ability to reason, plan, solve problems, think abstractly, comprehend complex ideas, learn quickly and learn from experience (Gottfredson, 1997 p. 13). Also referred to as general mental ability (Ziegler *et al.*, 2011) and as 'g' or the ability to learn (Hunter, 1986).

### **Expert**

One who generates superior reproducible performances of representative tasks relevant to the domain of activity (Ericsson, 2006 p. 3).

### **Expertise**

The characteristics, skills and knowledge that distinguish experts from novices and less experienced people acting in that domain (Ericsson, 2006 p. 3).

### **Formal Learning**

Learning typically provided by an education or training institution, structured (in terms of learning objectives, learning time or learning support) and leading to certification. Formal learning is intentional from the learner's perspective (European Commission, 2001 p. 32).

### **Informal Learning**

Learning resulting from daily-life activities related to work, family or leisure. It is not structured (in terms of learning objectives, learning time or learning support) and typically does not lead to certification. Informal learning may be intentional, but in most cases it is non-intentional (or 'incidental'/random) (European Commission, 2001, p. 32).

### **Job Autonomy**

The extent to which a job allows freedom, independence and discretion to schedule work, make decisions and choose the methods used to perform tasks (Morgeson & Humphrey, 2006 p. 1323).

### **Leader**

A leader is one who influences the behaviour of group members in the direction of goals with which the group is faced (Parry & Bryman, 2006 p. 1). The performance of leaders is organised in terms of a progression from novice to intermediate to expert skill levels (Lord & Hall, 2005 p. 591).

### **Leadership**

A set of values, qualities and/or behaviours exhibited by the leader that encourages the participation, development and commitment of others (usually termed 'followers') (Bolden, 2006, p. 17).

### **Leadership Development**

Expanding the collective capacity of organisational members to engage effectively in leadership roles and processes (McCauley, Moxley & Van Velsor, 1998).

### **Leadership Skills Strataplex**

A 21-item framework developed by Mumford *et al.* (2007), which is used in this study to measure the impact of a learning experience on the leader's performance. The Leadership Skills Strataplex is made up of 4 categories of leadership skill requirements, namely cognitive, interpersonal, business and strategic leadership skills.

### **Learner Readiness**

The extent to which individuals are prepared to enter and participate in a training program (Holton, 2005 p. 45).

### **Learning**

The relatively permanent change in knowledge and skill produced by experience (Weiss, 1990 p. 172).

### **Learning Effectiveness**

The study of the factors or variables that likely influence learning outcomes at different stages of the learning process (Alvarez, Salas & Garofano, 2004 p. 388).

### **Learning Evaluation**

A measurement technique that examines the extent to which a learning experience meets the goals intended, and is a methodological approach for measuring learning outcomes (Alvarez *et al.*, 2004 p. 387).

### **Learning Transfer**

The application of new knowledge and skills to improve individual and group performance in an organisation or community (Broad, 2005, p. 87).

### **Learning Transfer System**

All the factors ... that influence transfer of learning to job performance (Holton *et al.*, 2000 p. 335).

### **Learning Transfer System Inventory (LTSI)**

A diagnostic tool developed by Holton *et al.* (2000) and is 'a framework that defines 16 constructs that make up the learning transfer system' (Holton, 2005 p. 44).

### **Motivation to Learn**

A specific desire on the part of the learner to learn the content of a learning experience (Noe & Schmitt, 1986).

### **Motivation to Transfer**

The direction, intensity and persistence of effort toward using in a work setting, skills and knowledge learned (Holton, 2005 p. 45).

### **Non-formal Learning**

Learning that is not provided by an education or training institution and typically does not lead to certification. It is however, structured (in terms of learning objectives, learning time or learning support). Non formal learning is intentional from the learner's perspective (European Commission, 2001, p. 33).

**Opportunity to Use Learning**

The extent to which trainees are provided with or obtain resources and tasks on the job enabling them to use training on-the-job (Holton, 2005 p. 46).

**Organisational Outcomes**

A measurement of effectiveness or efficiency (of the organisation) relative to core outputs of the system, sub-system, process or individual (Holton, 1999 p. 33).

**Peer Support**

The extent to which peers reinforce and support use of learning on-the-job (Holton, 2005 p. 45).

**Perceived Content Validity**

The extent to which the trainees judge training content to accurately reflect job requirements (Holton, 2005 p. 46).

**Performance - Outcomes Expectations**

The expectation that changes in job performance will lead to valued outcomes (Holton, 2005 p. 47).

**Performance Coaching**

Formal and informal indicators from an organisation about an individual's job performance (Holton, 2005 p. 47).

**Performance Self-efficacy**

An individual's general belief that they are able to change their performance when they want to (Holton, 2005 p. 47).

**Personal Capacity for Transfer**

The extent to which individuals have the time, energy and mental space in their work lives to make changes required to transfer learning to the job (Holton, 2005 p. 45).

**Personal Outcomes Negative**

The extent to which individuals believe that not applying skills and knowledge learned in training will lead to negative personal outcomes (Holton, 2005 p. 45).

**Personal Outcomes Positive**

The degree to which applying training on the job leads to outcomes that are positive for the individual (Holton, 2005 p. 45).

**Resistance to Change**

The extent to which prevailing group norms are perceived by individuals to resist or discourage the use of skills and knowledge acquired in training (Holton, 2005 p. 47).

**Self-reflection**

The inspection and evaluation of one's thoughts, feelings and behaviour (Grant, 2002 p. 821).

**Supervisor Sanctions**

The extent to which individuals perceive negative responses from supervisors/managers when applying skills learned in training (Holton, 2005 p. 46).

### **Supervisor Support**

The extent to which supervisors/managers support and reinforce the use of training on-the-job (Holton, 2005 p. 46).

### **Training**

Learning experiences designed to bring about permanent change in an individual's knowledge, attitudes, or skills (Noe & Schmitt, 1986 p. 497).

### **Training Transfer**

The degree to which trainees effectively apply their knowledge, skills and attitudes gained in a training context to their job (Baldwin & Ford, 1988 p. 63).

### **Transfer Design**

The extent to which (a) training has been designed to give trainees the ability to transfer learning to the job, and (b) training instructions match the job requirements (Holton, 2005 p. 46).

### **Transfer Effort - Performance Expectations**

The expectation that effort devoted to transferring learning will lead to changes in job performance (Holton, 2005 p. 46).

## **Acronyms**

I/O - Industrial/Organisational

LTSI - Learning Transfer System Inventory

MBA - Master of Business Administration

MTIWL - Motivation To Improve Work through Learning

QUAL - Qualitative

QUAN - Quantitative

ROI - Return On Investment

SES - Senior Executive Service

SDT - Self-Determination Theory

SO - Senior Officer