

Development and Validation of Organizational Environment Scale (OES) for University Teachers

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The major purpose of the study was to develop an instrument to assess the organizational environment at university level in Pakistan. The data were collected from 336 teachers working at four public sector universities in the province of the Punjab. Items were derived from the relevant literature. The Organizational Environment Scale (OES) includes major components as internal environment, professional development, team work, guidance and support, facilitations, participation and coordination, and rewards and benefits. A Confirmatory Factor Analysis (CFA) using Asymptotic Covariance Matrix, Polychoric Correlation Matrix, and Weighted Least Squares Estimation was employed to validate the OES instrument. LISREL 8.3 was used to conduct Confirmatory Factor Analyses. Fit indices for Organizational Environment Scale indicated an adequate model. Factor loadings for each item had the thresholds value of 0.35. Correlation values among the latent factors were significant at 5%.

Keywords: *organization, environment, organizational environment scale, confirmatory factor analysis.*

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Introduction

In recent times, organizations have become complex due to the cultural, racial and gender differences. The provision of favorable working environment is a challenging task for administrators. The organizational environment is based on various forces e.g., suppliers, competitors, government regulatory agencies, public pressure groups, organizational structure and employees' unions (Arndt & Biglow, 2000). These forces potentially encompass the organizational performance (Robbins, Judge, & Sanghi, 2009). Also, it is noted that some organizations have static while others have dynamic environment. The static environment lacks competition and technological advancement whereas, the dynamic environment make changes in products, rules and regulations and the competitors.

There are various types regarding size of the organization, like small organizations with few employees and big organizations with huge number of employees. The work force of each organization

demands a stable organizational environment which imparts the valuable work experience to its employees (Kira & Eijnatten, 2008). The survival of any organization depends on its working conditions because every organization gets the provisions from both internal and external environment. This interchange is constant because the organization sends its product to customers and vice versa. These relationships are complex and critical because these belong to different sectors of environment. The present study is based on the certain factors which are highly important for working conditions in the universities of Pakistan.

Review of Related Literature

Environment is unification of various organizational factors like technological, competitive, political, cultural and economic (Loosemore, Dainty, & Lingard, 2003). The interaction of these factors makes the organizational structure more complex. The major intention of educational organization is to prepare skilled and

trained workers according to the social requirements. The favorable environment plays a significant role in producing skilled workers. In the recent times, the organizations are well informed about the Human Resource Management (HRM) issues in the working environment (Loosemore & Waters, 2004; Yip & Rowlinson, 2006; Wilkinson, 2008; Sang, Ison, & Dainty, 2009).

There are various environments prevailing in the organizations viz.; task environment, general environment, natural environment, internal and external environments (Daft, 2003; Daft & Marcic, 2004; Cohen, 2006; Jermier, Forbes, Benn, & Orsato, 2006). Amongst these, the external and internal environments play a pivotal role in the organizational environment. Besides this, the role of culture is also evident for an organizational environment because it unifies organization through its philosophies, assumptions, values, expectations, attitudes and norms. Gamage (2006) stated that the manager should identify the organizational culture to enhance organizational effectiveness. The basic ideology (e.g., beliefs, values and norms) of the organization shapes its culture (Triece & Beyer, 1993). Generally, organizational managers manipulate the external environment with their own context which specifies the organizational culture. The significance of organizational culture is extensively recognized by the experts for organizational behavior and performance (Deal & Kennedy, 2000; Peters & Waterman, 2004).

The organization culture is based on the environmental manipulation of organizational leaders. Many studies have been conducted in the field of leadership and culture. The concept of leadership has been discussed in the different contexts in literature. Leadership is mostly viewed as similar with power, authority, management, administration and supervision. According to the experts, the ineffective leadership in organization is the main reason of minimizing the organization's production and downward position (Yukl, 1994). The role of leaders is to instigate the followers to take part with high expectations (Bass & Avolio, 1992). The leaders support, involve and appreciate followers to pursue their instructions and show utmost commitment to fulfill their dreams (Bryman, 1992; Schein, 1990). The success or failure of

organizations depends, somehow, on the qualities of leader. Therefore, successful managers should demonstrate certain qualities which make the environment helpful to work within an organization. These qualities are presented below:

Motivation

Motivation is a psychological process which is cause of inspiration, determination and a path to achieve organizational goals. It is a set of both external and internal forces that creates the work related behavior of employees (Pinder, 1998). Similarly, it is also an interaction between an individual and the situation in which individual do the best for success (Robbin, 2004). Motivation has two major types, i.e., extrinsic and intrinsic motivation. Extrinsic is mostly influenced by external factor, e.g., rewards and punishment and intrinsic means inspiration from within self, e.g., classroom environment (Santrock, 2004). It is the job of a leader to create motivation amongst workers which is the main source of worker's satisfaction and the key element in achieving organizational goals. The satisfied workers express their opinions, requirements and expectations with pleasure and reconcile organizational goals with individual needs (Mesko *et al.*, 2008).

Rewards and Benefits

Rewards are attributes engaged to attract, stimulate and maintain employees. It is the major tool to enhance work motivation (Erez & Earley, 1993). To enhance workers' efficiency, the working in the organization is a complicated task. The production of organizations suffers due to the reward that holds a little meaning to workers. Using various reward and benefit techniques, the productivity of the organization can be enhanced. The financial rewards can be positively used to increase production but under certain conditions. Moreover, reward is to praise the employees' work that results in enhancing the productivity. It should also be linked with the performance of employees. Such rewards and benefits make the working environment conducive and productive. It is an important task for administrators to consider positive (gratifying and endorsing) as well as negative aspects (retirement or removal of the employee) in their decision making (Meyer, 1997).

Team work

Team work is a process in which the groups of people work together for the achievement of unanimous targets. Obviously, teamwork is the symbol of success in modern organizations. The differences of culture in modern organization badly affect the team work. However, the appropriate management of these differences creates the team work; ultimately enhances the performance of organization (Derlue, 2003). It is practiced in all types of educational organizations to increase performance, employee unity and organizational culture. In teamwork, members group their ideas together to produce exclusive ideas in dealing problems. In educational organization, teamwork is the spinal column of the effective communication. Another good derivative of teamwork is cohesion within the organization where employees are more cooperative than hostile in accepting the organizational decision. Similarly, major effect of teamwork in organization is that each employee learns from other's experiences (Swenson, 1997).

Guidance and Support

Educational organizations, particularly, universities are the icons of hierarchical structure as the powers are delegated at the departmental level. Thus, every teacher in the department knows how to deal and communicate to the departmental issues. The role of manager is needed to guide and support the subordinate (Bass, 1992). Guidance and support in educational organization stands for the provision of services and academic guidance to the teachers. It mostly involves advice, supervision, mentoring and counseling. The guidance and support from the manager provides broad spectrum about teaching and learning process (McKimm & Jolli, 2007).

Participation and Coordination

According to Robbin (2004), coordination is the essence of an organization which starts even before the planning. The modern organizations are made up of different departments like finance, administration, janitorial and fieldworkers. The coordination among these departments plays significant role in the smooth functioning of organization. Mintzberg (1988) advocated that it is the duty of manager to develop interpersonal relations, make decisions,

make flow of information, coined and execute the policies in the organization. Thus, it is the manager who ensures achieving objectives with the help of other people. Coordination is a powerful way to personify the complex behavior in the organization. The role of coordination in teaching and learning process is vital because learning activities without students' engagement are fruitless.

Facilitations

Facilitation is a process in which the manager facilitates groups in the organization to work effectively in achieving organizational goals. The job of facilitator is to help every individual in the organization to do their best for accomplishing different goals (Bens, 2000). Facilities in educational institutions are comprised of non-human and non-financial resources including all changeable and fixed materials, which are used for teaching and learning process like physical facilities. Olagboye, (2004) listed educational facilities *viz.*; audio and visual aids, graphics, printed, display and consumable materials along with building, furniture, equipment, machinery, vehicles, electricity and water supply infrastructure. Similarly, Ojedele (2004) enumerated three constituents through universities infrastructure, such as buildings and playgrounds; instructional facilities (materials, equipment and furniture) and physical environment. The facilitator ensures the complete participation and coordination of the workers in working environment. Another important role of facilitator is to ease the subordinates during the conflicts through dialogue and negotiation. In short, it works for the better and favorable working environment in the organization.

Professional Development

It is important to develop the working individuals and to improve the quality of performance in modern organizations. It also enhances the quality of work which is a burning issue of the modern organizations (Baker, 2002). Moreover, it is fundamental for the career because it improves their expertise and technical skills. Professional development is a lifelong process starting since recruitment and continuing till the day of retirement. It should concentrate on the specific and general pedagogical skills. Such skills are not only significant for the school improvement but also

to foster an excellent teaching and learning process. School administrators need to understand the integral role of professional development in the school and how to provide staff with the opportunities for the ongoing professional developments (Knapp, Zucker, Adelman, & St. John, 1991). Due to the increasing demand of the complex working environment, the teacher equips the learners with the skills to meet the challenges of society. This emerged the demand of competent and professional teachers to make them better in teaching and learning skills being students belong from a wide range of social background and learning abilities (Harwell, 2003).

Pilot Testing of OES

The Organizational Environment Scale (OES) was developed by the researchers. It was validated from the university experts. After validation of the instrument by the relevant experts, it was piloted with 336 faculty members from the selected universities. Confirmatory factor analysis (CFA) was applied to ensure the factor structure of the questionnaire. Cronbach Alpha (Reliability Coefficient) value of the instrument was 0.92. The procedure of factor analysis is explained as:

Factor Analysis

A confirmatory factor analysis (CFA) is suitable with the ordinal data having polytomously responded items. LISREL 8.3 (Jöreskog & Sörbom, 1999) was used to conduct confirmatory factor analyses. Jöreskog and Sörbom (1996) suggested polychoric correlation matrix, asymptotic covariance matrix, and weighted least squares estimation for the ordinal data.

Fit Indices

Hu and Bentler (1999) suggested use of GOF indices combinations indices for fit model evaluation in structural equation modeling. The standard suggested values were SRMR<0.08, RMSEA<0.06, TLI>0.95, and CFI > 0.95. However, these values are not used as definite standards rather than just a “rule of thumb”. The new strategies have incorporated without satisfactory consideration to the limitations. The experts like Beauducel and Wittmann (2005); Fan & Sivo, (2005); Marsh, Hau, & Wen, (2004) and Yuan, (2005), suggested that in

typical practice, these endpoint values are too laborious and may have limited generalizability to the levels of misspecification. Generally, “good enough” or “rough guideline” approach for incremental and absolute fit indices (such as CFI, GFI, NFI, NNFI and TLI) was commonly accepted. The cut-off values should be above 0.90 under relaxed criteria while the residuals matrix values below 0.10 or 0.05 may be considered satisfactory. Even though every individuals have different sets of indices which may not be escaped. In the study in hand, the attempt is being made to pick the index that is not the most positive about the fit of our model, but it is suggested the readers to be careful because good fit does not guarantee that model is correct, only that it is credible.

Table 1 displays the fit statistics for the chosen tested model. The table-1 indicates the GFI, CFI, NNFI and NFI measures well above 0.90, the Fit Indices for Organizational Environment Scale along with RMSEA measures above 0.05 which indicates slightly inadequate fit.

Table-2 shows the factor loading for each item on the related dimensions. Loadings for each item are above the thresholds value 0.35.

Figure 1 shows correlated factor analyses of the tested model. Values before each item box shows the measurement error, the values on the arrows indicate factor loading contributed by each item – here anything above 0.35 is considered good. Two items 8 and 15 were dropped whose factor loading was 0.125 and 0.022.

Table-3 shows the correlation among the latent factors. All coefficient values are significant at 5%.

Interpreting Correlation Coefficient

The size and significance of correlation indicates its usefulness. The *r*- value is statistically significant, if *r* differs from 0.00. Since the *r value* achieved significance, it is concluded that the relationship between the two variables is not by chance. The values of *r* always fall between -1 and +1 and the value does not change if all values of either variable are converted to a different scale. Both negative as well as positive high (or low) correlation has the same interpretation. A negative correlation indicates that the high scores in one variable are associated

with low scores in the other variable.

Results and Discussion

Recently, the provision of favorable working environment is an uphill task for the administrators. The study at hand is an attempt by the researchers to develop an instrument to measure the organizational environment in the universities of the Punjab. Extensive literature has been reviewed prior to develop the scale. From the literature review different organizational environment factors have been derived viz.; internal environment (organizational climate), professional development, teamwork, guidance and counseling, facilitations, participation and co-ordination and rewards and benefits. These factors have been reviewed comprehensively and discussed. The researchers have crafted initially 38 items for the scale with the help of professionals. The language and content in the instrument was also validated by the experts. During the development of instrument, the researchers kept in mind the local environment of the public sector universities in Punjab. Four universities were randomly selected for piloting of instrument. In these four universities, two were newly established and two were old established universities. The data were collected from 336 faculty members of the selected universities. The data were analyzed through SPSS version 19 and Lisrel 8.5. During the analysis, it was found that two items have low correlation thus those were dropped from the final instrument. In this way the final instrument was comprised of 36 items. The reliability coefficient of the instrument was .92. To make this instrument more authenticated, confirmatory factor analysis (CFA) of items was also carried out. LISREL 8.3 was used to conduct confirmatory factor analyses using an asymptotic covariance matrix, polychoric correlation matrix, and weighted least squares estimation. The correlation among the latent factors was ranged from .99 to .59 while the factor loading of each item was ranged from .75 to .30. The factor wise division of items was reported in Table No.5. In nutshell, the instrument is good enough to measure the working environment of the educational institutions in Pakistan.

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Table: 1
Fit Indices for Organizational Environment Scale

Sr. No.	Fit Indices	Value
1	NFI	0.913
2	NNFI	0.938
3	CFI	0.927
4	GFI	0.939
5	RMSEA	0.07

Table: 2
Factor Loading for Each Item on Related Dimensions

Sr. No.	Items	Internal	Profession	Team	Guidance	Facilitation	Participation	Reward
Q1	The working environment is conducive in my department.	0.48						
Q2	Enough opportunities are provided for professional development.		0.58					
Q3	I am encouraged to deliver my best.				0.55			
Q4	My HOD gives me useful feedback about my job performance.						0.53	
Q5	My immediate boss encourages me to make important decisions.				0.69			
Q6	My immediate boss trusts me in academic affairs.	0.53						
Q7	Team work is appreciated in my department.			0.80				
Q8	I like to socialize with my colleagues in the department.			0.35				
Q9	Head of department takes decisions democratically.						0.66	
Q10	In my department work load is distributed according to the interest of teachers.						0.57	
Q11	Timetable is developed with the consultation of teachers.						0.62	
Q12	Essential information flows effectively from immediate boss to staff.			0.61				
Q13	My immediate boss listen each party at the time of conflict.	0.63						
Q14	Team work is the symbol of my faculty.			0.76				
Q15	My boss motivates and appreciates me for good work.				0.63			
Q16	I have the authority to organize my work as I want.		0.55					
Q17	Staff meetings are scheduled regularly in my department.			0.55				
Q18	I can express my ideas freely.						0.62	
Q19	My department head is available for emergency meetings.					0.56		
Q20	My colleagues behave with me amicably.			0.38				
Q21	My department takes care of my health and well beings.					0.61		
Q22	The senior behave the juniors with honour and dignity.				0.51			
Q23	In my department subordinates are encouraged to use their own professional judgment in case of emergency.				0.60			
Q24	I am provided with the opportunity to get the training, needed in work related activities.		0.61					
Q25	My head is compassionate with the subordinates.				0.52			
Q26	My colleagues consult with each other when they need support.						0.43	
Q27	I am satisfied with my pension benefits.							0.49

Sr. No.	Items	Internal	Profession	Team	Guidance	Facilitation	Participation	Reward
Q28	There is pay equity in my institute.							0.49
Q29	My immediate boss assigns work fairly.					0.63		
Q30	My department encourages employees to “think out side the box.”	0.62						
Q31	My department has enough sources to enable me to work up to optimum level of my abilities.		0.67					
Q32	I am well aware of policy making process at my department.					0.66		
Q33	I am satisfied with the developmental opportunities at my department.					0.71		
Q34	I have been empowered.					0.66		
Q35	My salary package is according to my skills and abilities.							0.50
Q36	Rewards are associated with higher performance in my institute.							0.75

Table: 3
Correlation among Latent Factors

	Internal	Professional	Team	Guidance	Facilitation	Participation	Reward
Internal	1.00						
Professional	0.87	1.00					
Teamwork	0.94	0.92	1.00				
Guidance	0.99	0.94	0.98	1.00			
Facilitations	0.87	0.92	0.855	0.837	1.00		
Participation	0.95	0.85	0.934	0.999	0.908	1.00	
Reward	0.58	0.77	0.641	0.591	0.745	0.623	1.00

Table: 4
Correlation with Variables

Sr. No.	Correlation Value	Interpretation
1	≤0.50	Very low
2	0.51 to 0.79	Low
3	0.80 to 0.89	Moderate
4	≥0.90	High Good

Table No. 5
Factor Wise Item Division of OES

Sr. No.	Factors	Items
1	Internal environment	1, 6, 13, 30

2	Professional development	2, 16, 24, 31
3	Team work	7, 8, 12, 14, 17, 20
4	Guidance & support	3, 5, 15, 22, 23, 25
5	Facilitations	19, 21, 29, 32, 33, 34
6	Participation & coordination	4, 9, 10, 11, 18, 26
7	Reward & benefits	27, 28, 35, 36

Figure 1: Factor Analysis of Organizational Environment Scale

