

Multidirectional analysis, causal relationship influencing the Effectiveness of support personnel Ramkhamhaeng University

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Abstract: The objectives of this study were to: 1) analyze the causal relationship pathway having influence on effectiveness of supporting personnel at Ramkhamhaeng University, and 2) verify the causal factor hypothesis having influence on the supporting personnel. The sample group consisted of 300 supporting personnel at Ramkhamhaeng University. The researchers gained 30 causal variables having influence on the supporting personnel and the sample group size was ten times of the variable. A set of questionnaires was used for data collection and analyzed by using frequency, percentage, mean, and standard deviation. Besides, path analysis was conducted by using the AMOS program.

Results of the study revealed that the conceptual framework of causal factor relationship having influence on effectiveness of the supporting personnel comprised 2 variables having direct influence: nature of work and quality of work life and 7 variables having both direct and indirect influence: 1) safe and health promotion environment, 2) an individual capability development, 3) social integration, 4) status in the organization, 5) relationship with society, 6) uniqueness of the work, and 7) reflection from work. The hypothetical model was work consistent with the empirical data based on the CMIN/df was equivalent to 1.465; p-value = .913; GFI = .960; RMSEA = 0.000; NFI = .957; TLI = .968; and CFI = .984. The total influence of the causal variable having influence on effectiveness of the supporting personnel most was nature of work and followed by quality of work life. All of the components could explain variance effectiveness of the supporting staff for 88.30 percent.

Keywords: effectiveness, commitment to the organization, supporting personnel

1. Introduction

Vision leaders must have the capability to convince their followers to attempt to do their assigned tasks more than ever which derives from a level of confidence towards assigned tasks. Also, they must have a rather high level of the earnestness towards success leading to a better transformation. This is under the elevation of awareness and consciousness of the importance and value of needed achievement. It also includes guidelines for success which personal interest must be overlooked. [1] and [2] claimed that characteristics of a vision leader comprise 3 components: vision creating, vision dissemination, and vision practice. An administrator having vision can adopt the vision and create reliability for subordinates to continually follow the vision leading to be a desired organization. A vision leader is someone who can create vision in the future and make the dream come true. Besides, the vision must be made to be reliable and attractive for progress and better transformation particularly on the 21st century. [3] explained that the vision leader condition has four basic factors: communication, organization atmosphere, creative thinking and emotional intelligence. In fact, communication is a key element for making understanding among people in the society. This can be done through knowledge transfer, and opinion/experience exchange in order to achieve the goal and gain a harmonious/happy life. [7] stated that good communication within an organization has an effect on good work atmosphere which can be created by the supervisor who is broad minded. This will result in good practice and attitude towards co-workers, a high level of satisfaction and enthusiasm leading to achieve the goal of vision.

[8] proposed immaturity-maturity theory related to impacts of organization atmosphere on staff personality. An organization determining structure and tasks which are lower than staff capability surely causes disappointment, refusal of responsibility and corporate resistance. [9] stated that an organization having good relationship atmosphere among its members has an effect on their satisfaction with their assigned tasks and good attitude towards the organization. This conforms to an idea of [10] which showed that the organization atmosphere supporting an individual to work will lead to the responsiveness to his work motivation and happiness. [4] cited that the factor on emotional intelligence has an effect on smooth interpersonal communication, creative thinking and close coordination of many parties. [4] had conducted a study on a relationship between emotional intelligence of the school administrator and leadership of supporting staff. It was found that emotional intelligence has a positive effect on the vision leader and school atmosphere. Besides, the school atmosphere has a positive effect on the vision leader condition.

The university is an educational organization which play roles in the production of graduates in different levels for the country development in both public and private sectors. These important tasks and roles must prepare readiness to cope with social change. In addition, the university must set a policy on research, teaching & learning, arts and culture maintenance and academic service to the society. During 2012-2020, higher education in Thailand has leaping development so as to be an effective knowledge source which is responsive to problem crisis solving and sustainable development of the country. For this reason, it must rely on proactive higher education management and the Higher Education Act is an important tool for driving the 2020 vision (Office of the Higher Education Committee, 2018). The university direction in the 21st century consists of 3 main aspects: 1) consideration of needs of the current world under the economy of globalization knowledge base and the body of knowledge must truly be built as an innovation; 2) the university must adapt itself to be a learning source area and convince students to build a body of knowledge which is beneficial to the society; and 3) students will change themselves to be modern more than ever. Importantly, individuals in the university lack of commitment to the university will have a negative effect on organizations of various aspects. An example is an increased efficiency of yields due to lack of personnel motivation and understanding that the organization does not perceive their value [5] (Meyer et al., 1993). The results in continual impact such as difficulties and damages on normal operation due to provision of replaced workforce, increased expenses, and recruitment of new staff and training expenses [6]. In addition, Ramkhamhaeng University has prepared a study project on guidelines for developing the personnel resource system development of the university. This is because the university realizes that the personnel resource management system is an important factor strengthening the organization and its success among the community transformation current. It aims to conduct a survey on problems encountered and suggestions for the development of personnel resource of the university.

According to review of related theoretical concepts and researches, it explains about some factors having relationships and an effect on effectiveness of an organization. However, there is no study on factors having relationship and effect on effectiveness of supporting personnel at Ramkhamhaeng University. Also, there is no construction of a causal relationship of factors effecting the effectiveness of the supporting personnel. Therefore, it is essential that there is the development to gain a model of causal relationships of the effectiveness. In this respect, the researchers have constructed a model of causal relationships between emotional intelligence, communication, creative thinking, visual leader condition, organization culture commitment to the organization, and effectiveness of the supporting personnel. When the model is verified it will be used as a guideline for sustainable development the supporting personnel at Ramkhamhaeng University.

2. Research Objectives

Specifically, this study aimed to:

1. Analyze the causal relationship pathway having an effect on effectiveness of supporting personnel at Ramkhamhaeng University and
2. Verify the causal factor hypothesis having an effect on the supporting personnel

3. Reserch Methodology

1. The constructed pathway model prepared under the theory was consistent with the empirical data or not
2. The causal variables having an effect on effectiveness of the supporting staff included three variables having direct effect: vision leadership, organizational, culture and commitment to the organization. Besides, there were three variables having indirect effect: emotional intelligence, communication, and creative thinking. In this respect, six hypotheses were set:

2.1 Vision leadership comprised culture focusing on self-adaptation, culture focusing on mission on structure and rules/regulations. All of these had direct influence on effectiveness of the supporting staff.

2.2 Organizational culture comprised culture focusing on self-adaptation, culture focusing on mission, and culture focusing on participation, culture focusing on structure and rules/regulations. All of these had direct influence on effectiveness of the supporting staff.

2.3 Commitment to the organization comprised acceptance of goals of the organization, task concentration, and need for being a member of the organization. All of these had direct influence on effectiveness of the supporting staff.

2.4 Emotional intelligence comprised awareness of self-emotion, self-motivation and understanding emotion of other. These had direct influence on vision leadership and effectiveness of the supporting personnel.

2.5 Communication comprised communicative skill and communicative channel using. These had a direct effect on the vision leader condition and effectiveness of the supporting personnel.

2.6 Creative thinking comprised initiative, flexible thinking and thoughtfulness. All of these had a direct effect on the vision leadership and effectiveness of the supporting personnel.

Population and Sample group

The population in the study consisted of 2,861 supporting personnel at Ramkhamhaeng University (Division of Staff, Ramkhamhaeng University, 2020). The sample group consisted of 300 supporting staff. The sample group size was ten times of the variables (30 variables) [11]. Stratified random sampling was employed for field data collection and it was on the basis of proportional stratified random sampling.

Research Instrument

A set of questionnaires was used for data collection. It consisted of 8 parts as follows:

Part 1. Socio-economic attributes of the respondents (sex, age, educational attainment, marital status, monthly income and year of service) 15 items.

Part 2. Vision leadership of the supporting personnel at Ramkhamhaeng University (15 items).

Part 3. Organizational culture of the supporting personnel at Ramkhamhaeng University (20 items).

Part 4. Commitment to the organization of the supporting personnel at Ramkhamhaeng University (15 items).

Part 5. Emotional intelligence of the supporting personnel at Ramkhamhaeng University (15 items).

Part 6. Communication of the supporting personnel at Ramkhamhaeng University (1- items).

Part 7. Creative thinking of the supporting personnel at Ramkhamhaeng University (20 items).

Part 8. Effectiveness of the supporting personnel at Ramkhamhaeng University (20 items).

Part 2-8 were in the form of close ended question (5 rating scale of Likert). Content validity was checked and improved based on suggestions of the specialists. Then, the questionnaire was tried out and reliability was analyzed based on α -Coefficient value computation (Cronbach, 1990). Content validity, was found at 0.79 (IOC > .50) and Alpha Coefficient was found at .95.

Data Analysis

Descriptive statistics (percentage, mean and standard deviation) was used for analyzing causal relationship pathway having an effect on effectiveness of the supporting personnel. This was done by synthesizing research issues individually with content analysis technique. Method for analyzing structural equations (Structural Equation Modeling (SEM) by way of path analysis) using approximation technique. Maximum likelihood (ML) was employed for the estimation of pathway coefficient to investigate direct and indirect influence of independent variables on the dependent variable and Amos Version 21 was employed.

Expected Outcome

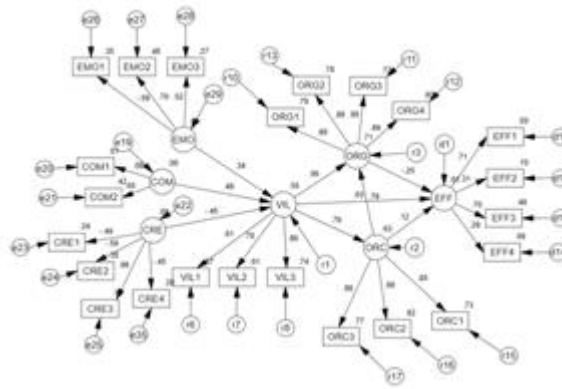
1. Results of the study would provide information about a model of causal relationship of factors having an effect on vision leader condition which would be used for policy setting and planning. This could promote effectiveness of the supporting personnel.
2. Findings could be used as a guideline for university administrators to develop the management system focusing on the development of personnel administration system.
3. The university administrators could adopt findings of this study to set a policy for effective development of the university.

4. Research Results

Results of the study showed that an analysis of the causal relationship structure having an effect on effectiveness of the supporting personnel as well as the verification of consistency between the hypothesis model and the empirical data (an analysis of direct/indirect effect and total effect of variables having influence on effectiveness of supporting personnel was done by using the Maximum Likelihood Estimates (ML) for analyzing the following:

1. Over identified model or model specification
2. Measure of the model fit
3. Parameter estimation of model
4. Direct effect, indirect effect and total effect

4.1 The researchers set an over identified model of analysis of causal relationship pathway as shown in Figure 1.



Chi-square = 1106.185 Chi-square / df = 4.895 df = 226 p-value = .000

GFI = .630 NFI = .673 TLI = .713 CFI = .726 RMSEA = .298

Figure 1 Structure of a model of causal relationship before improvement

Source: Adapted from Thanin Sinjaru (2012).

According to an analysis of the coefficient value of the over identified model of causal relationship pathway, it was found that the relationship between variables used for the analysis was still inappropriate. There was one pathway which its coefficient value was no statistical significance (Figure 1). Hence, it needed to reconfigure to obtain the best correlation model. This could be done by deleting the pathway having no statistical significance (Figure 1).

Measures of the model fit

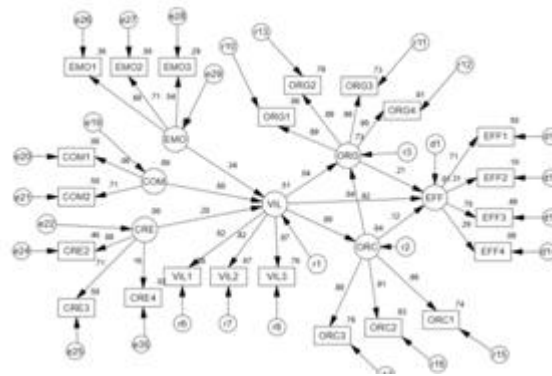
Hypothesis 1 was the model hypothesis testing to check whether the constructed model was consistent with the empirical real data or not

H₀ : Theoretical path model = model based on actual data

H₁ : Theoretical path model ≠ model based on actual data

The consistency between the hypothetical model and the empirical data was verified by using the AMOS package. The researchers collected data based on various variables in the real model. It was found that the hypothetical model was consistent with the empirical data. This was considered from CMIN/df = 1.465, P-value = .931, GFT = .960, RMSEA = .000, NFI = .957, TLI = .968 and CFI = .984. The total effect of the causal variables having an effect on effectiveness of the supporting personnel most was nature of work and it was followed by quality of work life. All components could explain variance of effectiveness of the supporting personnel for 88.30 percent. P-value was used to verify consistency of the empirical model and the theoretical model. However, it must have statistical significance (p > .05) which implied that there was consistency with the empirical data. In other words, there was no difference but consistency. In this study, p > 1.465 (Figure 2 and Table 1).

Relationship variables	between	E estimate	SE	CR	P-Value	Sig
VIL	<-- EMO	.707	.204	1.509	***	have
VIL	<-- COM	.937	.180	2.985	***	Have
VIL	<-- CRE	.665	.163	-1.114	***	have
ORC	<-- VIL	.936	.215	4.350	***	have
ORG	<-- VIL	.758	.242	1.240	***	have
ORG	<-- ORC	.941	.219	4.288	***	have
EFF	<-- VIL	.932	.386	4.086	***	have
EFF	<-- ORC	.881	.297	2.150	***	have
EFF	<-- ORG	.782	.154	1.277	***	have
EFF1	<-- EFF	.932	.186	4.486	***	have
EFF2	<-- EFF	.823	.246	1.913	***	have
EFF3	<-- EFF	.975	.264	3.690	***	have
EFF4	<-- EFF	.905	.170	4.795	***	have
ORG4	<-- ORG	.962	.124	8.564	***	have
ORG3	<-- ORG	.857	.113	7.586	***	have
ORG2	<-- ORG	.973	.265	8.676	***	have
ORG1	<-- ORG	.929	.125	8.214	***	have
VIL3	<-- VIL	.940	.214	5.792	***	have
VIL2	<-- VIL	.812	.244	3.322	***	have
VIL1	<-- VIL	.651	.164	3.366	***	have



Chi-square = 331.191 Chi-square / df = 1.465 df = 226 p -value = .913

GFI = .960 NFI = .957 TLI = .968 CFI = .984 RMSEA = .000

Figure 2 Structure of the causal relationship model, final model, improved.

Source: Adapted from Thanin Sinjaru (2012).

Table 1 shows the verification of the harmony of the causal model with the empirical data. Factors affecting effectiveness of the supporting personnel

contract Appearance	Statistics	critierion	Subject before adjustment	Subject after adjustment
CMIN-p	Chi-square Probability Level	p > .05	.000 ✗	.913 ✓
CMIN / df	Relative Chi-square	< 2	4.895 ✗	1.465 ✓
GFI	The goodness of Fit index	> .90	.630 ✗	.960 ✓
NFI	Normal Fit Index	> .90	.673 ✗	.957 ✓
TLI	Tucker- Lewis Index	> .90	.713 ✗	.968 ✓
CFI	Comparative Fit Index	> .90	.726 ✗	.984 ✓
RMSEA	Root Mean Square Error of Approximation	<.08	.298 ✗	.000 ✓

Source: Adapted from Thanin Sinjaru (2012).

Note: ✗ means not meeting the test criteria.

✓ means to pass the index test result criteria used to verify conformity and harmony. of the model and the empirical data

4.3 The results of parameter estimation of the model or the results of the various estimation of coefficients

Hypothesis 2: Causal variable influencing the Effectiveness of supporting personnel was divided into two causes; three variables had direct influence, namely vision leadership (VIL), organizational culture (ORG), and organizational commitment (ORC) with indirect influencing variables through leadership variables. Vision had three variables: emotional intelligence (EMO), communication (COM), and creativity (CRE).

Table 2 shows results of the estimation of Standardized Regression Weights after modulation.

Note: Significant * p < .05 , ** p < .01 , *** p < .001

Table 2 showed that causal variables had influence on the effectiveness of supporting personnel was divided into two causes; there were three variables with direct influence, namely vision leadership (VIL), organizational culture (ORG), and organizational affinity (ORC) with indirect influencing variables through the leadership variables. Vision had three variables: emotional intelligence (EMO), communication (COM), and Creativity (CRE).

Vision leadership (VIL) consisted of vision creating (VIL1). Publishing of Vision (VIL2) and Implementation of the Vision (VIL3) some caused direct influence on the support personnel's effectiveness.

Organizational culture (ORG) consisted of a culture of adaptation (ORG 1). Mission-oriented culture (ORG2) Culture focusing on participation (ORG3) and cultured focusing on structure and regulations (ORG4). Some caused directly influence on the effectiveness of the supporting personnel.

Organizational Engagement (ORC) consisted of the acceptance of the organization's goals (ORC1). Endeavor to work (ORC2) and the requirements for membership of the Organization (ORC3) some caused direct influence on the supporting personnel's effectiveness.

Emotional intelligence (EMO) consisted of the awareness of emotions of other (EMO1). Self-motivation (EMO2) and understanding other people's emotions (EMO3) There were causes of direct influence on vision leadership (VIL) and direct influence on the effectiveness of the support personnel passing.

Communication (COM) consisted of communication skills (COM1) .and the use of a communication channel (COM2). There were causes of direct influence on vision leadership (VIL) and supporting personnel's effectiveness passing.

Creativity (CRE) consisted of thinking fluency (CRE2) the flexibility of thinking (CRE3) and refinement of thinking (CRE4) There were causes of direct influence on vision leadership (VIL) and direct influence on the effectiveness of the supporting personnel passing.

4.4 Calculation of direct effect, indirect effect, and total effect.

Table 3 showed results of the analysis of direct influence. Indirect influence and the total of influence between variables and prediction variable

Dependent variable	In finance (Effects)	Prediction variable					
		EMO	COM	CRE	VIL	ORC	ORG
EFF	DE	.000	.000	.000	.821	.881	.782
	IE	.034	.064	.013	.111	.000	.000
	TE	.034	.064	.013	.932	.881	.782
VIL	DE	.707	.937	.665	.000	.000	.000
	IE	.000	.000	.000	.000	.000	.000
	TE	.707	.937	.665	.000	.000	.000
ORC	DE	.000	.000	.000	.627	.000	.000
	IE	.052	.087	.170	.309	.000	.000
	TE	.287	.502	.170	.936	.000	.000
ORG	DE	.000	.000	.000	.571	.941	.000
	IE	.028	.088	.071	.187	.000	.000
	TE	.028	.088	.071	.758	.941	.000

According to Table 3, it was found that the independent variables having an effect on the supporting staff consisted of three variables: vision leadership - VIL (Total effect = .932), commitment to the organization – ORC (Total effect = .881) and organizational culture – ORG (Total effect =.782). The variable having a direct effect most was commitment to the organization –ORC (Total effect = .881) and followed by organizational culture – ORG (Total effect = .982). Thus, this implied that acceptance of the organization’s – ORC1 goals, task devotion – ORC2, and need for being a member of the organization – ORC3 had effect most.

Conclusion and Recommendation

The conceptual framework of the model of causal relationship factors having an effect on effectiveness of the supporting personnel at Ramkhamhaeng University comprised 3 variables having a direct effect: vision leadership (VIL), organizational culture (ORG) and commitment to the organization (ORC) and 3 variables having an indirect effect : emotional intelligence (EMO), communication (COM) and creative thinking (CRE).

The hypothetical model having consistency with the empirical data based on CMIN/df (1.465), p-value (.913), GEF (.960), RMSEA (.000), NFI (.957), TLI (.968) and CFI (.984). The total effect of the causal variable having an effect on followed by quality of work life. All of these components could explain variance of effectiveness of the supporting personnel for 88.30 percent.

Therefore, the construction of a causal model led to the construction of a structural equation modeling (SEM) as shown below.

$$EFF = .013 + 0.932 VIL + 0.881 ORC + 0.782 ORG$$

$$VIL = .512 + 0.707 EMO + 0.937 COM + 0.665 CRE$$

$$EMO = .002 + 0.748 EMO1 + 0.727 EMO2 + 0.641 EMO3$$

$$COM = .004 + 0.887 COM1 + 0.781 COM2$$

$$CRE = .003 + 0.921 CRE2 + 0.65 CRE3 + 0.767 CRE4$$

$$ORG = .731 + 0.929 ORG1 + 0.973 ORG2 + 0.857 ORG3 + 0.962 ORG4$$

$$ORC = .644 + 0.953 ORC1 + 0.916 ORC2 + 0.922 ORC3$$

$$Cmin/df = 1.465 \text{ p-VALUE} = .913 \text{ GFI} = .960 \text{ AGFI} = .934$$

$$RMR \text{ RMSEA} = .001 = .003, \text{ NFI} = .957 \text{ TLI} = .968 \text{ CFI} = .984.$$

5. Discussion

1. Vision leadership (VIL) has a total effect at .932. That is, the administrator still be one factor in effectiveness of the organization leading to be successful. The administrator will play roles as the leader of transformation having vision. Besides, he is able to create the strong feeling of mission, reliability, trustworthiness, and promote personnel commitment to mission and goals. This conforms to an idea of [12] and [13] that the leader can transfer data or information from subordinates to the executive well. He can work well due to need of his supervisor so it makes the organization be effective like the promotion of an agency to produce some valuable things.[14] made conclusions in a study on effective leadership of Michigan University. It was found that an effective leader has a tendency to create relationships with his subordinates rather than less effective leaders. Moreover, an effective leader prefers to supervise work performance of subordinates by group rather than an individual.

2. Commitment to the organization had a total effect at .881. That is practitioners having a high level of commitment to his organization usually devote their body and mind to do best their assigned task. It is an important factor to achieve the goals of the organization due to effective work performance of the practitioners. This conforms to an idea of [15] and [16] that commitment to the organization is an importance variable to make the organization be successful or not.

6. Conclusion

1. Regarding the factors on nature of work and work diversity, it should have the determination of workload and responsibility of personnel on the basis of their capability, educational attainment and work experience
2. On the basis of the factor on work independence it should have the determination of responsibility scope of each position based on appropriateness and full authorization.
3. For the factor on reflection from work, it should have the construction of work culture which opens an opportunity for personnel to express their opinions and put it into practice. For example, preparing a meeting for operational development of each section then a minute on suggestion for problem is prepared.

Recommendation for Next Study

1. This study employed quantitative research which a set of questionnaires was used for data collection so there was a limitation on in-depth data. Hence, qualitative research should be added in next stud to gain various in-depth data.

In order to be clear in results of the study, longitudinal study should be conducted to investigate occurred behaviors whether it is consistent with research data or not (Recheck).

References

1. Braun, JB (1991). "An Analysis of Principal Leadership Vision and Its Relationship To school climate, " Dissertation Abstract. International. 52 (4): 1139.
2. Leithwood, KA (1992). The Move toward Transformational Leadership, Educational Leadership. 49(5): 8 - 12.
3. Kevin, SG (2006). "Leader Emotional Expressivity, Visionary Leadership and Organizational Change, ", Journal of Leadership & Organization Development. 27(7): 566 - 583.
4. Thomas, G. (2005). Elementary Principal Emotional Intelligence, Leadership Behavior, and Openness: An Exploratory Study. Ph.D. Dissertation, Department of Management in Organizational Leadership. Ohio: University of Ohio State.
5. Meyer, JP, Allen, NJ & Smith, CA. (1993). Commitment to organizations and occupations: Extension and test of a three-component conceptualization. Journal of Applied Psychology, 78(4): 538-552.
6. Buchanan, HB. (1974). Building organization commitment the socialization of managers in work organization. Administrative Science Quarterly, 19, pp. 533 - 546.
7. Likert, R. (1976). New way and Managing Conflict. New York : McGraw-Hill.
8. Argyris, C. (1995). Action Science and Organization Learning. Journal of Management Psychology. New York: Harper and Brother.
9. Litwin, GH, and Stringer, RA (1968). Motivation and Organization Climate. Boston: Harvard University.
10. Davis, K. (1981). Human Behavior at Work: Organizational Behavior. New York: McGraw-Hill

11. Field, A., Miles, J., and Field, Z., (2012). *Discovering statistics using R*, SAGE Publication Ltd., p. 957.
12. Bass, B.M. & Avolio, B.J. (1994). *Improving Organization Effectiveness Through Transformational Leadership*. Thousand Oak: Sage.
13. Emery, C. R., & Barker, K. J. (2007). Transactional and transformational leadership styles on the organizational commitment and job satisfaction of customer contact personnel. *Journal of Organizational Culture, Communication, and Conflict*, 11(1), 77-90
14. Hoy, Wayne. K and Cecil G. Miskel. (1991). *Educational Administration: Theory Research and Practice*: 4th ed. New York: Harper Collins.
15. Newman Secada and Wehlage. (1995). *A guide to authentic instruction and assessment: Vision, standards, and scoring*. Madison, WI: Wisconsin Center for Education Research.
16. Steers, R.M. (1977). *Organization Effectiveness*. California: Goodyear Publishers, Inc.