

# Impact of individual perception of organizational culture on the learning transfer environment

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This research is an empirical study of the relationship between organization culture, as perceived by employees, and the work-environment-related learning transfer factors in organizations, which we call learning transfer environment (LTE). To measure perceptions of organization culture, we use the Organizational Culture Assessment Instrument and categorize organizations as clan, adhocracy, market or hierarchy. To measure LTE, we use a subset of the Learning Transfer System Inventory items, including items such as feedback and coaching received, supervisor and peer support, supervisor reprimand, resistance or openness to change and personal outcomes (positive/negative). Our results reveal that many of the LTE factors are systemically related to perceptions of organization culture type. Some organization culture types support certain learning transfer factors more than others. Specifically, flexible organizations (defined as predominantly clan and/or adhocracy cultures) have a more supportive LTE than stable organizations (defined as predominantly market and/or hierarchy cultures).

## Introduction

Organizational learning can be critical in influencing the success of organizations in a globalized system characterized by rapid technological advancements, fierce competition and rapid rates of change in work environments (Nonaka & Takeuchi, 1995). An important determinant of organization learning is the transfer of knowledge (Garvin *et al.*, 2008) from training programs. According to Chiaburu and Lindsay (2008), training programs are effective only to the extent that the skills and behaviors learned and practiced during instruction are actually transferred to the workplace. This can happen only if the organization has a favorable transfer environment, which is one that affects

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motivation and performance of its people positively (Krishnamani & Haider, 2016; Litwin & Stringer, 1968). It is recognized that the process of learning transfer within an organization is complex because of various influences (Bates & Khasawneh, 2005; Edmondson *et al.*, 2007), including work-environment-related elements (Baldwin & Ford, 1988). Although learning and training are many a time used interchangeably, there is a nuanced difference between the two. As per their dictionary meanings, training is imparted through specific teaching interventions meant to upgrade a set of skills or behavior of the trainee(s), whereas learning refers to the acquisition of knowledge, skill and/or attitude through multiple sources like study, experience or being taught. Thus training is a type of learning. The terms *training transfer* and *learning transfer* have been used interchangeably in this paper. The latter term has been preferred, however, because we do not restrict our research to training but include programs that are designed to build wider knowledge and influence attitude.

One of the key aspects of the work environment is organizational culture. There is substantial literature that focuses on the impact of the organizational culture on organization learning (Amabile, 1998; Prather, 2000; Shallcross, 1975; Sternberg, 2003); however, very little effort has been made to understand the relationship between organizational culture and organization-specific factors that affect the transfer of learning from training programs. This paper is an empirical study of the relationship between organization culture, operationalized as individual perception of the organizational culture, and the work-environment-related learning transfer factors in organizations, which we call learning transfer environment (LTE).

For the purpose of this research, we have chosen two established models. The first is the Learning Transfer System Inventory (LTSI) which was developed by Holton *et al.* (2000); we focus on a specific part of this model to define the LTE. Second, we use Cameron and Quinn's (1999) model on organizational culture called the Competing Values Framework (CVF) and a matched scale based on CVF, called Organizational Culture Assessment Instrument (OCAI), to help us identify specific cultures of organizations. The next sections describe the two models in detail.

## Literature review

We first define and discuss LTE and the instrument used to measure LTE, followed by a discussion on organization culture and the instrument used to measure individual perception of organizational culture.

### Learning transfer environment

Research has demonstrated that learning transfer from training programs is complex and involves multiple factors and influences (Baldwin & Ford, 1988; Ford & Weisbein, 1997; Holton *et al.*, 1997, 1998, 2000; Noe, 1986; Rouiller & Goldstein, 1993). If the transfer environment in the organization is favorable, the trainee is likely to be more motivated to transfer learning to the job (Noe & Schmitt, 1986). LTSI is an instrument which diagnoses the factors affecting transfer of learning. It was developed on the HRD Research and Evaluation Model (Holton, 1996) theoretical framework. At a broad level, the model assumes that learning outcomes are a function of ability, motivation and environmental influences at three outcome levels: learning, individual performance and organizational performance. Secondary influences that impact motivation, such as attitudes and personality, are also included. LTSI is a theoretically and psychometrically sound instrument that has shown evidence of cross-cultural factor validity (Khasawneh, 2004). It has undergone a variety of validation studies, including construct, criterion and cross cultural studies; it has also been examined for convergent and divergent validity (Holton *et al.*, 1997). There are 16 transfer factors which are divided into four groups: trainee characteristics, motivation, work environment and ability. Holton (1996) describes the work-environment-related transfer factors as being made up of seven constructs, namely performance coaching, supervisor support, supervisor sanctions, peer support, resistance to change, personal outcomes-positive

and personal outcomes-negative. These seven factors are what we consider as LTE. We use term LTE for better readability, instead of referring to these factors as work environmental related factors of the LTSI.

Holton *et al.* (1997) provide specific details of the LTE factors. For example, supervisor support for transfer, supervisor sanctions and performance feedback deal with employee-supervisor relationship. Essentially these factors address managers' involvement in clarifying performance expectations after training, identifying opportunities to use new knowledge and skills, setting realistic goals based on training and working with individuals on problems encountered. Supervisor sanctions indicate the degree of opposition to application of new skills and knowledge, lack of assistance to identify opportunities to use new skills and providing negative or inadequate feedback when individuals successfully apply learning on the job. The peer support and openness to change factors assess the work-group-related factors that influence training transfer. The peer support factor aims to establish whether peers mutually implement opportunities to apply skills and knowledge learned in training, encourage each other to use new skills, and display patience and appreciation for the use of new skills. The openness to change factor addresses the extent to which work groups are willing to invest energy to change and provide support to individuals who use new techniques learned in training. The reward system in place in organizations and the rewards an employee expects for successful training completion and implementation of new knowledge and skills on the job are important constructs that influence the amount of transfer on the job. These factors are measured by two factors: performance outcomes-positive and performance outcomes-negative. Positive outcomes delineated here include increased productivity at work, increased personal satisfaction, respect, increase in salary or other types of rewards and promotion. Negative outcomes include reprimands, penalties, peer resentment and lack of rewards. A brief description about them is seen in Table 1.

### **Organizational culture**

Hofstede and Hofstede (2005) say organization culture is the shared mental software of the people in an organization and though it is treated as a soft concept, it is known to have hard, tangible consequences on performance of organizations. The literature says that organization culture impacts organization learning (Amabile, 1998; Prather, 2000; Shallcross, 1975; Sternberg, 2003; Thompson, 2003). Researchers recognize organizational culture as the most significant barrier to creating and leveraging knowledge assets (De Long & Fahey, 2000). In a vector study article on organizational learning, Dodgson (1993) states that learning is stimulated by both environmental changes and internal factors (individuals, culture, etc.) in a complex and iterative manner. Fiol and Lyles (1985) also state that organizational learning is influenced by contextual factors such as culture. Another stream of research available in the literature is organizational climate, which can be defined as a psychologically meaningful description of the work environment (James & Jones, 1976; Jones & James, 1979). It is an individual psychological state affected by organizational conditions like culture, structure and managerial behavior (Burke & Litwin, 1992). Organizational culture is based on beliefs that are shared organization-wide, whereas climate is based on what an individual senses in and about the organizational environment (Reichers & Schneider, 1990). Our reason for choosing culture and not climate is culture refers to deep structures of organizations, rooted in values, beliefs and assumptions of members, whereas climate is more temporary (Denison, 1996). In common man's term, if culture is the personality of an organization, climate is its mood. To study LTE, we assume that a more fundamental and permanent aspect of an organization's persona is more appropriate.

### **Competing values framework**

Our study focuses on the perception of organization culture and its impact on the LTE factors. We use the OCAI to measure the perception of the predominant culture existing in an organization. This instrument is derived from the CVF proposed by Quinn

Table 1: Learning transfer environment (LTE) factors

Factor name	Factor definition	Factor description
Feedback/Performance coaching	Formal and informal indicators from an organization about an individual's job performance	The extent to which individuals receive constructive input, assistance and feedback from people in their work environment (peers, employees, colleagues, managers, etc.) when applying new abilities or attempting to improve work performance. Feedback may be formal or informal cues from the workplace.
Supervisor/Manager support	The extent to which managers support and reinforce the use of learning on-the-job	This includes managers' involvement in clarifying performance expectations after training, identifying opportunities to apply new skills and knowledge, setting realistic goals based on training, working with individuals on problems encountered while applying new skills and providing feedback when individuals successfully apply new abilities.
Supervisor/Manager sanctions	The extent to which individuals perceive negative responses from managers when applying skills learned in training.	This includes when managers oppose the use of new skills and knowledge, use techniques different from those taught in training, do not assist individuals in identifying opportunities to apply new skills and knowledge or provide inadequate or negative feedback when individuals successfully apply learning on-the-job.
Peer support	The extent to which peers reinforce and support use of learning on-the-job.	This includes the degree to which peers mutually identify and implement opportunities to apply skills and knowledge learned in training, encourage the use of or expect the application of new skills, display patience with difficulties associated with applying new skills or demonstrate appreciation for the use of new skills.

Table 1: Continued

Factor name	Factor definition	Factor description
Resistance/Openness 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.	This includes the work groups' resistance to change, willingness to invest energy to change, and degree of support provided to individuals who use techniques learned in training.
Personal outcomes-positive	The degree to which applying training on the job leads to outcomes that are positive for the individual.	Positive outcomes include increased productivity and work effectiveness, increased personal satisfaction, additional respect, a salary increase or reward, the opportunity to further career development plans or the opportunity to advance in the organization.
Personal outcomes-negative.	The extent to which individuals believe that applying skills and knowledge learned in training will lead to outcomes that are negative.	Negative outcomes include reprimands, penalties, peer resentment, too much new work, or the likelihood of not getting a raise if newly acquired skills are utilized

Source: Learning Transfer System Inventory (Holton *et al.*, 2000).

# Competing Values Framework

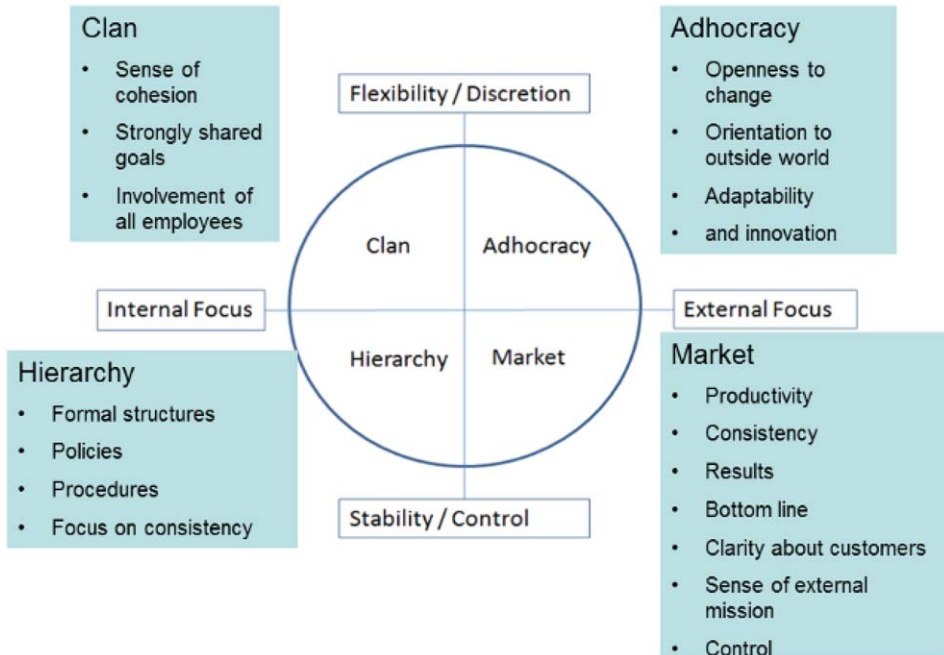


Figure 1: Competing values framework. [Colour figure can be viewed at [wileyonlinelibrary.com](http://wileyonlinelibrary.com)]

and Rohrbaugh (1983) and was initially based on research to identify indicators of organizational effectiveness. The CVF uses the two main dimensions (internal vs external and stability vs flexibility) in order to generate the two-by-two matrix that classifies culture as a balance between the four cultural archetypes (Jacobs *et al.*, 2013). Organizations can be characterized based on their cultural orientation as Clan, Adhocracy, Market or Hierarchy. A brief description of the culture types as developed by Quinn and Rohrbaugh (1983) and later refined by Cameron and Quinn (1999) is discussed below:

Clan culture is internally focused with flexibility and discretion. It is characterized by a sense of cohesion, strongly shared goals and involvement of all employees. Adhocracy culture is externally focused with flexibility and discretion. It is characterized by openness to change and orientation to outside world, adaptability and innovation. Market culture is externally focused with stability and control. It is characterized by productivity, consistency, results, bottom line, clarity about customers and a sense of external mission combined with control. Hierarchy culture is internally focused with stability and control. It is characterized by formal structures, policies, procedures and focus on consistency. Organizations that lie in the left side of the OCAI matrix (Clan and Hierarchy) are classified as be internally focused (I), whereas organizations in the right side (Adhocracy and Market) are classified as externally focused (E). Organizations that lie in the upper half of the OCAI matrix (Clan and Adhocracy) are classified as flexible (F), whereas organizations in the bottom half of the matrix (Market and Hierarchy) are classified as stable (S). Figure 1 represents the CVF.

Based on the CVF, Cameron and Quinn (1999) developed a matched scale, the OCAI. Kwan and Walker (2004) have noted that the CVF has become the dominant model in the quantitative research on organizational culture. According to Cameron and Quinn (1999), organization culture can be attributed to differences in six attributes:



Dominant Characteristics, Organizational Leadership, Management of Employees, Organization Glue, Strategic Emphases and Criteria of Success. The OCAI questionnaire associates different characteristics based on these attributes with each of the culture type, as indicated in Table 2. The OCAI has been found to be applicable globally when evaluating the dominant dimensions of organization culture for both qualitative and quantitative research (Kimemia, 2013). Yu and Wu (2009) have studied the many empirical studies using the CVF and OCAI that have been done globally and noted that OCAI is one of the most influential and extensively used models in the area of organizational culture research. For our research, we have used this instrument to measure an individual's perception of his/her organization culture.

## **Purpose of study and research hypotheses**

The goal of our study is to examine how LTE of organizations is affected by organization culture, as perceived by employees of organizations.

Four of the seven factors that comprise the LTE, namely performance coaching, supervisor support, peer support and personal outcomes-positive indicate a positive work environment factor where managers support learning, give constructive feedback; peers are amenable to changes brought about by implementing new learnings at the workplace. They are likely to be high in flexible culture types like Adhocracy and Clan which are more encouraging in accepting and implementing new knowledge or learnings in the workplace and have very high people connect. Following are our hypotheses:

*H1.* Performance coaching will be higher in flexible cultures than in other cultures.

*H2.* Supervisor support will be higher in flexible cultures than in other cultures.

*H3.* Peer support will be higher in flexible cultures than in other cultures.

*H4.* Personal outcomes-positive will be higher in flexible cultures than in other cultures.

Resistance to change is the extent to which individuals perceive group norms in workplace resisting or discouraging the use of skills and knowledge acquired in training. This factor is likely to be high in hierarchy culture which is a very controlled and structured place. Formal procedures generally govern what people do. Any change will be time taking and may not seem worth the effort. It is likely to be high in internal focused cultures like clan and hierarchy, and less in external focused cultures like adhocracy and market which are more entrepreneurial and market focused in nature.

*H5.* Resistance to change will be higher in internal focused cultures than in external focused cultures.

The remaining two factors are supervisor/manager sanctions deal with the extent to which individuals perceive negative responses from managers when applying skills learned in training, and personal outcomes negative deals with the extent to which individuals believe that applying skills and knowledge learned in training will lead to outcomes that are negative. Organizational culture will have no impact on these factors because no culture will explicitly discourage application of learning on the job.

*H6.* Supervisor sanctions will not be impacted by organizational culture.

*H7.* Personal outcomes negative will not be impacted by organizational culture.

## **Research methodology**

This section discusses the population and sample, the instrument, the data collection process and the type of analyses used.

Table 2: Characteristics of clan, adhocracy, market, hierarchy cultures

Attributes	Clan	Adhocracy	Market	Hierarchy
Dominant characteristics	The organization is a very personal place. It is like an extended family. People seem to share a lot of themselves.	The organization is a very dynamic entrepreneurial place. People are willing to stick their necks out and take risks.	The organization is very results oriented. A major concern is with getting the job done. People are very competitive and achievement oriented.	The organization is a very controlled and structured place. Formal procedures generally govern what people do.
Organizational leadership	The leadership in the organization is generally considered to exemplify mentoring, facilitating or nurturing.	The leadership in the organization is generally considered to exemplify entrepreneurship, innovating or risk taking.	The leadership in the organization is generally considered to exemplify a no-nonsense, aggressive, results-oriented focus.	The leadership in the organization is generally considered to exemplify coordinating, organizing or smooth-running efficiency.
Management of employees	The management style in the organization is characterized by teamwork, consensus and participation.	The management style in the organization is characterized by individual risk-taking, innovation, freedom and uniqueness.	The management style in the organization is characterized by hard-driving competitiveness, high demands and achievement.	The management style in the organization is characterized by security of employment, conformity, predictability and stability in relationships.
Organization glue	The glue that holds the organization together is loyalty and mutual trust. Commitment to this organization runs high.	The glue that holds the organization together is commitment to innovation and development.	The glue that holds the organization together is the emphasis on achievement and goal accomplishment. Aggressiveness and winning are common themes.	The glue that holds the organization together is formal rules and policies. Maintaining a smooth-running organization is important.
Strategic emphases	The organization emphasizes human development.	There is an emphasis on being on the cutting edge.	The organization emphasizes competitive actions	The organization emphasizes permanence and



Table 2: Continued

Attributes	Clan	Adhocracy	Market	Hierarchy
	High trust, openness and participation persist.	The organization emphasizes acquiring new resources and creating new challenges. Trying new things and prospecting for opportunities are valued.	and achievement. Hitting stretch targets and winning in the marketplace are dominant.	stability. Efficiency, control and smooth operations are important.
Criteria of success	The organization defines success on the basis of the development of human resources, teamwork, employee commitment and concern for people.	The organization defines success on the basis of having the most unique or newest products. It is a product leader and innovator.	The organization defines success on the basis of winning in the marketplace and outpacing the competition. Competitive market leadership is key.	The organization defines success on the basis of efficiency. Dependable delivery, smooth scheduling and low-cost production are critical.

Source: Organizational Culture Assessment Instrument (Cameron & Quinn, 1999).

### Population

Our focus is on short-term executive training, and we use participants of “open” executive education programs at a premier business school in India. Participants in the programs come from top, senior and middle management categories belonging to the private, public, government or social sectors.

### Sample

To ensure that participants are chosen from a diverse range of industries, 17 open programs were selected, and participants from these programs were administered the survey. The programs were in the areas of strategy, leadership, general management and functional excellence like finance, marketing, information technology, risk management. All the programs ran in a particular fiscal year of the school and were selected based on the nature of topics covered, seniority level of the participants and duration of at least three days. This sample comprised of mostly senior executives, and of the 200 participants approached, we received 159 completed responses for the analysis. The remaining 41 were either nonfilled or partially filled, hence could not be used for the purpose of the study. The participants represented various industries (98 per cent from private sector, 2 per cent from government sector and none from the nonprofit sector) like agriculture, automobile, banking and finance, chemicals, consumer products, electronics, energy, food and beverage, government, health, information technology, manufacturing, materials and construction, media, mining and metals, real estate, retail, services, telecom, textile, trading, travel and transportation. Ninety per cent of respondents were male, 10 per cent female; 59 per cent of the participants were graduates, 38 per cent were post-graduates and the rest were post-doctoral. In terms of years

Table 3: LTSI transfer environment factors loading

Factors	Eigen value	Questions	LTSI factors
F2 (S)	4.70	21, 22, 26	Supervisor support
F3 (S)	2.40	23, 24, 25	Supervisor sanctions
F4 (G)	2.12	43, 44, 48	Performance coaching
F5 (S)	1.86	12, 15, 16	Personal outcomes (-)ve
F8 (S)	1.31	18, 19, 20	Peer support
F9 (G)	1.12	40, 41, 42	Resistance to change

Note: (S) = training specific; (G) = training in general.

of experience, 3.5 per cent were in the range of 0–5 years, 12 per cent in the range of 5–10 years, 17.5 per cent in the range of 10–15 years, 20 per cent in the range of 15–20 years, 26 per cent in the range of 20–25 years and the rest were unspecified.

### Instruments used and analysis

The specific instruments used were the LTSI and the OCAI. LTSI version 4 was used; in this instrument, 33 items relate to the specific training program in question, whereas 15 items are classified as general items because they are expected to affect all training programs. The LTSI version 4 employs a scale of 1–5, 1 being ‘strongly disagree’ and 5 being ‘strongly agree’ for all the items. The OCAI consists of six questions. Each question has four alternatives. Hundred points are to be divided among these four alternatives, depending on the extent to which each alternative is relevant to the participant’s own organization. A higher number of points are to be given to the alternative that is most relevant to one’s organization.

The LTSI questionnaire was administered to the executive training participants toward the end of each training program, typically on the penultimate day of the training. The OCAI questionnaire was administered online before participants came to the program. Exploratory factor analysis was used in the analysis of learning transfer. For every individual in the sample, we collected LTSI scores as well as OCAI scores. The steps for the analysis:

- A factor analysis on the LTSI data shows that there are 10 factors with eigenvalues greater than 1. After doing the oblimin rotation, we checked for questions with factor loadings greater than 0.45 because we had a sample size of around 150 (Hair *et al.*, 1998). Six of the seven factors pertaining to LTE clearly load. The one factor that did not load was personal outcomes-positive. Table 3 shows the summary of the results.
- For every factor in LTSI, we added the scores of all the questions that load on that factor and arrived at the sum of scores for that factor. The measure of sampling adequacy (MSA) was used to determine the appropriateness of the use of factor analysis. No inadequate MSA values were found, thus supporting its use. Analysis of variance (ANOVA) and paired *t* tests were used to explore whether or not differences in learning transfer exist based on perception of predominant culture types of organizations.
- We calculated the clan (C), adhocracy (A), market (M) and hierarchy (H) scores for each individual’s organization. We denoted an organization being perceived as C/A/M/H based on the scores. In the process, we had 12 data points where the scores were not sufficiently differentiated to be classified as a specific culture type.
- We also classified the organizations perceived as being internal (I) or external focused (E) as well as flexible (F) or stable (S). For this classification, a difference of at least 10 points was considered. (The way the OCAI is designed, the sum of F and S or I and E scores has to be 100. We followed a convention by which we classified an observation as F or S and I or E if the difference between the F and S or I and E

Table 4: Summary of data

Classification	By culture type	By internal/ external focus	By flexibility/ stability focus
Details	Clan (C) – 65 Adhocracy (A) – 10 Market (M) – 43 Hierarchy (H) – 29	Internal focus (I) – 68 External focus (E) – 39	Flexible (F) – 58 Stable (S) – 50
Not clear	12	52	51
Total	159	159	159

score was at least 10. We did not classify the observations where the difference was lesser). There were some firms which could not be classified, given that they did not have a 10-point difference. Table 4 indicates the summary of data as per each classification. There were 52 data points where the difference in the culture scores was not significant enough to classify as I or E and 51 data points where the difference in the culture scores was not significant enough to classify as F or S.

- We completed a comparison of means of each perceived culture type using ANOVA. Where the difference was significant, instead of using the inbuilt pairwise methods available in the software (Sidak, Bonferroni and Scheffe in the oneway command), we analyzed using paired *t* tests. This is because although these options are easy to use, many researchers consider the methods to be too conservative for pairwise comparisons (“Using Stata for One-Way Analysis of Variance”, n.d.). We also completed the analysis by distinguishing “internal” or “external” focus as well as “stable” or “flexible” using paired *t* tests.

## Results

### Support for the hypotheses

Our broad hypothesis that perceived organization culture impacts LTE is supported. These transfer factors are seen to be statistically different for different perceived cultures. The summary of results is shown in Table 5. The ANOVA and paired *t*-test results for each of the six LTE factors that loaded are given in Table 6. The paired *t*-test results for the comparison between external and internal focused cultures as well as stable and flexible cultures are also given. An explanation or interpretation of the results for our hypotheses follows.

#### **H1: performance coaching will be higher in flexible cultures than in other cultures**

Our hypothesis was this factor is impacted by perceived organization culture and will be high in adhocracy and clan cultures which are more encouraging in accepting and implementing new knowledge or learning in the workplace and have high people connect.

Results (Table 6) indicate this factor is affected by perceived culture type. There is no significant difference between clan, adhocracy and hierarchy cultures, however in Market culture, it is significantly lower. It does not vary with internal or external focus. However, flexible organizations (clan and adhocracy) have higher values than stable ones (market and hierarchy).

The reason this factor is perceived low by employees in market culture can be potentially explained as follows: Performance coaching is the extent to which individuals receive constructive input, assistance and feedback from people in their work environment (peers, employees, colleagues, managers, etc.) when applying new abilities or attempting to improve work performance. Market cultures are extremely competitive and results driven. It is possible instead of giving constructive feedback; employees

Table 5: Results summary

Factor	Proposition	Validated/ not validated	Culture type level	Internal vs. external focus	Stable vs. flexible
Performance coaching	Impacted by organization culture.	Validated	Different M is less than C, A, H	Not different	Different (F>S)
Supervisor support	Impacted by organization culture.	Validated	Different A is greater than C, M, H	Not different	Different (F>S)
Peer support	Impacted by organization culture.	Validated	Different A is more than C, M, H	Not different	Different (F>S)
Resistance to change	Impacted by organization culture.	Validated	Different A is less than C, M, H	Different (I>E)	Not different
Supervisor sanctions	Culture has no impact.	Validated	Not different	Not different	Not different
Personal outcomes-negative	Culture has no impact.	Validated	Not different	Not different	Not different

Table 6: Results of paired *t*-tests

Transfer factor	Mean, SD, N values at culture type level	<i>p</i> -value for one-way Anova	Paired <i>t</i> -test ( <i>p</i> -value) where significant	Mean, SD, N values at internal/ external level	Paired <i>t</i> -test ( <i>p</i> -value) where significant	Mean, SD, N values at flexible/ stable level	Paired <i>t</i> -test ( <i>p</i> -value) where significant
Performance coaching	A - 10.2, 3.0, 10	0.09	C-M:0.04	E - 9.4, 2.6, 39	NA	F - 9.6, 2.4, 58	0.01
	C - 9.2, 2.3, 65		A-M:0.03	I - 9.2, 2.3, 68		S - 8.6, 2.4, 50	
	H - 9.6, 2.3, 29		M-H:0.02				
Supervisor support	M - 8.4, 2.6, 43	0.08	A-C:0.005	E - 10.0, 2.8, 39	NA	F - 10.1, 2.4, 58	0.03
	A - 11.8, 1.3, 10		A-H:0.005	I - 9.7, 2.3, 68		S - 9.3, 2.2, 50	
	C - 9.6, 2.6, 65		A-M:0.01				
Peer support	H - 9.5, 2.6, 29	0.00	C-A:0.00	E - 11.5, 2.0, 39	NA	F - 11.6, 1.7, 58	0.02
	M - 10.0, 2.5, 43		A-M:0.00	I - 11.4, 1.7, 68		S - 10.9, 1.9, 50	
	A - 13.4, 1.4, 10		A-H:0.00				
Resistance to change	C - 11.4, 1.7, 65	0.15	C-A:0.02	E - 5.3, 2.1, 39	0.00	F - 6.7, 2.9, 58	NA
	H - 10.9, 1.9, 29		A-M:0.04	I - 7.0, 2.6, 68		S - 6.5, 2.2, 50	
	M - 11.1, 2.0, 43		A-H:0.04				
Supervisor sanctions	A - 5.0, 2.4, 10	0.8	NA	E - 5.3, 2.3, 39	NA	F - 5.2, 2.4, 58	NA
	C - 6.9, 2.7, 65			I - 5.0, 2.3, 68		S - 5.2, 2.2, 50	
	H - 6.9, 3.0, 29						
Personal outcomes-negative	M - 6.3, 2.0, 43	0.68	NA	E - 5.1, 2.0, 39	NA	F - 5.3, 2.2, 58	NA
	A - 4.8, 1.6, 10			I - 5.7, 2.6, 68		S - 5.6, 2.5, 50	
	C - 5.0, 2.3, 65						

may remain quiet or even secretly cherish a peer's failure. The other reason could be people do not have the time to discuss and give feedback, because they are always driven by meeting targets and achieving results.

## **H2: supervisor support will be higher in flexible cultures than in other cultures**

Our hypothesis was that this factor is impacted by perceived organization culture. We expected supervisor support will be high in adhocracy and clan cultures which are more encouraging in accepting and implementing new knowledge or learning in the workplace and have high people connect. Results (Table 6) show that this factor is affected by perceived culture types. It is seem to be higher in adhocracy type than in the other culture types. It does not vary with internal or external focus. However, flexible organizations (clan and adhocracy) have higher values than stable ones (market and hierarchy).

In adhocracy/entrepreneurial cultures, supervisors give more freedom to learn and apply learnings in the context of work. The management style in the organization is characterized by individual risk-taking, innovation, freedom and uniqueness. For implementing a new learning, a supervisor's go ahead is enough. Employees and their supervisors often do not have to go through long processes to make any changes. Long drawn processes and bureaucracy can often act as deterrents for learning transfer. Hence employee's perception of supervisor support may be high for adhocracy culture.

## **H3: peer support will be higher in flexible cultures than in other cultures**

We hypothesized that this factor is likely to be high in perceived adhocracy and clan cultures which are more encouraging in accepting and implementing new knowledge or learning in workplace and have high people connect, for the same reasons as mentioned for performance coaching and supervisor support.

Results (Table 6) show peer support to be higher in adhocracy type than in the other culture types. It does not vary with internal or external focus. However, flexible organizations (clan and adhocracy) have higher values than stable ones (market and hierarchy).

A possible explanation could be that in adhocracy/entrepreneurial cultures, peers are more supportive and willing to give feedback on new initiatives. Because the environment supports risk-taking, fear of failure is less. The commitment to innovation in these organizations ensures everyone's participation in creating anything new. Hence peer support is rated highly in adhocracy-type cultures.

## **H4: personal outcomes-positive will be higher in flexible cultures than in other**

This hypothesis could not be tested because the factor did not load.

## **H5: resistance to change will be high in internal focused cultures and less in external focused culture**

We hypothesized that this factor is likely to be high in hierarchy culture which is a very controlled and structured place. Formal procedures generally govern what people do. Any change will be time taking and may not seem worth the effort. It is also likely to be less in adhocracy culture which is more entrepreneurial in nature.

The factor is affected by perceived organization culture. Results (Table 6) show this factor to be significantly lower in adhocracy type than in the other culture types. It does not vary with organizations being stable or flexible. However, internally focused organizations (clan and hierarchy) are likely to have more resistance to change than externally focused organizations (adhocracy, market).

## **H6: supervisor sanctions will not be impacted by organizational culture**

Our hypothesis was that no culture will discourage application of learning on the job; hence this will be a perceived culture agnostic transfer factor. Results show that this is a perceived culture agnostic transfer factor.



# Research Findings

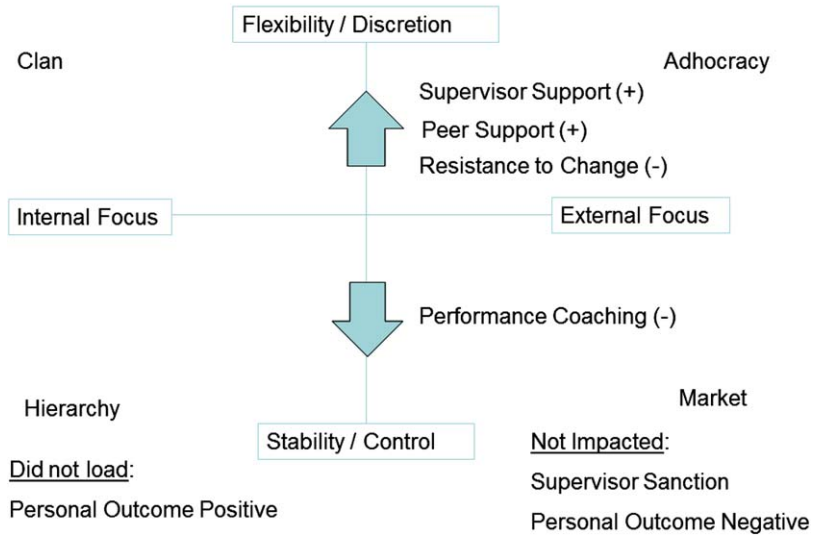


Figure 2: Research findings. [Colour figure can be viewed at [wileyonlinelibrary.com](http://wileyonlinelibrary.com)]

## H7: Personal outcomes negative will not be impacted by organizational culture

Our hypothesis is that no culture will discourage application of learning on the job; hence this will be a perceived culture agnostic transfer factor. Results (Table 6) show that this is a perceived culture agnostic transfer factor.

The summary of results is shown in Figure 2. The results indicate that perceived flexible organizations (clan and adhocracy) create a supportive LTE. Factors like supervisor support, peer support and performance coaching are higher in these organizations. Resistance to Change is more in perceived internal facing (clan and hierarchy) organizations. These results complement the findings of another study that was done to study organization cultures behavior on tacit knowledge sharing behavior (Suppiah & Sandhu, 2011). Their study finds stable organizations (market and hierarchy) to be non-supportive of sharing tacit knowledge and we have found perceived flexible organizations (clan and adhocracy), which have characteristics opposite of stable organizations, support a positive transfer environment more than stable organizations (market and hierarchy).

## Discussion

### Theoretical contributions

There have been a number of studies on work environment factors, including top management, supervisor and peer support (Facteau *et al.*, 1995), task constraints and opportunity to perform (Ford *et al.*, 1992), learning transfer climate (Bates & Khasawneh, 2005) and factors affecting training transfer within the work environment (Noorizan *et al.*, 2016; Williams, 2008). In addition, three studies provide evidence of criterion validity and suggest that several work environment factors measured by the LTSI, especially for interpersonal supports, were powerful predictors of individual job performance following training (Holton *et al.*, 1997, 2000) and motivation to transfer (Holton *et al.*, 1998). Most of these studies show how the work environment factors impact learning, individual performance, organizational performance, innovation, motivation, etc. These studies consider the environment factors as independent

variables. Literature survey, however, does not indicate any studies where effect of organization culture is studied on these environment factors as dependent variables.

There have been extensive studies on impact of organizational culture on areas such as organizational change initiatives, implementation of total quality management, job satisfaction, firm performance, etc. (Yu & Wu, 2009). Two such studies related to our area of research are on tacit knowledge sharing behavior (Suppiah & Sandhu, 2011) and knowledge management initiatives (Kangas, 2009). The first study finds stable organizations (market and hierarchy) to be nonsupportive of sharing tacit knowledge. The second study reveals the importance of assessing organizational culture type as it relates to continuous knowledge management initiatives. By generating the right organizational culture and continuous knowledge management initiatives, leaders will enhance value and help increase an organization's competitive advantage. Another study by Kim *et al.* (2015) finds that the degree of employees' psychological attachment toward an organization stimulates their intention to perform as they learn.

Learning and its transfer in organizations depends on the subtle interplay of a lot of factors that go on in the minds of the learners. Organizational culture is known to impact learning (Amabile, 1998; Prather, 2000; Shallcross, 1975; Sternberg, 2003). It is important to understand this impact and how it can be used to an organization's advantage. Thus, our research offers an addition to the contributions already available within this field, by empirically showing the impact of perceived organization culture on work-environment-related transfer factors (LTE). It can be the foundation for other research questions as indicated in the next section.

### **Future research**

The findings in this paper offer various interesting research questions: for example, does perception of organization culture affect other transfer factors like trainee characteristics, motivation and ability as well? Does organization climate impact these factors? In this research, participants were from different organizations; what kind of results would emerge if all participants were from same organization? Some organizations may not be of a particular organization culture type: how would such organizations impact the transfer environment and/or other factors? The present research is limited to mostly senior executives. What would be the outcome if different levels of the workforce are considered? Would the results be different for millennials? Does gender have any impact on this research? Research on these and other questions will provide deeper insights into the world of knowledge transfer, organizational culture and organizational learning. We hope other researchers will attempt to extend this study and answer some/all of these research questions.

### **Limitations**

It is important to acknowledge the limitations in the study. First, the data set is not entirely representative of all types of organizations. Participants who attend executive training at the premier business school (where the data were collected) tend to come from large, elite organizations. As such, this study does not represent executives of all types of organizations, like small- and medium-sized companies. Also, participants of this study are top and senior executives; this study does not include middle or junior personnel. We hope other researchers will attempt to extend this study to executives of such types of organizations as well as include all levels of workforce. One of the factors of LTE, namely personal outcomes-positive did not load with the data set. Hence it was not possible to validate the hypothesis that personal outcomes-positive is also impacted by organization culture. We hope such impact can be tested in future studies.

### **Practical implications**

Tannenbaum and Yukl (1992) suggest that research defining and accurately measuring factors affecting transfer of learning is important in helping human resource development and learning and development departments move beyond the question of

whether training works, to why training works. If relationship between LTE and organizational culture can be established, it will be possible to recommend to organizations which transfer factor(s) they should focus on depending on their culture scores. Organizations can reap benefits by enhanced learning transfer, leverage knowledge assets, get better returns on dollars spent on training or executive education and subsequently enhance organizational learning. Studies on transfer climate reveal that a suitable climate can also significantly increase innovation (Bates & Khasawneh, 2005). Strengthening an organization's LTE through cultural levers can result in significant enhancement of learning, individual performance and organizational performance (Holton, 1996).

It is not only important for organizations to design and manage mechanisms for learning transfer, it is also important to manage the perception of organization culture in the employees mind as being flexible. This can be done by involving employees in organization-wide initiatives, developing a strong sense of cohesion, having a shared vision, being flexible to changes, adaptable, agile and innovative. Employees will then be motivated to transfer learning. The perception of senior managers (participants in this study were from top/senior levels) on organizational culture can play a critical role in learning transfer. Often in organizations, employees emulate their senior leadership. If this level plays an active role in transfer of learning, it is possible that other levels will also follow them. Organizations can reap benefits by enhanced learning transfer and subsequently enhance organizational learning.

## Conclusion

Our hypothesis in this study is that perceived organization culture impacts the LTE. Our hypothesis is broadly validated. In general, it is seen that perceived flexible organizations (clan and adhocracy) support learning transfer and factors like supervisor support, peer support and performance coaching are higher in these organizations. Resistance to change is higher in perceived internal facing (clan and hierarchy) organizations.

The LTSI holds significant promise in its ability to diagnose barriers to transfer, provide support for data-driven interventions to address those barriers and isolate critical factors for evaluating training effectiveness. The transfer environment is affected by organizational culture (Holton *et al.*, 2003). By researching the interplay between two established frameworks, one on LTE and the other on organizational culture, our empirical research shows that individual's perception of organizational culture impacts the LTE. Although this can pave way for further academic research related to organization culture, learning transfer, transfer environment and organizational learning, it can also help practitioners to improve the LTE based on their prevailing organizational cultures.

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